

# *Are you leaving \$\$\$\$ on the table?: Loss of Productivity Claims*

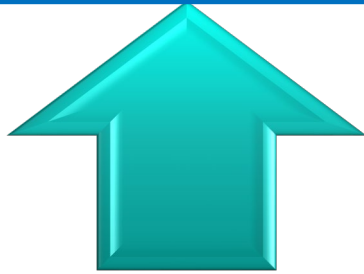
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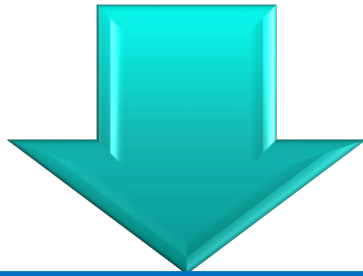
CFMA MIDWEST REGIONAL  
CONFERENCE

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# What are we talking about?



**Productivity** – the measure of the rate at which work is performed



**Loss of Productivity** – the increased cost of performance caused by a change in the contractor's anticipated or planned working conditions, resources, or manner of performing its work

# Disruption $\neq$ Delay



“[A] ‘delay’ claim captures the time and cost of not being able to work, while a ‘disruption’ claim captures the cost of working less efficiently than planned.”

*-Bell BCI Co. v. United States, 72 Fed. Cl. 164, 168 (2006)*

# Do I Have a Loss of Productivity Claim?

Loss of Productivity claims arise when a contractor's plan – sequencing, scheduling, volume, manning, or flow - is forced to be altered by the owner's actions, inactions, directives, changes, or decisions (or other factors for which the owner assumes the risk).

## What Do I Need to Prove?

- Liability
- Causation
- Damages



# Why the Supposed Complexity?

- Multiple factors and multiple actors
- Some factors may be recoverable; some are not (liability)
- Often hard to prove causation
- Damages based on incomplete or speculative data, or assumptions

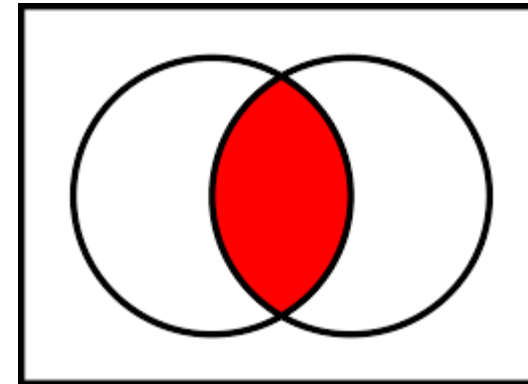
# Loss of Productivity is a BIG DEAL for Contractors!

- Labor is a major portion of construction costs
- Slim margins in the construction industry
- Small loss of labor productivity can eat up all profits, or lead to a loss

# Common Factors for Loss of Productivity *Claims*:

- **Weather**
- Crowding/Stacking
- **Out-of-Sequence Work**
- Restricted/Limited Site Access
- Idleness
- Site Conditions
- **Acceleration**
- Cumulative Impact

Not Mutually  
Exclusive!!!



# Factors and Standards

- U.S. Army Corps of Engineers
- Mechanical Contractors Association of America (MCAA)
- National Electrical Contractors Association (NECA)
- Association for the Advancement of Cost Engineering (AACE)
- American National Standards Institute (ANSI)



**US Army Corps  
of Engineers.**



**MCAA**



# MCAA Labor Estimating Manual

## Inefficiency Factors:

- Stacking of Trades
- Morale & Attitude
- Reassignment of manpower
- Crew Size Inefficiency
- Concurrent Operations
- Dilution of Supervision
- Learning Curve
- Errors & Omissions
- Beneficial Occupancy
- Joint Occupancy
- Site Access
- Logistics
- Fatigue
- Ripple
- Overtime
- Season & Weather Changes

# MCAA Standards

| Factor                                                                                                                                                                                                                                                                                                   | Percent of Loss per Factor |         |        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------|--------|
|                                                                                                                                                                                                                                                                                                          | Minor                      | Average | Severe |
| 1. <b>STACKING OF TRADES:</b> Operations take place within physically limited space with other contractors. Results in congestion of personnel, inability to locate tools conveniently, increased loss of tools, additional safety hazards and increased visitors. Optimum crew size cannot be utilized. | 10%                        | 20%     | 30%    |
| 2. <b>MORALE AND ATTITUDE:</b> Excessive hazard, competition for overtime, over-inspection, multiple contract changes and rework, disruption of labor rhythm and scheduling, poor site conditions, etc.                                                                                                  | 5%                         | 15%     | 30%    |
| 3. <b>REASSIGNMENT OF MANPOWER:</b> Loss occurs with move-on, move-off men because of unexpected changes, excessive changes, or demand made to expedite or reschedule completion of certain work phases. Preparation not possible for orderly change.                                                    | 5%                         | 10%     | 15%    |
| 4. <b>CREW SIZE INEFFICIENCY:</b> Additional workers to existing crews "breaks up" original team effort, affects labor rhythm. Applies to basic contract hours also.                                                                                                                                     | 10%                        | 20%     | 30%    |

# U.S. Army Corps of Engineers

## *Effects of Cold Weather on Productivity*

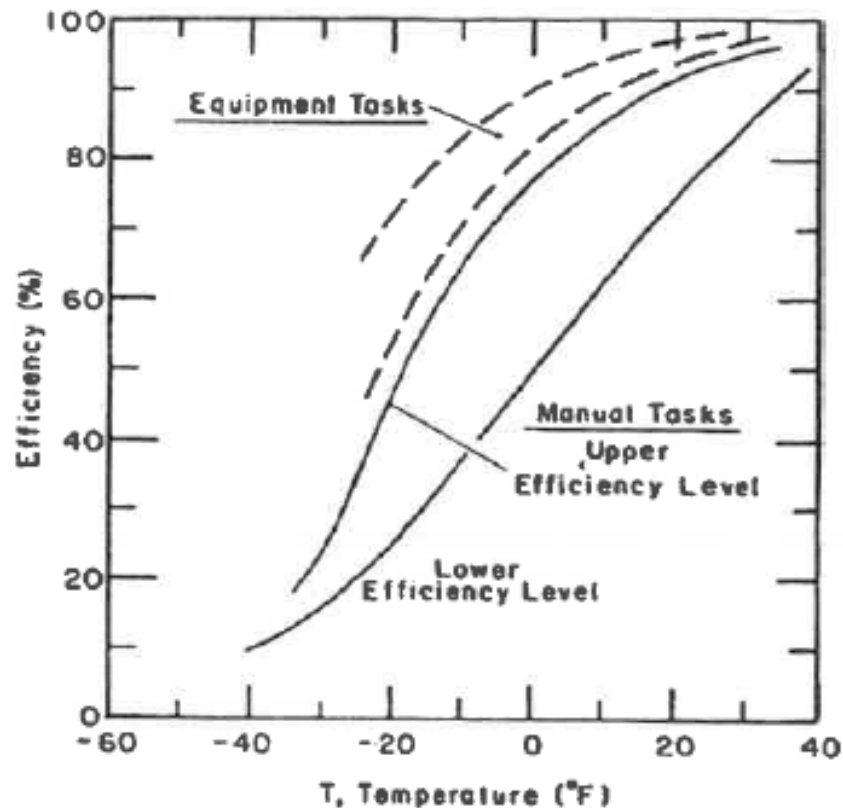
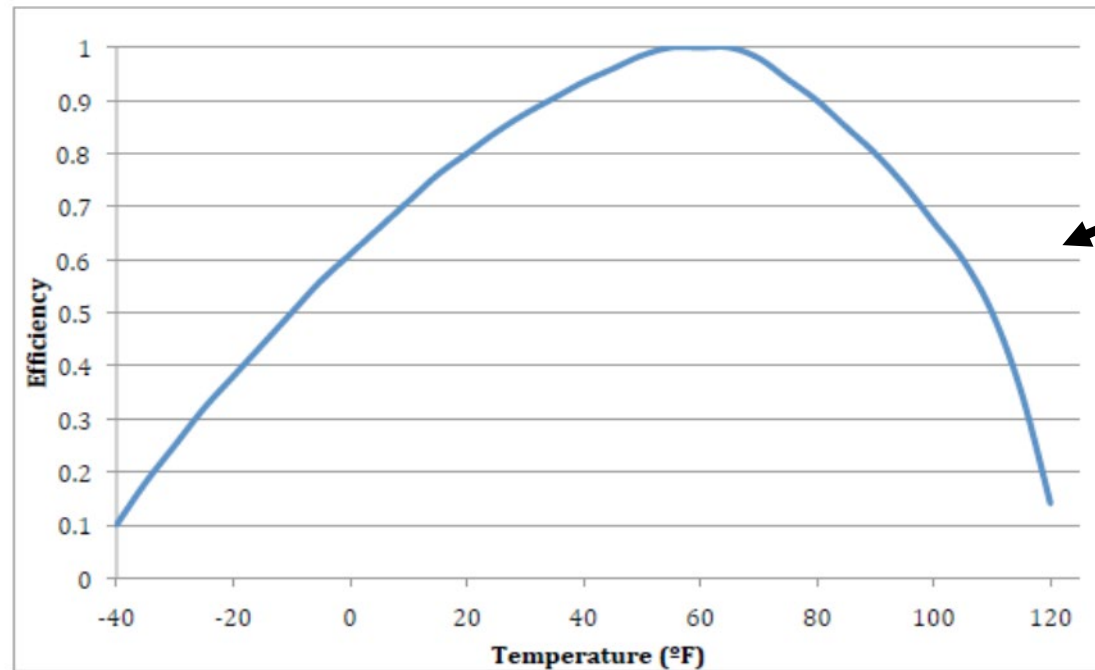


Figure 1. The effect of temperature on manual and equipment tasks.

- Working in cold weather impacts productivity!
- AND it affects productivity!

# Ibbs, Nguyen, and Lee

## *Quantified Impacts of Project Change*

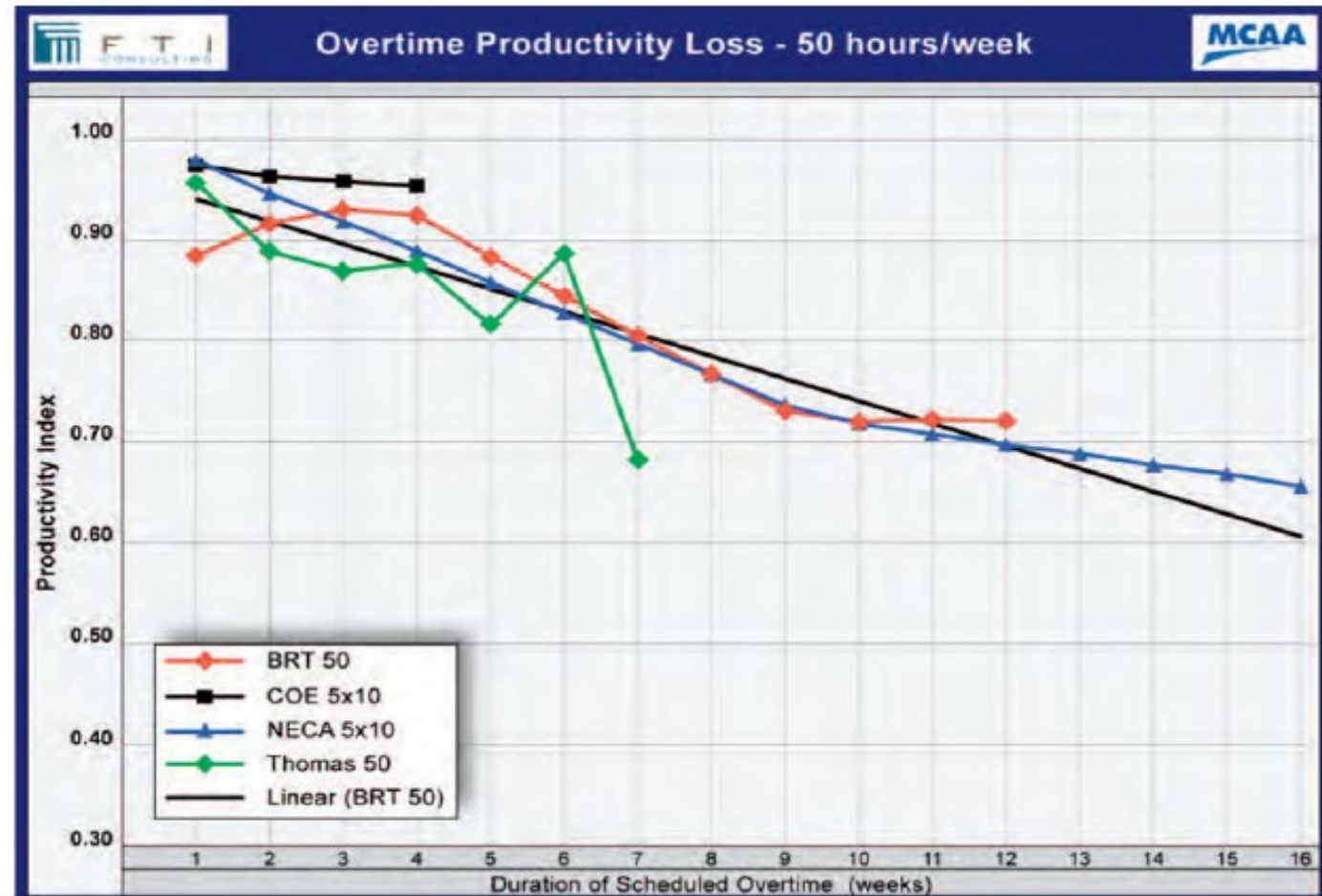


Hot weather too!

Figure 10: Overall Productivity Impact from Temperature, derived from Lee, 2007, Figure 6.6.22

# Overtime and Acceleration

- Overtime typically involves premium rates
- Direct cost may be covered by a Change Order
- But is the loss of efficiency covered?
- Downstream Effects?



# Ibbs, Nguyen, and Lee

## *Quantified Impacts of Project Change*

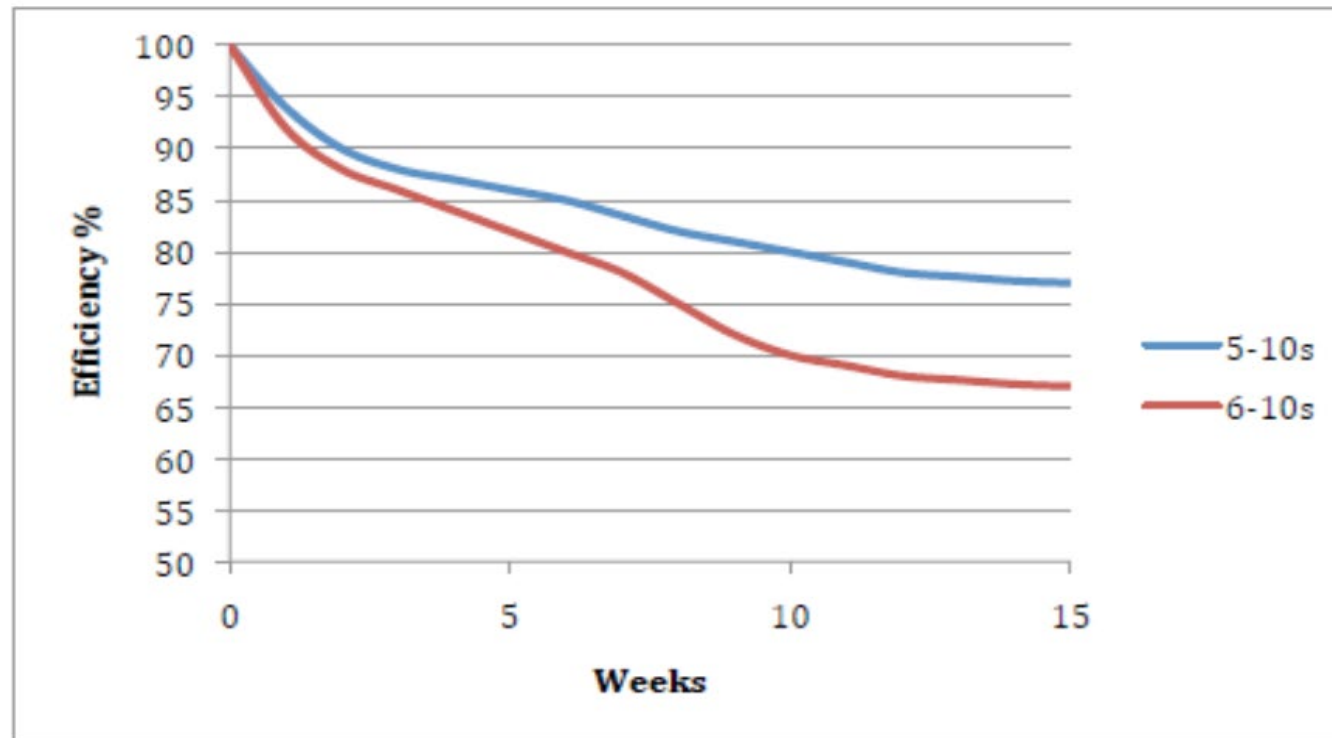


Figure 5: Change in efficiency as overtime is extended. (Lee, 2007)

# Using the Standards

- Generally not used to calculate damages
- Brainstorming
- Used to show your calculations are reasonable
- Expert Witnesses!



# The Big Question:

# Loss in Comparison to *What*?

- Some Baseline level
  - Not necessarily the bid!
- Expected Productivity
  - Not necessarily what *was* expected, what *should be* expected
  - Reasonable
  - Realistic
- Bruner & O'Conner:
  - “Compensable abnormal disruption”
  - Some level of disruption is to be expected (risk)

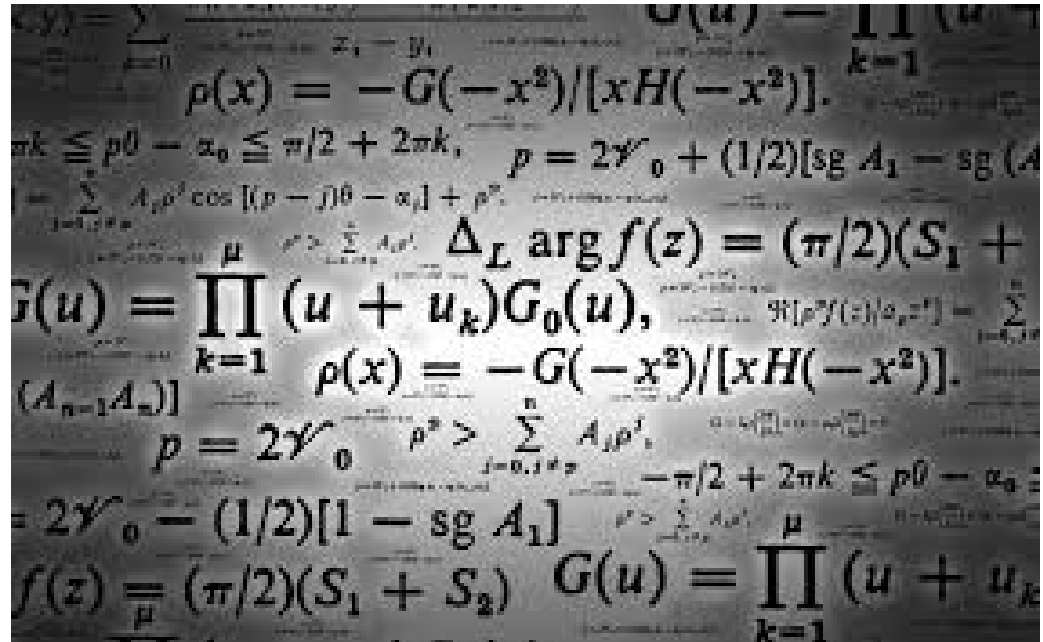


# Damages – The Real Fun!

- In general – get an expert!
- “Claims for lost productivity damages, based on the measured mile method or any other method, normally require expert opinion testimony under [Federal Rule of Evidence] 702.”

*Flatiron-Lane v. Case Atlantic Co.*

- *Reasonable* estimates are acceptable!
- May be limited by contract



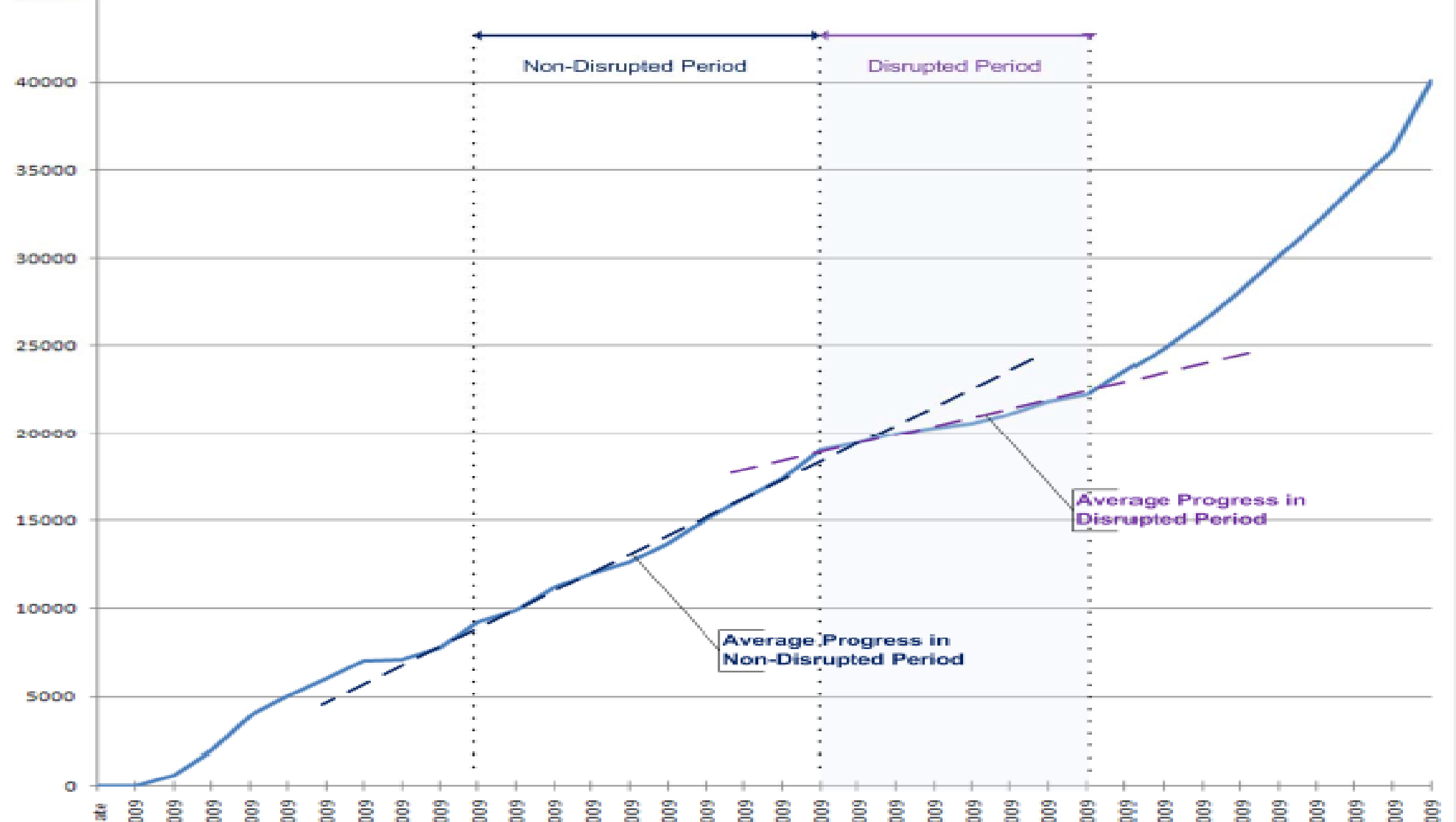
# AACE RP 25R-03: Methods Ranked

- **Project Specific Studies**
  - **Measured Mile (the King)**
  - Earned Value Analysis
- **Project Comparison Studies**
  - Comparable project work
  - Work on comparable projects
- **Subject Specific Studies**
  - Overtime
  - Impact of Change Orders
- **General Industry Studies**
  - MCAA, NECA, etc.
- **Cost-Based Methods**
  - **Total Cost**
    - Whole Project
    - Specific contract items / elements
  - **Modified Total Cost**
    - Whole Project
    - Specific contract items / elements

# Measured Mile Method

- Widely acknowledged as the most acceptable method for calculating lost productivity.
- Compares identical tasks during impacted and non-impacted periods of the project.
- Measures Actual Performance (impacted) vs. Actual Performance (un-impacted)





# So Why Use Anything But the Measured Mile?

*"I have the simplest of tastes, only the best will do."*

- Oscar Wilde

- Sufficiency of information available will dictate your method
- Nature of the productivity impacts
- Required certainty vs. preparation time and cost
- Prospective, concurrent, vs. after-the-fact tabulations



# Total Cost Method (and *Modified* Total Cost Method)

- Compares the BID costs to actual expended costs
- To be successful show:
  - (1) The impracticability of proving actual losses directly;
  - (2) The reasonableness of the bid;
  - (3) The reasonableness of the actual costs; and
  - (4) Lack of responsibility for the added costs
- Modified Total Cost Method is adjusted for concurrent disruptions



# Reality Checking

- Are contractor-caused impacts– in addition to the owner-caused impacts – adequately considered?
  - Credibility!
- Is the method you used the *most reliable* given the circumstances, data available, etc.?
  - If the supporting data is limited – is that your fault?
- Do your results match your narrative?

# Gathering Financial Information

- Control the information when you learn of an impact
- Contact attorney for assistance in identifying the types of information to segregate and gather once the impacted event has occurred
- Separate cost codes to track the impacted work
  - For General Contractor's supervision, coordination activities
  - For Subcontractor's labor on the impacted work
  - Easier when it is changed work than when it is base scope impacted by some outside event
- Require weekly summaries of the impacted costs
- Maintain bid information and backup records



# Seek Consultation Early

- Notify Attorney and Get Advice for Best Practices in Notifying Owner of Claim and Preserving the Evidence Needed to Prove the Claim
- Obtain Expert Consultation Via Either a Claims Consultant or Particular Trade Expert to Maximize the Recovery and Analyze the Additional Costs in a Manner that is Consistent with Industry Standards
- You can Limit the Costs of Attorneys and Expert Consultants, but if Your Claim is Significant, You Want Their Advice Early in the Process

# Notify the Owner!!!

- This is a Claim
- Notice Provisions Likely Apply
- You Do Not Need To Know Full Impact Before Issuing “Notice”
- Once Impact Is Realized – Provide Notice That An Impact Has Occurred And Your Productivity Will Be Impacted – You Will Provide Full Cost Impact Once It Is Realized And Fully Calculated
- Do Not Sign A Change Order That Waives Your Rights
  - If the lost productivity relates to a change in scope, when you sign the change order for the additional scope costs, it may include boiler plate language waiving rights to any other impacts or costs related to the subject matter of the Change Order. This will waive rights to lost productivity claims.

# Notify the Owner!!!

- Claims Notices In Payment Applications
  - The lost productivity/impact claims should be included on your outstanding or pending claims/change order lists
  - Some Owners and General Contractors are requiring you to sign claims waivers along with lien waivers.
    - Identify Claim: “Productivity Impact Due to Abnormal Weather Conditions, Amount TBD as impact is ongoing.”

# Notify the Owner!!!

- Once the Impact has Subsided, Then Provide a Final Computation and Submit the Updated Claim to General Contractor or Owner.
- General Contractors – If There is any Potential Legitimacy to a Subcontractor's Lost Productivity Claim, Pass it up to the Owner to Avoid Being Liable for it and not Recovering Any Amount From the Owner.

# Waivers of Notice Requirements

- Under certain circumstances, the Owner and/or General Contractor may waive any of the following:
  - Contractual notice requirements
  - Timing requirements
  - Pay if paid provisions
  - Pass through obligations
  - Payment defenses
- So Don't Give Up On A Claim If You Have Significant Additional Costs

# Strategies

- Arbitration is better than Litigation for Productivity Claims
- Hire Experienced Attorneys and Experts
- Secure All Project Records
- Before Project is Over, Have Documents Gathered in One Electronic Location
- In Contracts:
  - Do not waive right to inefficiency, impact or productivity claims
  - These are not consequential damages – so waiver does not apply
  - Give yourself as flexible notice of claims provisions as possible.



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