

QUANTITATIVE DELAY ANALYSIS & E.O.T. ENTITLEMENT

INTRODUCTION

The most significant unanticipated costs on many construction projects are the financial impacts associated with delay and disruption. Assessing delay and disruption, establishing a causal link from each delay event to its effect, contractual liability and the damages experienced as a direct result of each event can be difficult and complex. Construction experts are now being faced with Daubert-like challenges in international Arbitrations, with little guidance as to what governing protocols or industry standards these experts will be held to when conducting Critical Path Delay Analysis. The Presenter will present a few of the most commonly used methods of delay analysis, explain the application of the Daubert test in delay related cases, and most importantly, the series of assumptions a delay analyst must make when attempting any method of delay analysis. Mr Caletka will also present a brief update on recent case law relevant to delay and disruption and brief real-life case studies from recent assignments, time allowing.

PRESENTER

Mr. Anthony Caletka, Managing Director, Greyhawk

Tony has 22 years of experience providing construction management and consulting, with a strong emphasis on CPM scheduling and forensic delay analysis services. He is a Principal at Greyhawk and co-author of the groundbreaking SCL Delay and Disruption Protocol (eot.protocol.com), as well as Delay Analysis in Construction Contracts (Wiley-Blackwell 2008).

Certified Construction Manager (CCM) and has been appointed as expert on many construction disputes involving delay and disruption matters in US and UK courts as well as in many International arbitration forums (ICC, ICE & UNCITRAL), representing General Contractors, Construction Managers, sub-contractors, joint ventures, PFI/PPP consortia, and owners. Trained as an engineer he has hands-on experience addressing extra work, concurrent delays, CPM analysis, differing site conditions, acceleration, escalation, and quantifying the effects of disruption and inefficient working.

PROGRAM

DAY ONE

DEFINING TIME

• WHAT IS A CRITICAL PATH

- The As-Planned Schedule
- Early Completion Schedules

• WHAT IS FLOAT

- Forward Pass – Earliest Event Times
- Time Risk Allowances
- Who Owns the Float?

• WHAT IS CONCURRENCY AND WHAT ARE CONCURRENT DELAYS

- Sequential Delay Events
- Relevant Events and Irrelevant Events

DAY TWO

PREPARING A DELAY CLAIM

• DELAYS

- Excusable and Inexcusable Delay
- Inefficiency and Disruption
- Quantifying the Discrete Impact of Events

• ANALYZING THE EVENT

- Accuracy and Content
- Need for Clarity
- Use of Charts and CPM Networks

• ANALYZING THE IMPACT

- As Planned, As Built, Windows and other forms of Analysis
- Impossibility and Defective CPM Schedules
- Identification of Concurrent Delay and Concurrent Entitlement

• DELAY RELATED DAMAGES

- Overhead, both Job Site and Home Office Overheads
- Disruption and Loss and Expense
- Delay / Extension of Time and Prolongation Costs

DAY THREE

PREPARING AND PRESENTING A DISRUPTION CLAIM

• DISRUPTIVE EVENTS

- Late Design
- Rework / Corrective Work
- Delayed or Hindered Access

• DISRUPTION / ACCELERATION CATEGORIES

- Crew overloading / crowding
- Learning and “un-Learning” curves
- Stacking of Trades in confined space

• PRESENTING ACCELERATION / DISRUPTION

- Mechanical Contractor's Association Publication/Software
- “Measured Mile” approach
- Modified Total Cost approach

DAY FOUR

• MANAGING RISK (EMPLOYERS) OR MAXIMIZING OPPORTUNITIES (CONTRACTORS)

- Schedule Submission and Approval
- Event Impact and Change Management
- Full and Complete Satisfaction / Reservation of Rights (future effect)
- Documentation and Record Keeping

• TIME RISK ALLOWANCE ALLOCATION

- Early Completion Schedules
- Declaration of Float Deterioration
- Re-Assignment of Time Risk Allowance

• GAMES CONTRACTORS PLAY

- Unrealistic early completion schedule
- Artificial logic to hide float or exaggerate known delays
- Incorrect actual dates in progress updates

• GAMES EMPLOYERS (ENGINEERS) PLAY

- Non-Approval of Baseline Schedule
- Identification of Contractor Caused Delays (x-files)
- Shadow Schedules

DAY FIVE

AVOIDING THE “WAIT AND SEE” GAME – PROCEDURES THAT WORK

• PROTOCOL COMPLIANT PROCEDURES

- SCL Protocol – Recommendations
- Float (Time and Money)
- Concurrent Delay (Time and Money)
- Record Keeping

• TAILORING PROCEDURES TO FORMS OF CONTRACT

- ECC / Fidic Forms
- Flow Charts and Procedures
- AACE, and others

• RECENT EFFORTS TO PROMOTE THE PROFESSION OF SCHEDULING

- APM - College of Scheduling
- AACE, and others

• CASE STUDIES – ILLUSTRATIONS

- Preparing Claims Management Manuals and Procedures
- Predicting Delays and Establishing Project Contingencies
- Demonstrating Cause-Effect and Concurrent delay without CPM Schedules