

# Roman Road System



**A BRIEF OVERVIEW OF ROMAN STONE  
CONSTRUCTION COMPANY'S METHOD OF  
PRECAST CONCRETE PAVEMENT REPAIR.**

# Roman Stone Construction Company



- Providing Precast to Long Island and surrounding areas for over a hundred years
- NCPA approved plant
- Contacts
  - Tom Montalbine  
President and QC Administrator  
[tmontalbine@romanstoneco.com](mailto:tmontalbine@romanstoneco.com)  
631.667.0566 Ext. 14
  - Layne Urbas  
Vice President and Marketing Director  
[lurbas@romanstoneco.com](mailto:lurbas@romanstoneco.com)  
631.667.0566 Ext. 15
  - Adam Brodal  
Chief Engineer and Sales Support  
[abrodal@romanstoneco.com](mailto:abrodal@romanstoneco.com)  
631.494.0015 Ext. 32
  - <http://www.romanstoneco.com/pavement-slab.html>



# The Roman Road System



- **PCPS – Precast Concrete Pavement System**
- **Jointed system, with load transfer devices at each transverse joints.**
- **Panels are fabricated 1” thinner and raised to grade with high density polyurethane injection.**
- **Installation is less vulnerable to weather and temperature extremes.**
- **Minimal subgrade preparation**
- **Short work windows, less traffic disruption**
- **Standardization, slabs come in standard sizes.**

# Fabrication



- Roman Road slabs are fabricated to standard sizes, 12'-0" wide by 6'-0", 8'-0", and 10'-0" long. Slabs can be made to custom sizes and a length up to 20'-0".
- Poured on a steel bed with steel formwork
- Concrete is cured in plant controlled condition
- NYSDOT approved QC department performs pre-pour post-pour inspections and concrete test.

# Installation



- Close repair lane and adjacent shoulder or lane.
- Use template to mark repair area and saw cut
- NYSDOT lift-out procedure (Prevents damage to sub-base)
- Verify depth with scratch template and place the slab, with minimal disturbance to subbase.



# Installation, continued



- Raise slab by inject polyurethane through predrilled grout ports, remove any extra
- Install LTD's, NYSDOT Dowel Bar Retrofit is typical.
- Open to traffic



# Uretek



- Set time = 22 seconds
- The typical travel of the polymer is 36” out from the bottom of the grout port.
- The grout is hydro-insensitive (rain resistant), extending the contractor’s work season.
- *Compressive strength is directly proportional to the confining load.*
- *The surface pumping pressure is 800 psi*
- *The lifting capacity is 900 psf*
- *May be opened to traffic in 15 minutes*



# Uretek



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## Route 27, Sunrise Highway



- **Project duration 9/29/2009 to 10/07/2009 on Sunrise Highway, Route 27 between exits 62 & 63. Repair was to correct deteriorating joints in the 30 year old jointed concrete pavement. Installed in 6 hour work window at 6-7 pieces per day, for a total of 35 panels. The load transfer device used was the dowel bar retrofit method. Over six months later a Falling Weight Deflectometer test was preformed. Good Load Transfer Efficiencies were observed.**

# Roman Road Systems – The Best Pavement Repair and Replacement System



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# Conclusions



- The Roman Road System provides a durable solution with minimum traffic disruption while allowing the contractor to get in get out and stay out.
- Thank you.
- Questions?