

Innovative Pavement Technologies

NCDOT Division 7 Shoulder Construction



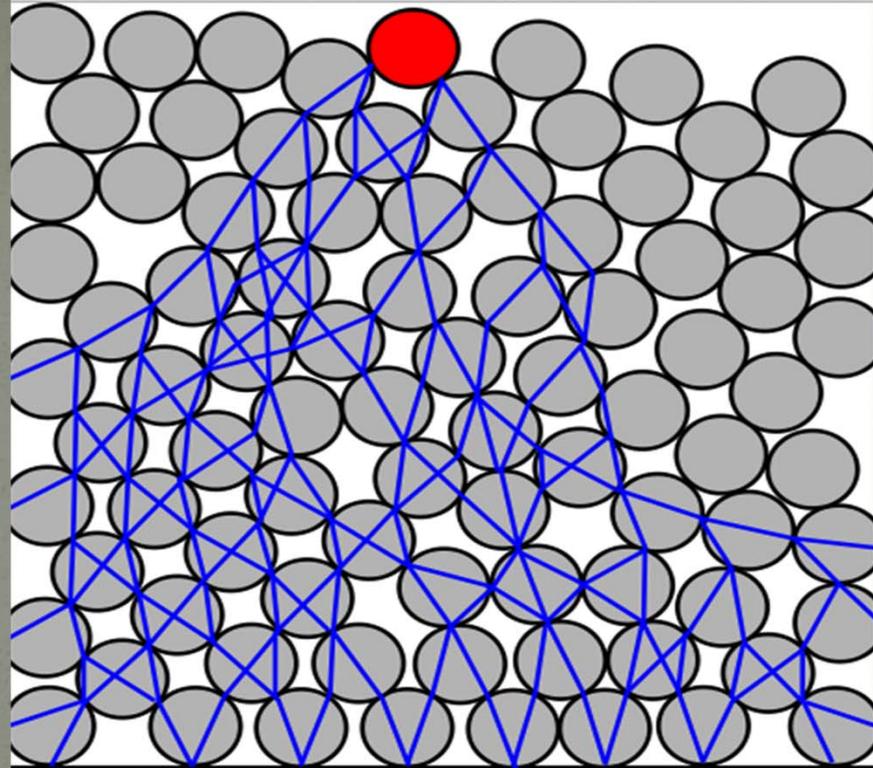
What is RCC?

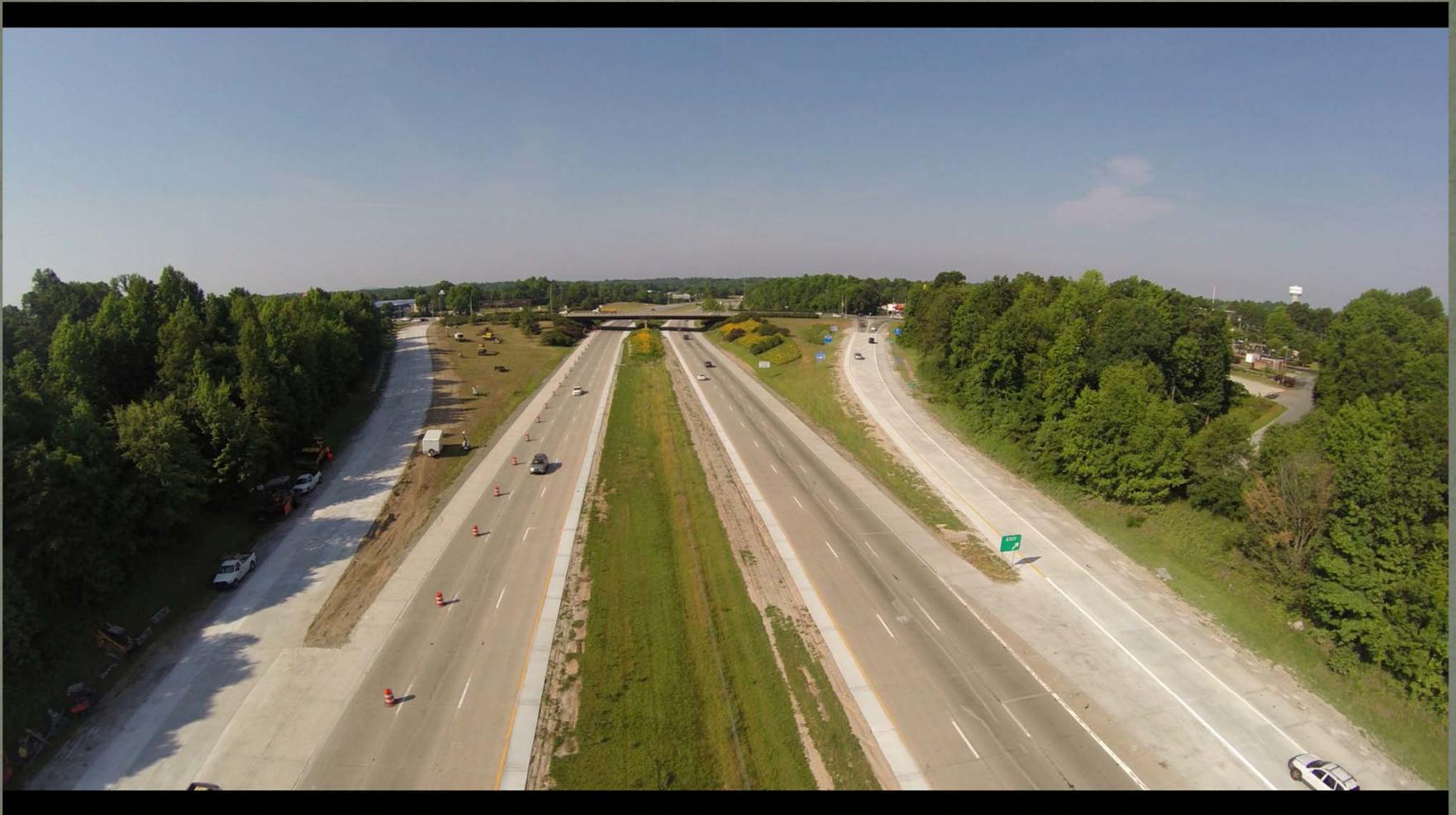
RCC is a no-slump concrete that is compacted by a high density screed paver and vibratory rollers.

- Zero slump (very dry...less paste)
- Little to no forming-depends on application
- No reinforcing steel
- Limited finishing required
- Compacted with vibratory rollers
- High and Fast strength gain
- Resistant to freeze/thaw cycles and permeability
- Very dense
- Highly efficient installation methods

RCC is a Granular Solid

- Compressive strength (f'_c)
 - 4,000 to 10,000 psi
- Flexural strength (MR)
 - 500 to 1,000 psi
 - $MR = C(f'_c)^{1/2}$ where $C = 9$ (up to 11)
- Modulus of elasticity
 - 3,000,000 to 5,500,000 psi
 - $E = C_E(f'_c)^{1/2}$ where $C_E = 57,000$ (up to 67,000)







RCC is not new to North Carolina...



Where did RCC begin?



A Look at CCP vs Traditional RCC



Is there really anything to consider?





**Five hundred years ago,
everybody knew the earth
was flat**



**“If you don't know where you're going, you might not
get there.” -*Yogi Berra***



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

C203914

CONTRACT AND
CONTRACT BONDS

FOR CONTRACT NO. C203914

53029.3.1 NHPIM-0085(3)117

I-5738, I-5789, I-5821

GUILFORD, RANDOLPH

ROADWAY & STRUCTURE CONTRACT

I-85 LENGTH 7.400 MILES

I-85 FROM I-85 BUSINESS TO MAIN STREET IN ARCHDALE.

WBS

T.L.P. NO.

COUNTY OF
THIS IS THE
ROUTE NUMBER
LOCATION