

2026 CMAA EDUCATION PROGRAM NORTHERN CALIFORNIA CHAPTER

EDUCATION WEBINAR-

Schedules & Forensic Delay Analysis: A
Practical Guide for Construction Managers



PRESENTS

EDUCATION PROGRAM WEBINAR

SCHEDULES & FORENSIC DELAY ANALYSIS:
A PRACTICAL GUIDE FOR CONSTRUCTION
MANAGERS

THURSDAY, FEB 19th | 11:30am - 1:00pm



CONTINUING EDUCATION CREDIT

A credit value is assigned to CMAA courses and seminars in units of Professional Development Hours (PDH), Learning Units (LU), and CCM Recertification Points. CMAA guarantees that course material meets the minimum requirements for a PDH, which is 60 minutes of instruction, or increments thereof.



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UPCOMING EVENTS



SACRAMENTO - CMIT
Young Professionals Meet ...
Fri, Feb 27 | Bowlero



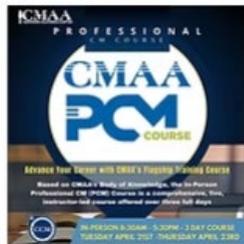
HAYWARD- CMIT Young
Professionals Meet & Mingle
Fri, Feb 27 | Round 1 Bowling



CMIT / YP Site Tour - The
Heart Group Medical Offic...
Fri, Mar 06 | The Heart Group M...



Career Fair
Thu, Apr 16 | Rotunda Building



In-Person Professional CM
Course
Tue, Apr 21 | May Lee State Offi...



Owners' Night, in
association with ACEC Bay..
Thu, Apr 23 | MTC



Awards Gala and Industry
Celebration
Thu, May 14 | BlackHawk Museum



2026 Past Presidents Golf
Tournament
Thu, Aug 27 | Chardonnay Golf ...

Celebrating
Excellence
in the Built
Environment

March 19, 2026,
Submission deadline

OMAAA
NORTHERN CALIFORNIA CHAPTER

**PROJECT
ACHIEVEMENT
AWARDS**

2026 CALL FOR ENTRIES

Project Achievement Awards 2026 CALL FOR ENTRIES

Market Sector Categories

- SMALL BUSINESS BUILDINGS - ANY VALUE
- SMALL BUSINESS INFRASTRUCTURE - ANY VALUE
- BUILDINGS- UP TO \$49M
- BUILDINGS- BETWEEN \$50M - \$99M
- BUILDINGS- BETWEEN \$100M - \$299M
- BUILDINGS - OVER \$300M
- INFRASTRUCTURE - UP TO \$49M
- INFRASTRUCTURE - BETWEEN \$50M - \$99M
- INFRASTRUCTURE - BETWEEN \$100M - \$299M
- INFRASTRUCTURE - OVER \$300M

SMALL BUSINESS: Provide a current valid copy of the license from State, Local, or Federal Authority to qualify.

Sustainability

New projects with the most significant provisions for green certifications (LEED, ZNE, etc.)

Program Management

For delivery of multi-project CIP

Community Impact

Project that has included a significant impact to the community based on its intended purpose.

BUILDINGS defined as:

Healthcare, Higher Education, Civic, Warehouse, Mission Critical, K14, Life Sciences, Defense. etc.

INFRASTRUCTURE defined as:

Aviation, Highways & Bridges, Ports & Maritime, Rail & Transit, Water/Wastewater, Energy, Environmental, Power plants, telecommunications networks, communication networks, energy supply, etc.

Dates to Remember

- **March 19, 2026,** Submission deadline at 4:00pm
- **May 14, 2026,** Winning projects will be awarded at the 2026 Gala.

This competition is open to all CMAA members and non-members. To be eligible, projects, programs, or program phases must be completed during the period starting January 1, 2025, and ending December 31, 2025. **\$350 Member Firm per entry & \$550 - Non-Member Firm per entry.** Multiple entries from one firm are accepted.





John Armstrong
PMP, CCM, PSP, PMI-SP
Principal

- 20+ years in the construction industry
- BS Construction Engineering, Purdue University
- Dual Licensed Residential & Commercial Contractor in Arizona
- Topics Opine and Testify
 - Forensic Schedule Analysis
 - Consequential Damages (i.e. defect cost of repair, extended general conditions, loss of productivity, unplanned escalation)
 - Contractor & Owner Standard of Care
 - Owner Schedule Reviews



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LEARNING OBJECTIVES

1

Identify the core responsibilities of a Construction Manager in developing, reviewing, updating, and enforcing project schedules without acting as the project scheduler.

2

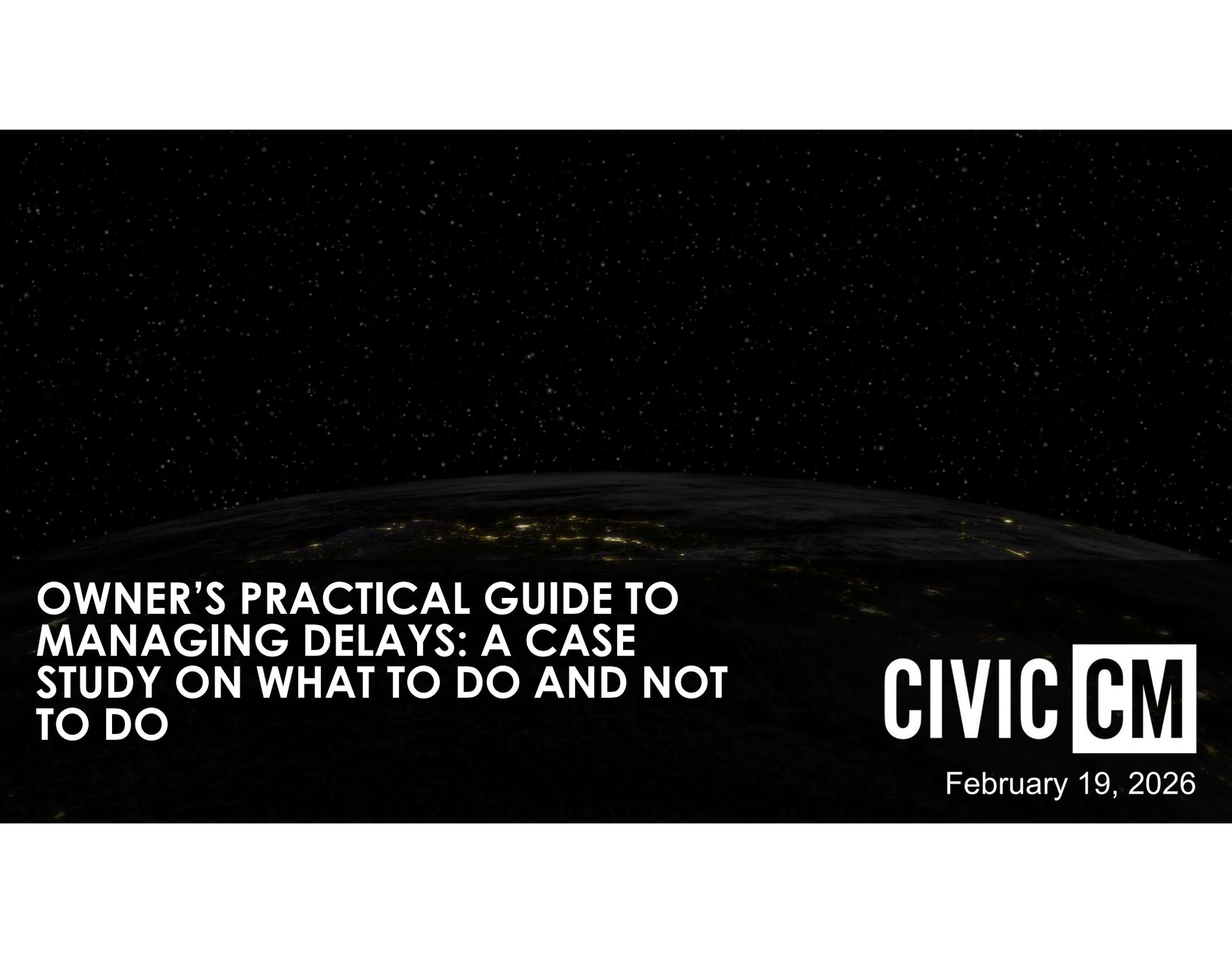
Implement daily, weekly, and monthly actions that help maintain schedule integrity, track progress accurately, and identify issues early.

3

Understand the purpose of a TIA, recognize the key components of a credible analysis, and ask the right questions when reviewing contractor-submitted TIAs.

4

Identify behaviors, practices, and schedule manipulations that undermine credibility and create claims risk, along with strategies to avoid them.



**OWNER'S PRACTICAL GUIDE TO
MANAGING DELAYS: A CASE
STUDY ON WHAT TO DO AND NOT
TO DO**

CIVIC CM

February 19, 2026

1. Introduction
2. It Starts With the Contract
3. Defining the Owner's Obligations
4. Handling Delays

INTRODUCTION

CIVIC CM



John Armstrong, PMP, CCM, PMI-SP, PSP

Principal

- 23 Years of Experience in the Construction Industry by provide scheduling, risk management, claims and contract management, and expert witness services
- BS in Construction Engineering, Purdue University
- Specialties & Expertise
 - CPM Scheduling
 - Claims Analysis & Forensic Delay Analysis
 - Owner Schedule Reviews & Auditing
 - Standard of Care for Owners & Contractors
 - Construction Defect & Cost of Repair
 - Program, Project & Construction Management
 - Contract & Commercial Management

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- Civic CM is a construction consulting firm that specializes in CPM scheduling, claims & advisory services, and expert witness testimony
- Maintains offices throughout the United States in San Diego, Los Angeles, Northern California, Phoenix, Denver, Austin, Boise, and Chicago
- Our clients include general contractors, subcontractors, owners and owners' representatives, and attorneys
- Our firm is comprised of highly experienced and skilled schedulers, contractors, engineers and architects, attorneys, and project management professionals

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IT STARTS WITH THE CONTRACT

CIVIC CM





***A well-written contract solves a lot of problems
and defeats many good arguments.***

1. Poor Contract Language Sets Owners Up for Failure
2. Where Contracts Typically Fail
3. What Can Go Wrong
4. How To Fix It

1. Poor Contract Language Sets Owners Up for Failure

- Can't enforce a requirement that isn't written in
- Often leads to mistrust, misunderstandings, delays and cost overruns
- The best and most equitable approach is to establish clear "rules of the road" for all parties to abide by and then enforce them
- And frankly, its owner who is in the best position to develop strong, clear and equitable contract language

2. Where Contracts Typically Fail

- Poor definition of milestones (and maybe too many milestones)
- Unspecific definitions of concurrent and excusable delays
- Failure to provide clear instructions on exactly how delays are addressed
- Lack luster and non-stringent requirements for how schedules are produced
- Lack of contract “teeth” to enforce sound scheduling practices



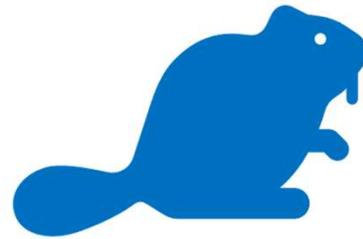
***Real Life Example About Contracts and
Scheduling - How a Commercial Property
Developer Stepped Over a Dollar to Save a
Nickel***

3. What Can Go Wrong

- Delays to TCO and occupancy due to administrative impacts
- Contractor gets paid for extended general conditions even when there was some likely concurrent delays
- Inaccurate forecasts for when work is really occurring
- Uncertainty as to when the project will get done – upset boards, taxpayers, and investors

4. How To Fix It

- Define contract milestones in extreme detail and keep it to no more than 1 or 2
- Establish very robust and detailed commercial and change management requirements
- Do not go cheap or light on the scheduling spec
- Be extremely hesitant and weary in waiving scheduling spec requirements



What should a scheduling specification include?

- Define all the types of schedules are to be submitted
- Define when the schedules are to be submitted
- Ties interim payments to schedule acceptance
- Defines technical CPM performance parameters
- Defines concurrent delays
- Defines excusable and non-excusable delays
- Defines compensable delays
- Defines narrative parameters
- Defines the different types of delays to perform
- Defines reporting requirements
- Defines scheduler qualifications and roles
- Defines when recovery and mitigation schedules are to be submitted

Want get some snapshots of a great scheduling specification? Email me!



DEFINING THE OWNER'S OBLIGATIONS

CIVIC CM



After establishing a sound a contract, the Owner should eliminate GC excuses, ensure there is a good schedule, monitor the schedule, document problems, and exercise the contract

1. Clear the Roadblocks
2. Raise Your Expectations for Owner-Performed Schedule Reviews
3. Effective Monitoring of the Work
4. Exercising the Contract

1. Clear the Roadblocks

- Whenever practically possible, eliminate excuses GCs can leverage for delays
- That means delivering on promises, holding designers and other consultants accountable
- Don't forget to bake contingencies into your overall master plan . . . or be prepared to be dissapointed

2. Raise Your Expectations for Owner-Performed Schedule Reviews

- Most technical reviews by owner's reps are **useless**
- Reviews need to be based on not only sound CPM scheduling practices, but practical construction, contract, and risk management knowledge



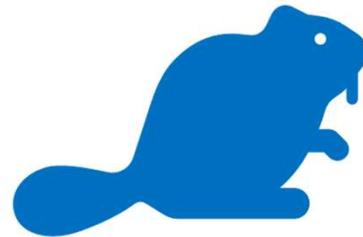
***Real Life Example of a Poor Owner's Schedule
Review and How it Hurt the Owner***

3. Effective Monitoring of the Work

- Walk the job at the end of each week
- Using the latest schedule track actual start dates, actual finish dates, and what was supposed to start/finish but didn't
- Documents areas the contractor is not working and potential manpower shortfalls
- And then review RFIs, meeting minutes, and other project records to see what are the causes for delays

3. Effective Monitoring of the Work (Cont'd)

- Now take a look at the 3 week look ahead schedules produced each week by the contractor – is it the same as the monthly schedule update?
- Track your notes weekly and incorporate into your schedule review each month



***Why does this help you with resolving
delays?***

4. Exercising the Contract

- You got a great contract!
- You got great notes!
- Now we exercise the contract!
- ... But there are some cautions to avoid costly mistakes
- So what does exercising the contract look like?

HANDLING DELAYS





Delays are going to happen. But if you take the time to develop a good contract, monitor progress regularly and work contract, they become easy to handle.

1. Work and Enforce the Contract
2. Timeliness is Critical
3. Leverage Your Schedule Reviews & Notes
4. Where Things Go Off the Rails

1. Work and Enforce the Contract

- If the contract says “thou shall do a time impact analysis...”, do not accept anything else
- Demand source documentation substantiating dates
- Demand a narrative (better yet, make it a requirement in the contract)
- Each change order should address money, time, risk and scope – do not let a contractor put “TBD” down

2. Timeliness is Critical

- Do not wait to the end of the project
- Execute change orders in a “prospective” manner whenever possible
- Late response leads to constructive acceleration, and that may cost you more money in the long run



Real Life Example of Constructive Acceleration

3. Leverage Your Schedule Reviews & Notes

- Do the dates in your schedule reviews and notes match?
- Does the contractor identify or address concurrent delays you were documenting all along?
- Perform your own delay analysis to see if you get the same results

4. Where Things Go Off the Rails

- Contractor's submissions not aligning with reality (3-week lookahead vs the CPM schedule)
- Owners taking too long to review and/or rejecting time extension requests not grounded within the contract
- Simply not working the contract
- Not having a pre-determine action plan
- Letting emotions get in the way



CLOSING REMARKS



1. Introduction
2. It Starts With the Contract
3. Defining the Owner's Obligations
4. Handling Delays

ASK YOUR QUESTIONS

