

# Coatings for Structural Concrete

Theodore Hopwood II, P.E.  
MWBPP Meeting  
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Kentucky  
Transportation  
Center  
[www.ktc.uky.edu](http://www.ktc.uky.edu)

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# Why Paint Structural Concrete?

# Deterioration of Beam Ends



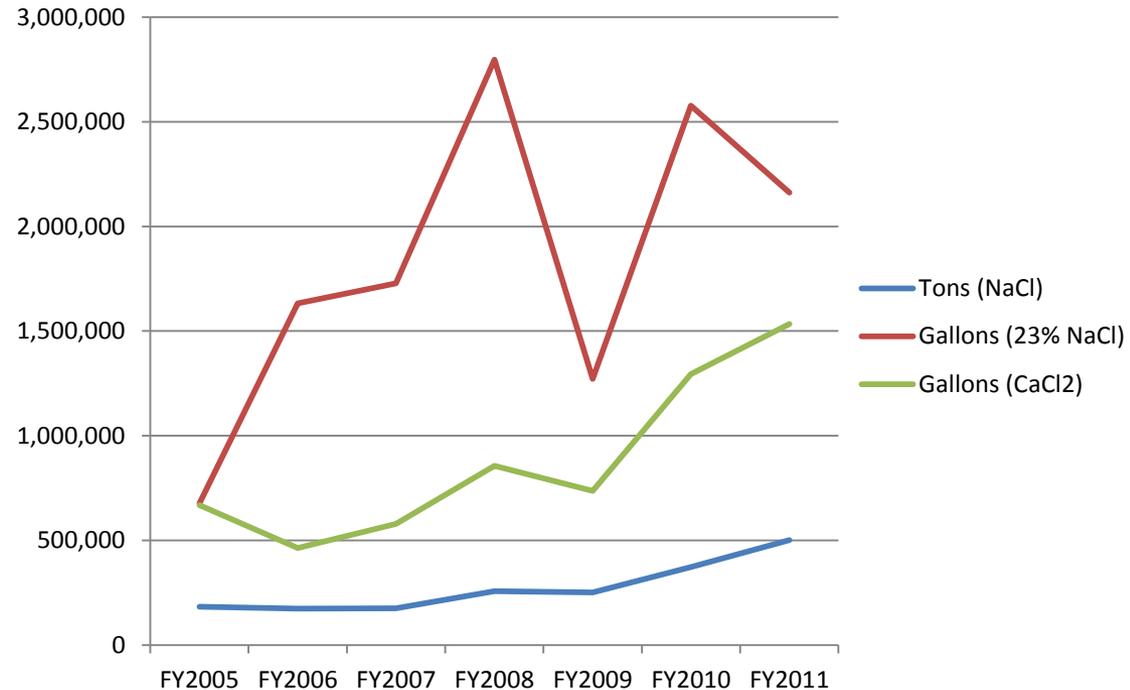
# Deterioration of Pier Caps and Columns



# Leaking Joints



# Increasing Use of Deicing Salts by KYTC



KYTC Statewide Use of Deicing Chemical Since FY 2005

# KTC Research on Bridge Concrete Deterioration



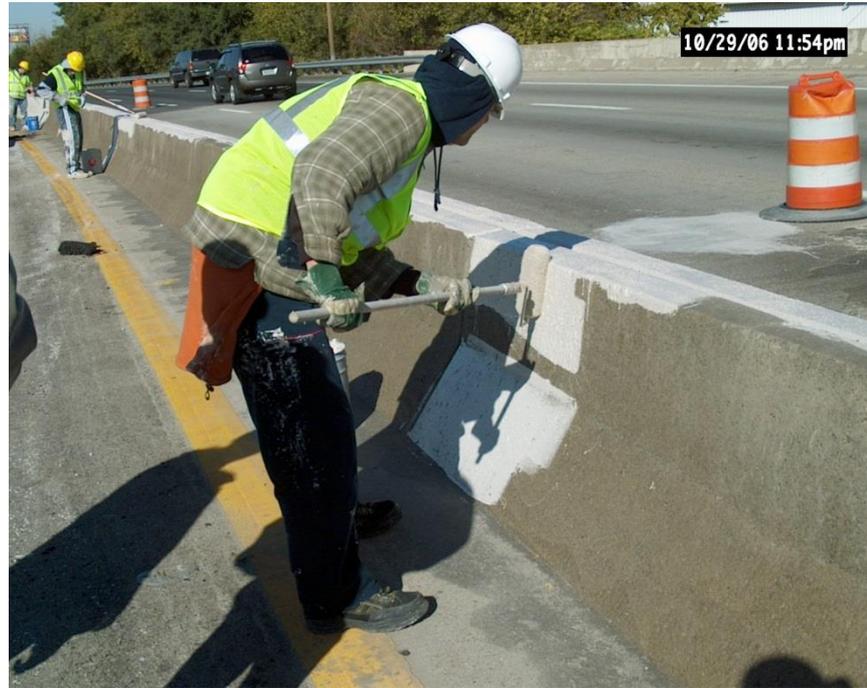
# Chloride Measurements of Substructure Elements



# Preventive Maintenance Actions



# Experimental Maintenance Painting of Concrete



# Concrete Coatings Lab Tests



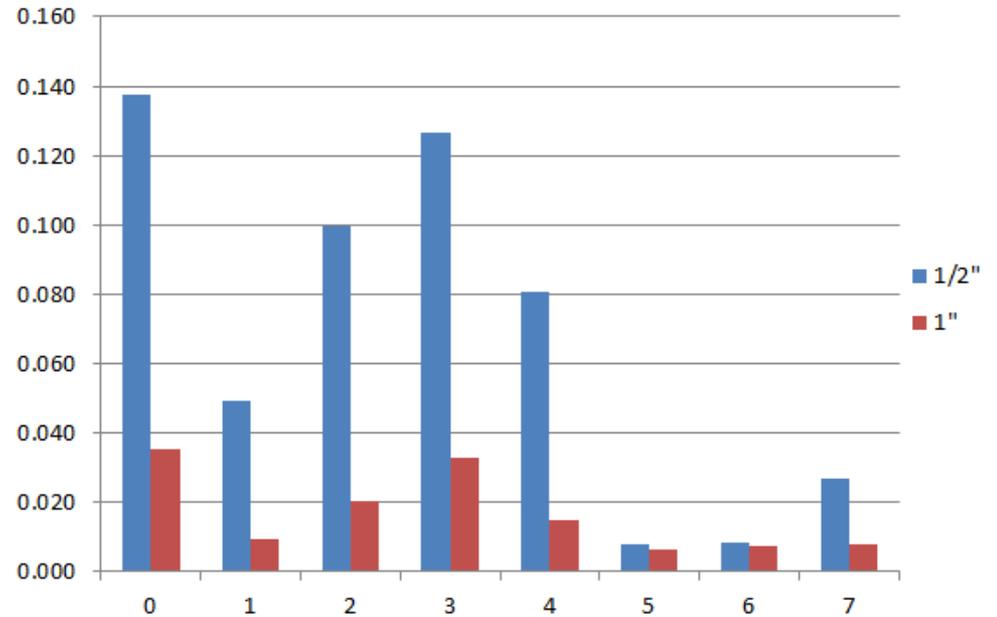
Chloride Ion Penetration



Weatherability

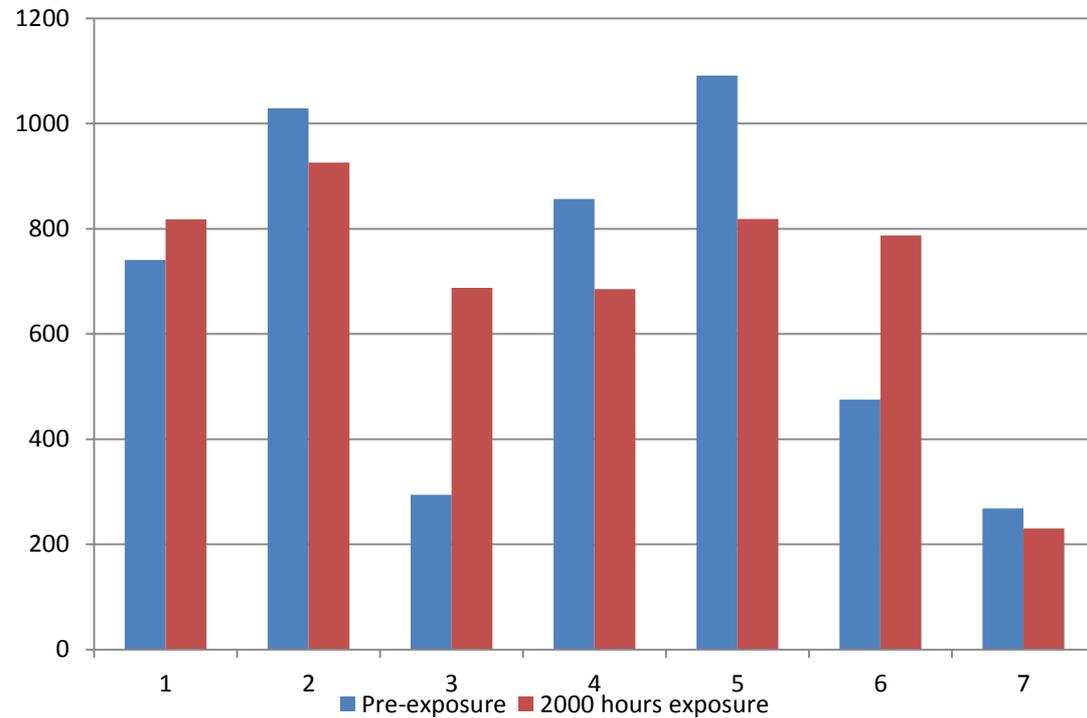


# Chloride Ion Penetration Measurements



% Chloride by Wgt. Concrete for Various Coatings at 1/2" and 1" Depths in Salt Ponding Blocks

# Weatherability Adhesion Measurements

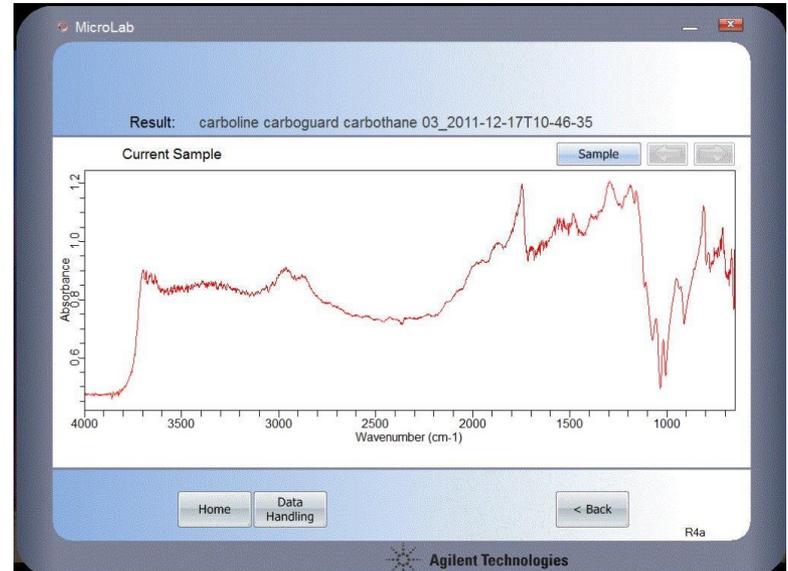


Adhesion Test – Tensile Stress for Pre-Exposure and 2000 Hours of UV/Condensation Testing

# Field Test Patch Application



# Field Test Measurements



# In Summary

- Appropriate coatings can protect structural concrete
- Laboratory and field tests identify the most suitable coatings
- AASHTO NTPEP is will be sponsoring testing to evaluate concrete coatings

# Thank You!

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