



**COLORADO**

Department of  
Transportation

**Construction CPM Schedules**

**CAPA Member Meeting**

**May 17, 2019**



# Revision Details



- Task Force Members
- Benefits
- Details of Revision
- Details of Specification
- Next Steps





# Task Force Participants

CCA	ACEC	CDOT
Jim Moody (CCA)	Marilen Reimer (ACEC)	Laura Zamora (HQ AE)
Dave Matheson (Ames)	Chris Carson (Arcadis)	Mark Straub (HQ AE)
Diego Melchert (Ames)	Christi Fu (Arcadis)	Casey Hensley (HQ AE)
Jeff Keller (APC)	Brian Coyne (Arcadis)	Andrew Pihaly (HQ Spec Engr)
Grant Cruseturner (Brannon)	Beth S. Sprague (Atkins)	Andrew Stratton (R1 Prog Engr)
Bruce Hamon (Hamon)	Scott A. Jones (Atkins)	Stephanie Alanis (R1 RE)
Jeanne Shreve (Hamon)	Brad Doyle (Atkins)	Jeffery Hampton (R1 PE)
Brent Bergin (Kraemer)	Bruce Tonilas (HDR)	Edgar Balderrama (R1 PE)
	Jim Zufall (Rocksol)	Mark Andrew (R2 Prog Engr)
FHWA	Geoffrey Page (Trauner)	Timothy McGhghy (R2 PE)
Edward Martinez		Jason Smith (R3 Prog Engr)
		Eric Salemi (R4 PE)
		Jeffrey Reichle (R5 PE)



# Benefits of Changes

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- Communication is key!
- Focus is PRIMARILY on the execution plan for the work
- Schedule is a dynamic, living document
- Reflection of the plan to complete the work
- Dispute resolution is not the primary purpose of the schedule
- In the end, Schedules are for mutual benefit and communication



# Revision Details

- Definitions
  - Added
    - Baseline Schedule, Free Float, Near Critical Activity, Planned Completion Date, and Total Float
  - Changed
    - Activity, Calendar, Critical Path, Critical Path Method Scheduling, Data Date, Milestone, Open Ended Activity, Revised Schedule
  - Deleted
    - Bar Chart, Float, and Salient Feature
- Schedule Review Meeting required for all schedule submittals



## Revision Details

- Clarified the schedule is the Contractor's and the Department evaluates and approves
- Float is owned by Project
- Native file and PDF (electronic submittal)

“The Contractor's schedule shall be an accurate plan to complete the work so that the Department can use the schedule to evaluate progress, schedule CDOT resources, inform the project stakeholders, and evaluate the effect of changes to the schedule.”



## Revision Details

- Construction activities cannot exceed 15 days unless approved
- Non-construction activities may exceed 15 days
- Not permitted
  - Negative lags
  - Start-to-finish relationships
  - Open-ended activities
  - Lags in excess of 10 work days (unless approved)
  - Constraints (unless approved)
- Eliminated Salient Features and Method Statements (added to Baseline Narrative)



# Revision Details

- Baseline and Revised Schedule Narrative
  - Critical and Near Critical activities
  - Risks and assumptions, include production rates
  - Non-work periods
  - Calendars
  - Planned work shifts or work that requires approval
  - Description of site mobilization
  - Fabrication and delivery of key and long-lead procurement activities
- Revised Schedule Narrative - add
  - List and explanation of added and deleted activities, logic changes, and duration changes





# Revision Details

- Update Narrative
  - Status of work and problems encountered or anticipated
  - Status of Planned Completion date
  - Explanations for milestones forecasted to occur late
  - Description of delays, effect on other activities, critical path, milestones, and completion date
  - Mitigation strategies
  - Explanation work not progressing
  - Explanation of added and deleted activities, logic changes, and duration changes
  - For working day contracts, a list of planned non-working days with actual work



# Specification

- Baseline or Preliminary Schedule require approval before work can start
- No payment if Updates are not submitted
- No payment if not a reflection of work (last resort)
- No submittal required during Landscape Establishment Period
- Response required for every submittal (10 day review periods)
  - Approved, no exceptions taken,
  - Approved-as-Noted, or
  - Revise and Resubmit



# Specification

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- Microsoft Project or Primavera (can't change once submitted)
- Types of schedules:
  - Preliminary Schedule (108.03(d))
  - Baseline Schedule (108.03(e))
  - Project Schedule Update (108.03(f))
  - Weekly Planning Schedule (108.03(g))
  - Revised Schedule (108.03(h))
  - Delay schedule Analysis (108.08(d))



# Specification

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- Only a Change Order can change Contract time
- Submittal includes:
  - Native file (\*.xer or \*.mpp)
  - Schedule
  - Narrative
  - Predecessor Activity and Successor Activity report
  - Early Start report
  - Float report
  - Critical Path report
  - Non-work days
- Included in the Work



# CDOT Next Steps

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- Emphasis on TRAINING
- Industry Outreach
- Update Construction Manual
  - Incorporated items not appropriate for Specification into CDOT Construction Manual
- Encourage and EXPECT Project Teams to discuss progress, impacts, and issues honestly and openly
- Revise 108.08 (d) Extension of Contract Time (June 6 Spec Committee)



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Transportation

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# Questions?

# Thank you!

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