Matthew Munsick has been a member of Morgan Corporation for fifteen years. In that time he has managed industrial, commercial, residential, environmental, and heavy highway civil construction projects. Prior to joining the Morgan team he was employed by a General Contractor based out of Atlanta, GA that constructed multi-family structures, high rise buildings, and commercial buildings. His experience spans many different facets of construction in a variety of environments with an array of material and equipment knowledge. Matthew holds a Bachelor of Science Degree in Business Management from the University of South Carolina-Upstate. Mr. Munsick has been at the forefront of construction technologies for Morgan Corporation in the fields of Global Positioning System applications for site construction, the successful installation of bottomless culverts, custom material screening operations, soils and aggregates processing. Recently, Matthew has been charged with developing a new Cement Products Division for Morgan Corporation that includes Pavement Rehabilitation and Recycling, Roller Compacted Concrete for pavements and structures, and Cement Treated Bases.

Methods for Successful Construction

- Suitable Materials and Proper Handling
- Appropriate Plans and Specs
- Qualified Contractors
- Capable Equipment
- Competent team (Engineer, Contractor, and QC)
- Realistic Construction Plan

“The Right Specs for the Job”

1. What are we building?  
   Dam, Base, Pavement (road or hardstand)
2. Do the specs address the environmental and logistical conditions?  
   Plant location, Material delivery, Weather
3. What conflicts are there?  
   Phasing, Schedule, Utilities
4. Who is responsible for QC and are they familiar with the project and material?
Material Selection:
Aggregates need to be of good quality:
- Low LA
- Sound
- High Angularity
- Low SSD
Well Graded & Fine Aggregates are Critical
Prevent segregation through handling

Cement needs to be of good quality
Look for consistent chemistry
Water needs to be free of deleterious materials
Suppliers are important!

Is RCC the right tool for the job?
Make a pull plan!
Geometry can greatly affect production and quality

Pull Plan
Take into consideration:
- Contours
- Structures
- Productions (Joints)
Joints:
- Construction
- Fresh
- Cold
- Isolation
Each have their own characteristics and place and must be constructed accordingly. A pull plan will help greatly.

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Test Sections
Why are they important?
- Test the equipment in production mode
- Check the QC equipment
- Establish the roll pattern
- Verify production mix matches design
- Shows the client the product on their site
- Perform before production

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Good Bases:
- Uniform
- Free draining
- Homogenous
- Compacted
- Not frozen

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RCC Quality Control
- Subgrade
- ASTM D1435 (RCC Cylinders)
- ASTM C309 or ASTM C171 (Curing)
- ASTM D1557 (Density)
- Weather conditions
- Stockpile management
- Grade control
- Planning

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Subgrade and Base Prep
- Uniform
- Free draining
- Homogenous
- Compacted
- Not frozen

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Joints
- Construction
- Fresh
- Cold
- Isolation
1) Maintain moisture
   Through wetting or cover with plastic
   Be careful to keep moist, but do not wash paste off (fresh)
2) Keep contaminates from washing on the joint
3) Do not overlap the screed too much on existing mat.
4) Watch the time, weather, and temperatures

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Compaction-Finishing
Critical for:
- Strength
- Aesthetics
- Smoothness
- Permeability
- Use an appropriate compactor
- Do not over roll
- Stay with the roll pattern
- Maintain moisture

Other compactors can be useful also.

QC, Curing, & Finishing
- One points, moisture checks
- Take densities often
- Make enough cylinders
- Maintain moisture
- Cure and cut control joints as soon as possible

Cores VS Cylinders

- Communicate the construction plan when TEST PAD is constructed
- Have an established QC plan before Construction!
- Testing procedures similar for embankment construction.
- Curing methods are accomplished by wet curing or a membrane application.