



# NORTH CAROLINA

Department of Transportation



# 2017 Construction Administration Workshops Effective Project Communication

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## *Partnering – Why???*



- Each party is a piece of a puzzle. You can't complete the puzzle without all of the pieces.
- Pieces of the puzzle include the NCDOT, Contractor, municipalities, utility owners, etc.
- Key component is keeping lines of communication open and resolution of issues in a timely manner
- Each group may have different goals, perspectives, and needs in every project.
- Timely resolution between all parties is critical to maintaining project delivery.



*Partnering*

Coming together is a

**BEGINNING**

Keeping together is

**PROGRESS**

Working together is

**SUCCESS**

Henry Ford

## *Ways to Partner*

- Keep an open mind. Contractor is allowed to run a business at a profit.
- Goal is to identify problems, develop solutions, and keep the project moving without significant impact to all parties
- Construction Meetings – make sure you are meeting on a regular basis to discuss issues. At least monthly meetings, but can be twice/month or every week if needed depending on project.
- Executive Meetings – This provides a means for Division Engineers and Division Construction Engineers to hear high level concerns from Contractors personnel.
- Clear and Concise Documentation - This helps all parties to ensure that they all came away from conversations with same understanding.
- Be prepared – Be familiar with plans, contract, and specs. This will assist with being able to communicate about what is needed on the project.
- Go ahead and talk to critical personnel about hot topics – includes Division and Area personnel. Invite them to meetings.
- Don't let things sit until they “Blow Up”



# *Pre-Preconstruction Details*

## **Before the meeting**

- Review the contract, plans, phasing, permits, project commitments, and other critical project documents. Make sure project personnel is doing same.
- Go out to project – Look around at critical areas. Take preconstruction pictures.
- Meet with critical internal personnel – Division personnel, Area Construction personnel, Roadside Environmental prior to preconstruction meeting to discuss critical activities
- Review utility relocation progress to see if conflicts exist
- Set up time, date, and location for preconstruction conference with contractor. Make sure to advise contractor to invite subcontractors and request critical documents that should be submitted before the project starts (SAFs, progress schedule, narrative, who can sign SAs, material suppliers, proof of insurance, etc.)
- Make sure to discuss the projects with all other parties – municipalities, utility owners, RR, etc. Make sure to understand their expectations and requirements.



# Meetings

## Needed Meetings

- Preconstruction Meeting
- Utility Relocation Meetings – strive to have them complete prior to Date of Availability
- Surveying Preconstruction meeting – Any project with Contract Surveying
- Monthly Construction Meetings – typically once a month but can be more often depending on pace/complexity of project
- Utility Construction Meetings – prior to beginning construction on water/sewer
- Pre-Paving – before you begin paving operations (whether asphalt or concrete). Also another one before final surface on asphalt projects.
- Pre-Drill/Pre-Drive Meetings - Structures
- Pre-Pour on decks
- Any other critical operation where you want to make sure everyone is on same page.
- Anytime Needed – sit down and discuss issues before letting them spiral out of control.

## Meetings – Who to Invite

- NCDOT Personnel – project personnel, ARE, RE, Division, Area, M&T, Roadside, etc.
- Contractor – make sure they have the critical personnel – superintendent, project manager, etc.
- Subcontractors – make sure they have an opportunity to attend and discuss concerns
- Municipality – water/sewer line construction and signal construction
- 3<sup>rd</sup> party utility owners – any utility conflicts
- Others partners – Railroad, public partnerships, etc.

# *Preconstruction Conference – Topics of Conversation*

- Introductions
- Setting Project up for success
  - Expectations – from NCDOT and Contractor standpoint
  - Sense of Urgency
  - Steps for Problem Solving
  - Team Approach
- Lines of Communication
  - Project personnel - both NCDOT and contractor
  - Escalation Process
  - Correspondence
  - Emergency phone numbers – not just prime contractor, but traffic control, signals, etc.
- Project Commitments (Green Sheets)
- Community Concerns
- Right of Way
  - Conflicts
  - Delay of Entry
  - Condemned Property
  - Right of Way Agents
- Utility – 3<sup>rd</sup> party private
  - Discuss known conflicts
  - Owners comments
  - Special Provisions – dates may be included
  - Establish monthly utility meeting (if needed)
- Utility – Municipal; included in the project
  - Plans and special provisions
  - Owners comments and expectations

# *Preconstruction Conference – Topics of Conversation*

- Safety
  - PPE
  - Backup Alarms
  - OSHA Competent Personnel
  - Crane Safety
  - Trenching and Shoring
  - Fall Protection
  - Daily Safety Meetings
  - Personnel responsible for safety
- Schedules
  - Progress Schedule, Narrative
  - Potential Problems – “Rocks in the Road”
  - Anticipated Start Date
  - Contract Time, ICTs, and LDs
  - Monthly Construction Meeting Schedule
  - Estimate End Date
- Erosion Control
  - Managing earthwork
    - Working areas to completion
    - Benefits of reduced erodible area
  - BMPs- Best Management Practices
  - NCDOT Expectations
  - NPDES Reporting - timely implementation of devices and maintenance
  - Level I and Level II Personnel
  - Clearing and Grubbing Expectations
  - Borrow and Waste Sites
  - Temporary Suspension / ICAs / NOVs
  - Comments from Roadside Environmental
- Environmental Permits
  - Review Conditions and Drawings
  - Burial Depths
  - Causeways
  - Channel Changes
  - Comments from Environmental Agencies
  - Comments from Division Environmental Officer



# *Preconstruction Conference – Topics of Conversation*

- Subcontractors
  - DBE/MBE/WBE Commitments
  - Replacement of DBEs
  - Lease Agreements; Joint Checks
  - Subcontractor concerns
- Submittals
  - Review timeframes
  - Critical submittals
  - Tracking
- Supplemental Agreements
  - Authorized persons
  - Review process and authority levels
  - Standard Pricing Form
  - Labor Burden Rates
- Claims Process
  - Work together to minimize/eliminate claims
  - Review process and authority levels
  - Requirements for filing a claim (Article 104-8)
- Final Inspection Process
  - Finish as you go; Running list
  - Common punchlist items
  - Joint responsibility to find/correct problems
  - Scheduling final inspections
- Closeout Conference
  - Process of reviewing final estimate
  - Timeframes for review of FE
- Terms of Contract
  - Liability Insurance
  - Worker's Compensation
  - Federal Posters
  - 12 Month Guarantee
  - EEO Compliance
    - FHWA 1273
    - Annual EEO Report
  - Material Testing;
  - Material Certifications
  - Prompt Payment
  - Submission of Records

# *Preconstruction Conference – Topics of Conversation*

- Surveying
  - Location and Surveys to provide control information and electronic files
  - Who is performing surveying;
  - Verification of structures
  - Photogrammetry
  - Set up surveying precon meeting to discuss further issues if needed
- Roadway Issues
  - Method of Clearing
  - Earthwork – how to measure
  - Paving Expectations
  - Rideability – prepaving meeting
  - Density Method
  - QA Supervisors comments
  - Review of Special Provisions
- Traffic Signals
  - Who maintains signals
  - Signal Inspection Checklist
- Structures
  - Review of Special Provisions
  - Submittals
  - Concerns
- Review of Plans
- Questions / Comments

# *Monthly Construction Meetings*

- Progress of Work
- Safety
- Plan of Operations – One Month Look Ahead
- Surveying Needs
- Subcontractor's status and any concerns
- Unresolved Issues – SAs, claims, RFIs, conflicts, etc.
- Utility Conflicts
- Plan Revisions
- Submittal Status
- Property Owner / Community Concerns
- Maintenance of Project
- Erosion Control / Permit Compliance
- Last Estimate - % complete ; Quantity discrepancies
- Concerns / Potential problems
- New Issues
- Action Items
- Other topics as needed
- Make sure to document meetings



# *Pre-paving Meetings*

- Before paving operations begin. Recommend another meeting on major projects prior to final surface lift
- Safety – Traffic Control, Flaggers,
- Sequence of paving
- Number of pavers,
- Number and type of rollers
- Trucks hauling to the project
- Chain of Command for Communication
- Weather / Temperature Expectations
- Intermingling of mixes from different sources
- Density Control / Control Strips
- Smoothness Control – Required Rideability Spec
- Automatic Screed controls
- Utility / Drainage Adjustments
- Thickness of mat
- Overruns / Underruns
- QC / QA Checklist
- MTV?
- QMS Manual – Section 9.4.2



# Pre-Deck Pour Meetings

- Before first deck pour – make sure to have contractor, subs, concrete supplier representative, Area Construction Engineer, RE staff, and any other personnel present
- Safety – Traffic Control, Flaggers, Trucks, PPE, etc.
- Personnel – by all parties
- Schedule for pours
- Concrete – Mix Designs, Specs,
- Testing Process
- Pumping Concrete – Specs
- Weather – Anticipated weather/temps.
- Dry Run
- Placement
- Curing
- Talk about “What ifs”
  
- Pre-Deck Pour Checklist is located at:

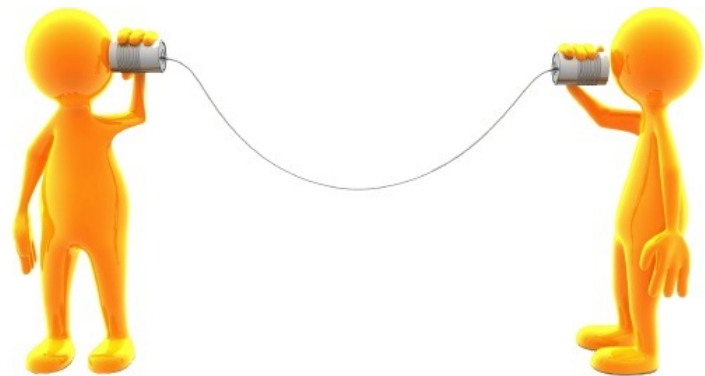
<https://connect.ncdot.gov/projects/construction/ConStManRefDocs/CONCRETE%20PRE-POUR%20CHECKLIST.pdf>

**TECHNICIAN'S CHECKLIST  
PRE-DECK POUR**

Pre - Deck Pour Checklist																									
<b>Concrete</b>																									
Have mix designs been submitted and approved?																									
How much retarder will be used?																									
<table border="1"> <thead> <tr> <th colspan="3">TABLE 1009.2 ELAPSED TIME FOR PLACING CONCRETE</th> </tr> <tr> <th rowspan="2">Air or Concrete Temperature Which ever is Higher</th> <th colspan="2">Maximum Elapsed Time</th> </tr> <tr> <th>No Retarding Admixture Used</th> <th>Retarding Admixture Used</th> </tr> </thead> <tbody> <tr> <td>90°F</td> <td>30 minutes</td> <td>1 hr. 15 minutes</td> </tr> <tr> <td>80°F through 89°F</td> <td>45 minutes</td> <td>1 hr. 30 minutes</td> </tr> <tr> <td>70°F or below</td> <td>60 minutes</td> <td>1 hr. 45 minutes</td> </tr> <tr> <td>**70°F through</td> <td>60 minutes</td> <td>1 hr. 45 minutes</td> </tr> <tr> <td>**60°F or below</td> <td>1 hr. 30 minutes</td> <td>2 hr. 15 minutes</td> </tr> </tbody> </table> <p>* Applicable to Class AA and A concrete. ** Applicable to Class B concrete.</p>			TABLE 1009.2 ELAPSED TIME FOR PLACING CONCRETE			Air or Concrete Temperature Which ever is Higher	Maximum Elapsed Time		No Retarding Admixture Used	Retarding Admixture Used	90°F	30 minutes	1 hr. 15 minutes	80°F through 89°F	45 minutes	1 hr. 30 minutes	70°F or below	60 minutes	1 hr. 45 minutes	**70°F through	60 minutes	1 hr. 45 minutes	**60°F or below	1 hr. 30 minutes	2 hr. 15 minutes
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What other admixtures will be used?																									
If the air content is low an entraining agent may be added on site as long as permitted by the Engineer and the specifications are followed.																									
<p>Construction Manual Section 423-4</p> <p>When concrete arrives on the job with an air content below the specified level by more than the allowable tolerance, the supplier may use additional air entraining admixture if the following conditions are met:</p> <ol style="list-style-type: none"> <li>1. The admixture is the same brand and type as originally introduced at the plant unless otherwise permitted by the Engineer.</li> <li>2. The admixture, if liquid, is measured into a bucket containing 1 gallon of water. The admixture, if prepackaged powder, is added according to the manufacturer's recommendation.</li> <li>3. The admixture, if liquid, is thoroughly mixed with the water and the mixture is then directed to the front of the drum with the drum momentarily stopped.</li> <li>4. The maximum allowable water-cement material ratio of the concrete is not exceeded with the addition of water and admixture solution.</li> <li>5. The concrete is then mixed 30 revolutions at mixing speed.</li> <li>6. A record is kept by certified personnel of the brand, type, and quantity of admixture and of water added is clearly noted on the sample card and batch ticket. This policy should apply only to trucks already on site for on route. However, air test, samples may be necessary on subsequent loads due to variations in raw materials at the plant.</li> </ol>																									
When an air test fails and an entrainment agent is added, the mix in the pump should be washed. When the adjusted mix exits the pump and passes they can begin discharging on the deck again.																									
What quantity of mix will be needed?																									
Minimum rate must be 35 cy per hour. What is the planned rate? The maximum interval between loads can not exceed 20 minutes.																									
Is fly ash required in the mix?																									
How many sets of body joints will be placed? How many concrete cylinders will be protected?																									
How and where will concrete cylinders be protected?																									
When will the trucks wash out?																									
What is the sampling frequency?																									

## *Other Meetings*

- Utility Relocation Meetings – Monthly or more often if needed to keep 3<sup>rd</sup> party utility owners moving. Continue until they are completely out of the way. Meet as needed when phased work is included in the contract.
- Utility Construction Meetings – Update municipality on ongoing work, issues, etc.
- Other Structure Meetings – Pre-drill, Pre-pile driving, Pre-wall construction
- Dilatory Progress Meeting
- Pre-Traffic Shift
- Pre-Blast Meeting
- Claim/Supplemental Agreements - understand where the other party is coming from. Sometimes easier to talk in person verses exchange emails.
- Any other time construction operations may be critical to project delivery, new to personnel, or if it appears that there are questions/concerns



## *Tips for Communication in Meetings*

- Be open, honest, and concise.
- If you don't know the answer, advise that you will research it, and then follow up in a timely manner.
- Open communication
- Be a good listener – keep an open mind when considering options
- Try to understand the other parties point of view – you don't have to agree but at least understand where they are coming from.
- Stay calm and professional
- Prepare an agenda prior to the meeting to keep the meeting on track
- If things start going off track, bring everybody back together and reign things back in.
- Follow up with documentation of meeting in timely manner
- Set goals, action items and follow up dates.



## *Tips for Documentation*

- Document, document, document.
- Send out minutes within 7-10 days of meeting. Everyone will still remember topics of conversation.
- Use the agenda to keep notes on critical points of discussion and topics discussed. Make notes about who said what.
- Bring someone to take good notes if you are running the meeting.
- Use iPad if you are the note taker – this can cut down on time needed to put minutes together afterwards
- Make sure you include details on critical discussions. Include decisions, follow up steps, action items, any directives, as well as points of view on both sides.
- Record it if needed so you can go back and listen to the meeting again. Let everyone know you are recording it.

