

# QC Project Procedures

**Recommendation & Guidelines** 



# RIV CRETE

### **Contact Information**

#### **CUSTOMER SERVICE PHONE NUMBER**

• 414.455.6070 (ext. 1)

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# MAIN OFFICE & HAMPTON BATCH PLANT

12005 West Hampton Ave. Milwaukee, WI 53225

#### **CHASE AVE. BATCH PLANT**

2761 South Chase Ave. Milwaukee, WI 53207

#### **13TH STREET BATCH PLANT**

**4350 South 13th St. Milwaukee, WI 53221** 

## **Hours of Operation**

#### **SCHEDULING ORDERS**

Monday - Friday 5:30 AM - 5:00 PM

#### **DELIVERY HOURS**

Monday - Friday 7:00 AM - 4:00 PM

Deliveries before 7:00 AM or after 4:00 PM are subject to additional charges.

#### **SATURDAY DELIVERY HOURS**

7:00 AM - 12:00 PM Weather and volume pending

Saturday Delivery Fee is \$85.00 per load

#### **PLANT OPENING FEES**

Please contact Customer Service for availability & rates.

# Important Notes QC Project Procedures

To ensure the highest level of quality concrete for the project the following policies and procedures should be followed to ensure a successful project. These procedures should be setup for two critical aspects of a project. One, the long-term strength gain of cylinders and the other short-term or contractor convenience cylinders for early break data.

Riv/Crete adheres to all State of Wisconsin DOT plant and material requirements. If requested Riv/Crete will provide a plant tour and inspection of our facilities.







# **Riv/Crete Quality Control Plan:** QC Personnel

Riv/Crete will provide onsite QC personnel to assist and help coordinate critical pours to the best of our ability with the contractor. Riv/Crete staff will work alongside the testing agency, contractor, to assist in monitoring and testing of concrete delivered to the project site.

#### **High Strength Load Sizes**

- Load sizes will be reduced as requested or determined by Riv/Crete will allow the truck to be unloaded faster to minimize heat gain.
- A minimum load size of 4 yards needs to be delivered in order to reach the specified strength.

#### **High Strength Concrete Time**

- High Strength concrete mixes (8K-12K) should not exceed 60 minutes on the project site. Loads that exceed that amount of time should be rejected.
- High Strength concrete mixes (8k-12k) should not exceed 90 times from the time the load is batched and delivered to the jobsite.

#### **Delivery Tickets**

- Times should be noted on delivery tickets.
- Drivers are not allowed to add water onsite unless directed to do so by the contractor or Riv/Crete quality control. Any addition of water will be noted on the delivery tickets.

#### Break Reports

 Riv/Crete will monitor and evaluate break data. Per ACI 318 if the concrete mixes are not performing as expected Riv/Crete will make modifications to the mix constituents to improve concrete performance. Riv/Crete Ready Mix has a mix numbering scheme that is informative and descriptive for our customers. Rather than a random set of numbers, each column is identifying a specific set of information about the concrete mix.



### **Project Site:**

ACI-301-16

"Provide space and source of electrical power on project site for testing facilities acceptable to owner's testing agency. This is for the sole use of owners quality assurance testing agency for initial curing of concrete strength test specimens as required by ASTM C31/C31M

#### **Third Party Technicians**

Certified ACI or equivalent certifications for field technicians shall be used for testing concrete onsite.

#### **Transportation**

- Cylinders can not be transported until at least 8 hours after final set.
- Cylinders need to be protected with suitable cushioning to prevent damage from jarring.
- Cylinders can not be in transit for over 4 hours.
  - o High Strength cylinders must be directly transported to the testing laboratory.

#### **High Strength Cylinder Storage**

During initial curing, the cylinders must be stored in a temperature range from 60 - 80 degrees F in an environment that prevents moisture loss for up to 48 hours. If the concrete design strength is 6,000 psi or greater, the initial curing temperature must range from 68 - 78 degrees F.

#### Must provide the following

- Designated location on jobsite for cylinder storage.
- Contractor will install a leveling pad for the designated area.
- Power source for the storage container.

- Max/Minimum thermometers to digitally track the internal temperatures of the curing box.
- Heating element during winter months
- Cooling element during summer months

# Short Term (Contractor Convenience) Cylinders

A maturity curve is a graphical representation of the relationship between concrete strength and maturity. Construction teams use the maturity curve of a specific concrete mix to estimate the strength of in-place concrete. This is typically used to determine early concrete strengths for moving forms or stressing concrete.

- o Tru-Max cure box should be used in this application to mimic the heat of the concrete placed on the deck.
- o Designated location on jobsite for cylinder storage.
- o Contractor will install a leveling pad for the designated area.
- o Power source for the storage container.
- o Max/Minimum thermometers or temperature data loggers to digitally track the internal temperatures of the curing box.
- o Heating element during winter months
- o Cooling element during summer months
- A probe would be used to validate the maturity curve and communicate with the Tru-Max cure box.
- A probe should be placed in one of the test cylinders placed in the tru-max box to synchronize the cure box temperatures of the in-place concrete.



### **Quality Control Laboratory:**

#### **Curing Facility**

Use a curing tank filled with saturated lime water (calcium hydroxide). Galvanized steel cattle trough, or equal, with temperature recording device inserted in water for control of 73.5 +/- 3.5 degrees F temperature requirement. Unless located in temperature-controlled environment, the facility must provide automatic temperature adjustment by means of heating/cooling elements.

#### **Laboratory Inspection**

Testing laboratory to provide inspection and photographic documentation of where and how the cylinders are being stored to ensure ACI compliance.

#### **Capping Method**

- High strength cylinders shall be ground.
- Neo-preen pads or sulfur capping can be used for concrete mixes not deemed high strength.

#### **Break Data Reporting**

- Testing lab will send timely break data reports to ensure the information is being consistently shared with the project team.
- A certified break technician will be capping and breaking cylinders.



## **Test Cylinder Quantities**

28 Day Mixes	6 Cylinders (Total)	
	2	7 Day Cylinders
	3	28 Day Cylinders
	1	56 Day Cylinder (Hold Cylinder)
56 Day Mixes	7 Cylinders (Total)	
	1	7 Day Cylinder
	2	28 Day Cylinders
	3	56 Day Cylinders
	1	56 Day Cylinder (Hold Cylinder)
91 Day Mixes	7 Cylinders (Total)	
	1	7 Day Cylinder
	1	28 Day Cylinder
	2	56 Day Cylinders
	3	90 Day Cylinders
	1	120 Day Cylinder (Hold Cylinder)



#### **HAMPTON BATCH PLANT**

Offers an extensive building supply center for your construction project.

#### **CHASE AVE. BATCH PLANT**

Accepts removed concrete and sells crushed materials for your jobsite.

**13TH STREET BATCH PLANT** 



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