“Managing Construction Claims”

Calvey Consulting, LLC
8473 Settlers Passage
Cleveland, OH 44141
440-740-1132

Managing Construction Claims

- Why are Claims are disputed.
- What is Typical Claim
- What does a Consultant use to develop a Claim.
- What are the Key Components.
- What are Accepted Methods of Analysis

Why are Construction Claims Disputed ?

- The Issues are complex.
- The Claims are loosely documented.
- Breakdown in communication.
- There is an honest difference in opinion.
- No budget dollars.

What is a “Typical Construction Claim”?

- Claimant – Multi Prime Contractor
- Money
- Time
- Source of the Dispute – Third Party
- No Exact Accounting

What does a Claims Consultant use to develop his analysis?

- Contract
- Project Schedules
- Pay Applications
- Certified Payrolls
- Project Meeting note
- Daily Logs

What are the Key Components of a Typical Contractor's Claim?

- The Planned Schedule
- The Actual Schedule
- Predecessor Delay
- Impact on the Contractor
- Quantify the Damages

Methods of Delay Analysis
Time Impact Analysis

- Impacted As Planned
- Adjusted As Built
- Windows
- Constructive Acceleration

Calculating Damages

- Extension of General Conditions
- Extension of Home Office Overhead
- Escalation
- Loss of Productivity

AACE - Purpose of Recommended Practice

- Identify Lost Productivity Estimating Methodologies
- Rank Order the Methodologies
- Define and Discuss Each Methodology
- Identify Selected Studies Applicable to Each Methodology

Methods of Estimating Lost Productivity

- Project Specific Studies
- Project Comparison Studies
- Specialty Industry Studies
- General Industry Studies
- Cost Basis

What is Productivity?

$$\text{Productivity} = \frac{\text{Output (units completed)}}{\text{Input (work or equipment hours)}}$$

$$\text{Productivity Factor} = \frac{\text{Actual Productivity}}{\text{Baseline or Planned Productivity}}$$

Common Causes of Lost Productivity

- Acceleration (directed or constructive)
- Crowding of labor or stacking of trades
- Over manning
- Learning Curve
- Excessive overtime
- Adverse or unusually severe weather
- Dilution of Supervision

Common Causes of Lost Productivity

- Changes, ripple impact, cumulative impact of multiple changes and rework
- Defective engineering, recycle and/or rework
- Absenteeism and the missing man syndrome
- Craft turnover
- Material, tools and equipment shortages
- Site or work area access restrictions

Project Specific Studies

- Measured Miles Study
- Earned Value Analysis
- Work Sampling Method
- Craftsmen Questionnaire Sampling Method

How long is it?

Measured Mile – Physical Units

Measured Mile

10 Miles of pipe installed – 1,000 manhours

100 manhours/mile

Impact

4 Miles of pipe installed – 640 manhours

160 manhours/mile

Loss of Productivity

60 manhours/mile

x4 miles

240 manhours

Earned Value Analysis

Measured Mile

70% Labor Complete – 1,000 manhours

14.3 manhours/1%

Impact

30% Labor Complete – 640 manhours

21.3 manhours/1%

Loss of Productivity

7 manhours/1%

30%

240 manhours

Project Specific Studies

- Measured Miles Study
- Earned Value Analysis
- Work Sampling Method
- Craftsmen Questionnaire Sampling Method

How long is it?

Project Comparison Studies

- Comparable Work Study
- Comparable Project Study

Specialty Industry Studies

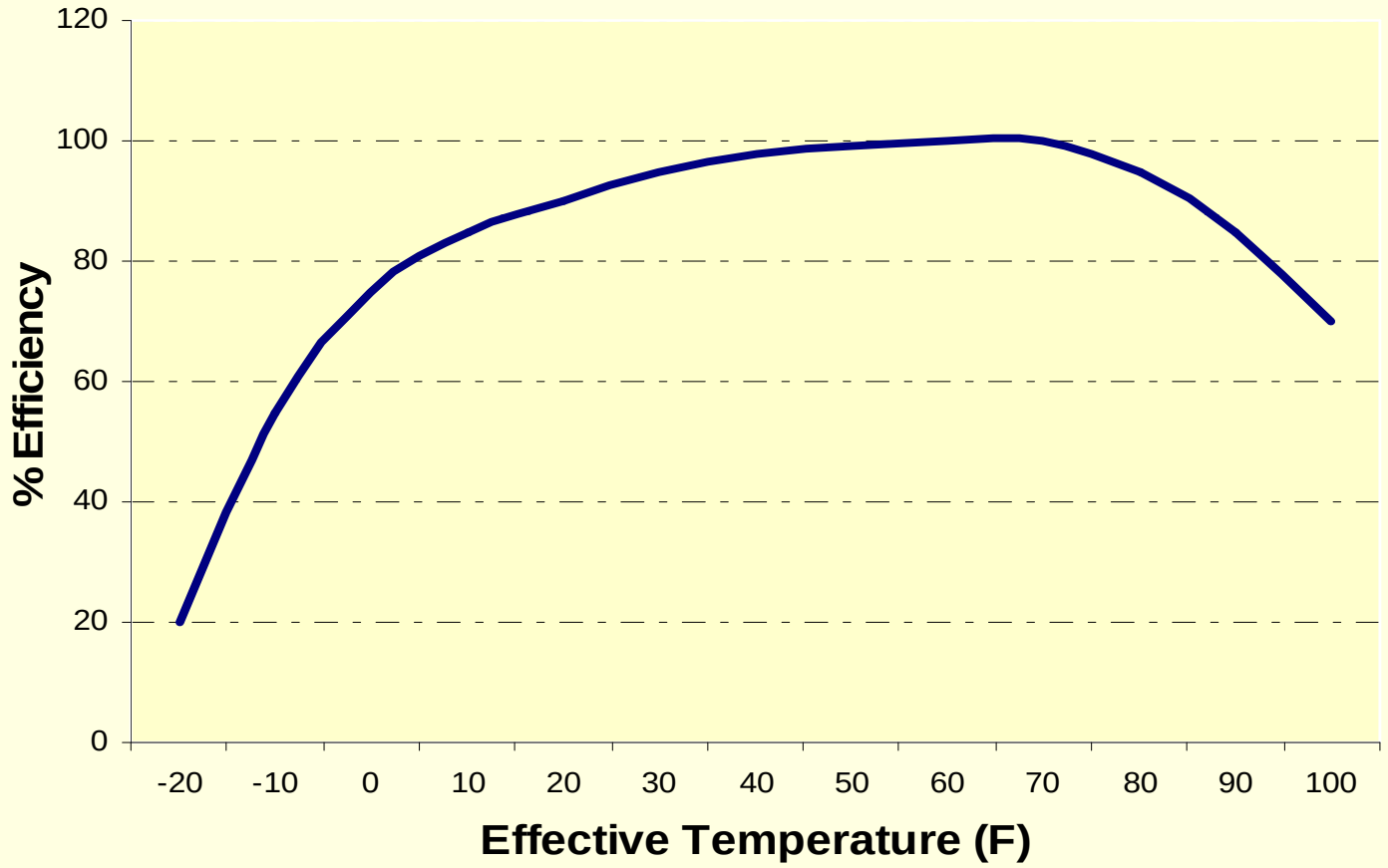
- Acceleration
- Changes, Cumulative Impact and Rework
- Learning Curve
- Overtime and Shift Work
- Project Characteristics
- Project Management
- Weather

Specialty Industry Studies

- Selected Studies
  - Weather Impact on Productivity

  - Overtime Impact on Productivity

Weather Impact on Productivity



Weather Impact on Productivity (NECA Studies)

- Temperature (effective) Impact

Effective Temperature Range °F	Efficiency %
+40 to 80	100
-20 to +20	20 – 95
80 to 100	85 - 60

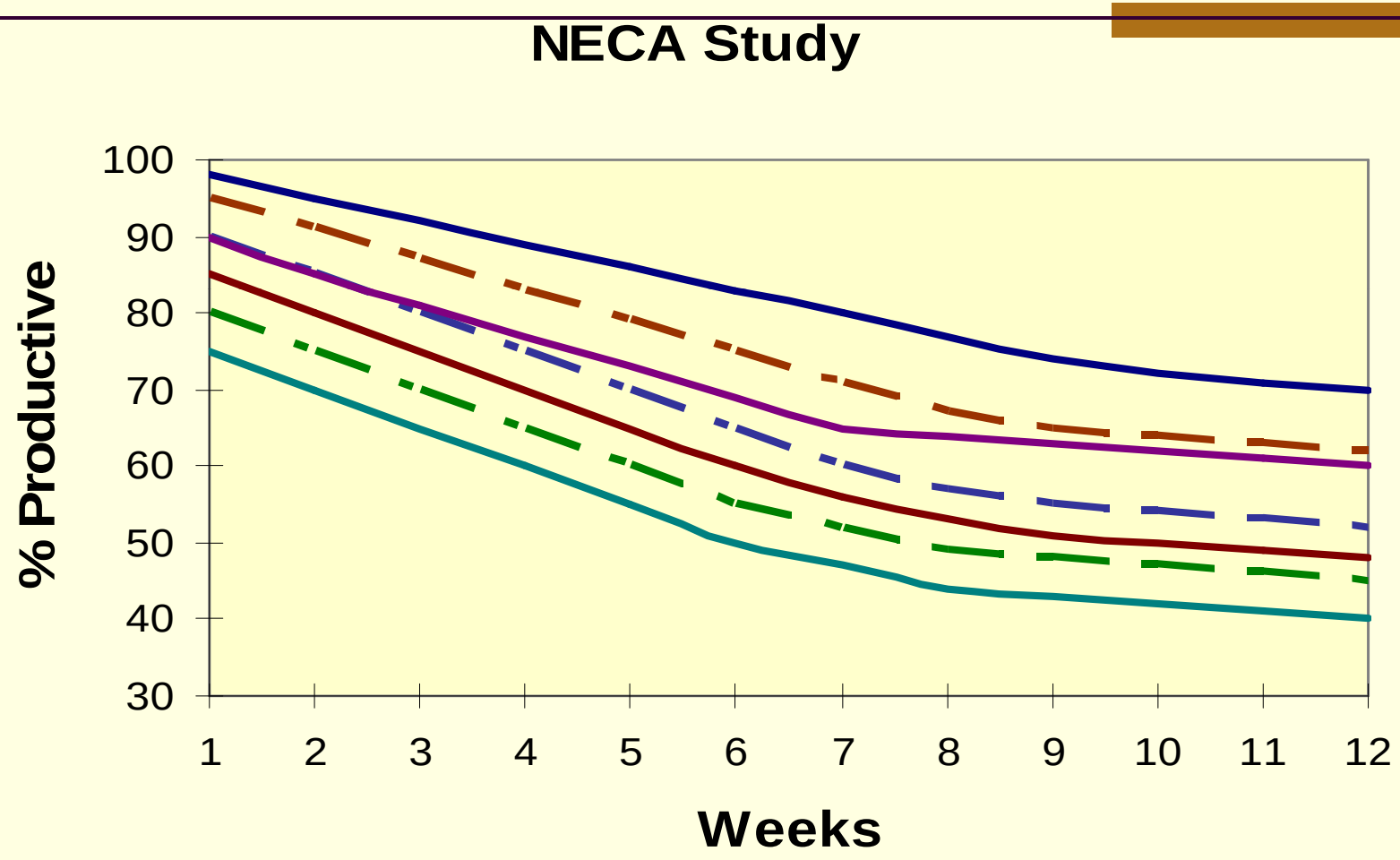
Weather Impact on Productivity

- Daily Log Documentation
  - Frequency (AM, Noon, PM)
  - Temperature
  - Wind
  - Precipitation (rain, snow, sleet)
  - Excessive Humidity
- Historic Data
  - National Oceanic & Atmospheric Admin. (NOAA) – National Climatic Data Center

Overtime Industry Studies

- Bureau Labor Statistics – 1947 (Mfg.)
- Business Roundtable – 1980
  - 10 year study of P&G plant projects
- National Electrical Contractors Assn.
  - 1969 (rev. 1989)
- Construction Industry Institute – 1988
  - 7 projects, all crafts
- Cost Engineering Composite - 2004

Overtime Impact on Productivity



Overtime Impact on Productivity

Days – hours per day	Productivity Range		
	2 wks	to	12 wks
5 - 10's	95 %	to	70 %
6 - 10's	91 %	to	62 %
5 - 12's	85 %	to	52 %
6 - 12's	75 %	to	45 %
7 - 12's	70 %	to	40 %

General Industry Studies

- U.S. Army Corps of Engineers Modification Impact Evaluation Guide
- Mechanical Contractor's Association of America
- National Electrical Contractor's Association
- Estimating Guides

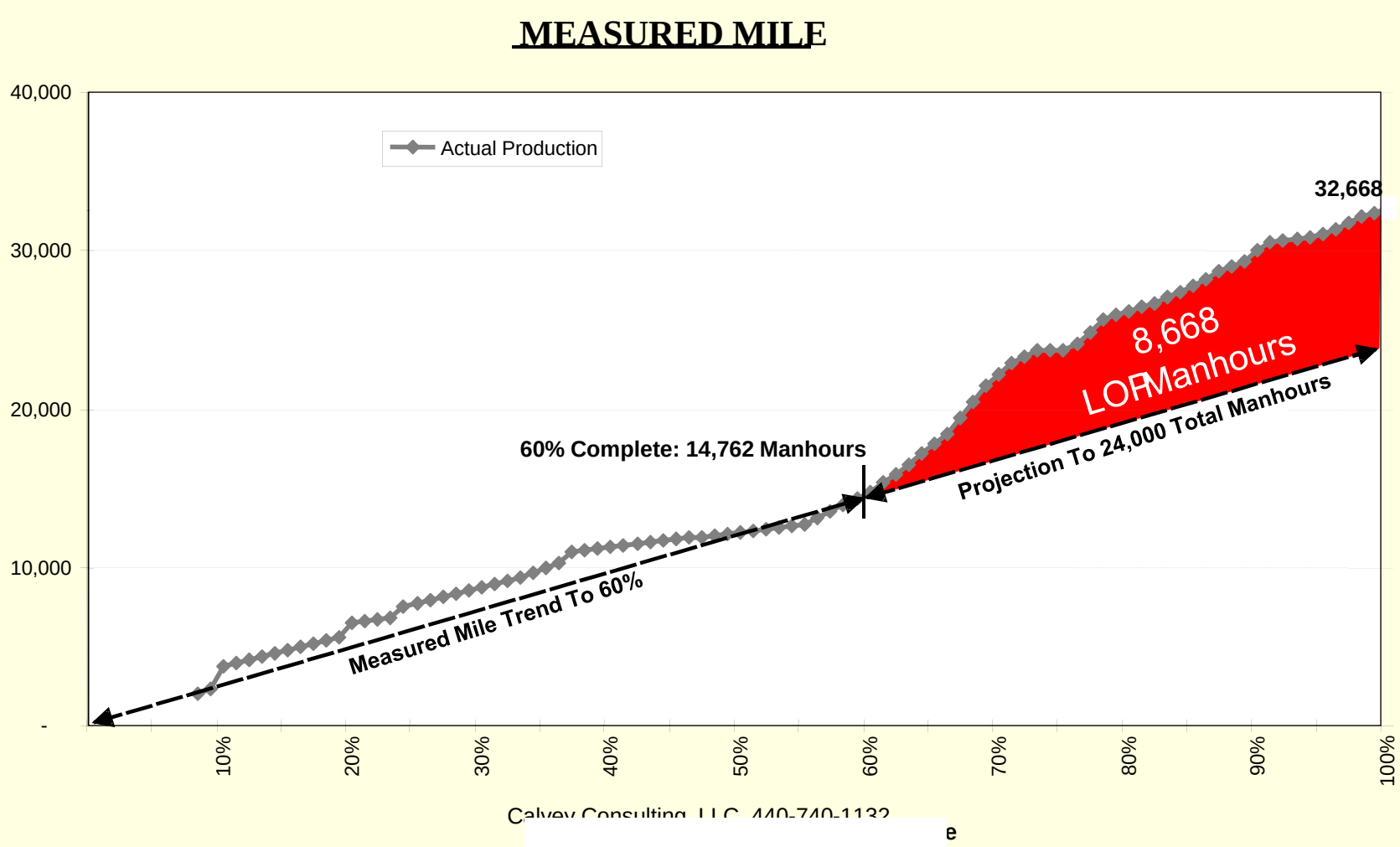
General Industry Studies

- MCAA
  - 16 Factors
  - Range of Loss
- NECA
  - 25 Factors Checklist
  - Normal – Difficult – Most Difficult
- US Army Corps of Engineers
  - Number of Factors
  - No Longer Published

Cost Basis

- Total Unit Cost Method
- Modified Total Labor Cost Method
- Total Labor Cost Method

Measured Mile



Court Case (A) – Clark Concrete Contractors, Inc., 99-1 BCA ¶30,280 [1]

"[The Government] is correct in asserting that the work performed during the periods compared by [the Contractor] was not identical in each period. We would be surprised to learn that work performed in periods being compared is ever identical on a construction project, however. And it need not be; the ascertainment of damages for labor inefficiency is not susceptible to absolute exactness. (Citation omitted). We will accept a comparison if it is between kinds of work which are reasonably alike, such that the approximations it involves will be meaningful."