Identifying and Mitigating Schedule Risk – A Meaningful Approach

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GR Palmer Consulting Services, LLC

Schedule Risk

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- What Is A “Schedule Risk?”

Schedule Risk

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- What Is A “Schedule Risk?”
  - Any Event That Can Potentially Impact A Schedule’s Planned Completion Date

Determining Schedule Risks

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- Perform Project Risk Assessment (Brainstorm, Checklist, & Other)
  - Project Is Located In Singapore – *180 Lightning Strikes/Year*
  - Industry Pipe Shortage – *Pre-buy Pipe*
  - Difficult Customs Clearing – *Allow 8 Weeks*

Determining Schedule Risks

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- Incorporate Project Risk Assessment Results Into Schedule
  - Project Is Located In Singapore – 180 Lightning Strikes/Year – *Adjust Calendar*
  - Industry Pipe Shortage – Pre-buy Pipe – *Add Activities*
  - Difficult Customs Clearing – Allow 8 Weeks *Add Duration*

Determining Schedule Risks

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- Are We Finished?
  - Many Contractors Stop Here!

Determining Schedule Risks

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- Assuming We Have Done A Good Job Identifying And Incorporating The Known Risks Into Our Schedule – What's Next?

Determining Schedule Risks

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- We Need To Find The Other Schedule Risks That Are Embedded In Our Project Schedule

Determining Schedule Risks

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- What Is the Evolution Of Most Project Schedules?

Determining Schedule Risks

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- What Is the Evolution Of Most Project Schedules?
  - 500 Activity Proposal Schedule To 5000 Activity Execution Schedule
  - In Many Cases This Schedule Has Never Had Team Buy-In

Determining Schedule Risks

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- Pertmaster
  - Many Project Teams Do A “Pertmaster” Analysis To Determine Schedule Risk

Determining Schedule Risks

- Pertmaster
  - Some Project Teams Take An Un-Validated Project Schedule, Summarize (8000 Activities To 200 Activities), And Then Use Subjective Variables For the Analysis

Determining Schedule Risks

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- What Value Is A Subjective Analysis Of An Un-Validated Schedule?

Determining Schedule Risks

Glen's Approach

- We Need To Analyze The Schedule In Detail
  - Evaluate All Critical And Near Critical Activities' Scope, Logic, Resources, And Durations As A Team

Determining Schedule Risks

Glen's Approach

- Why Do We Evaluate These Critical and Near Critical Activities?
  - These Are The Activities That Will Likely Determine The Project's Completion Date

Determining Schedule Risks

Glen's Approach

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- Why Do We Need The Entire Team Involved?
  - The Scheduler Does Not Determine All Of The Durations In A Schedule! This Evaluation Requires Anyone That May Have Determined A Duration In The Early Schedules Or That Has The Experience To Question A Duration

Determining Schedule Risks

Glen's Approach

- Why Do We Need The Entire Team Involved?
  - To Get Project Team Buy-In For All Changes Made

Determining Schedule Risks

Glen's Approach

- Validate Critical Paths (Most & Near)
  - Review Each Activity Scope Definition
  - Review All Predecessors And Successors
  - Review All Constraints, Leads and Lags
  - Review Resources
  - Review Each Activity Duration

Validating Critical Paths

Glen's Approach

- Validation Process Goals
  - Determine That The Team Understands Each Activity's Scope Of Work
  - Determine That The Critical Paths Are Accurate From A Logic Standpoint
  - Determine That The Individual Activity Durations Are Reasonable

Validating Critical Paths

Glen's Approach

- Schedule Review (Previous Pages)
  - This Process Will Greatly Improve Your Schedule Over Time

Activity ID	Activity Description	Orig Dur	Total Float	Early Start	Early Finish
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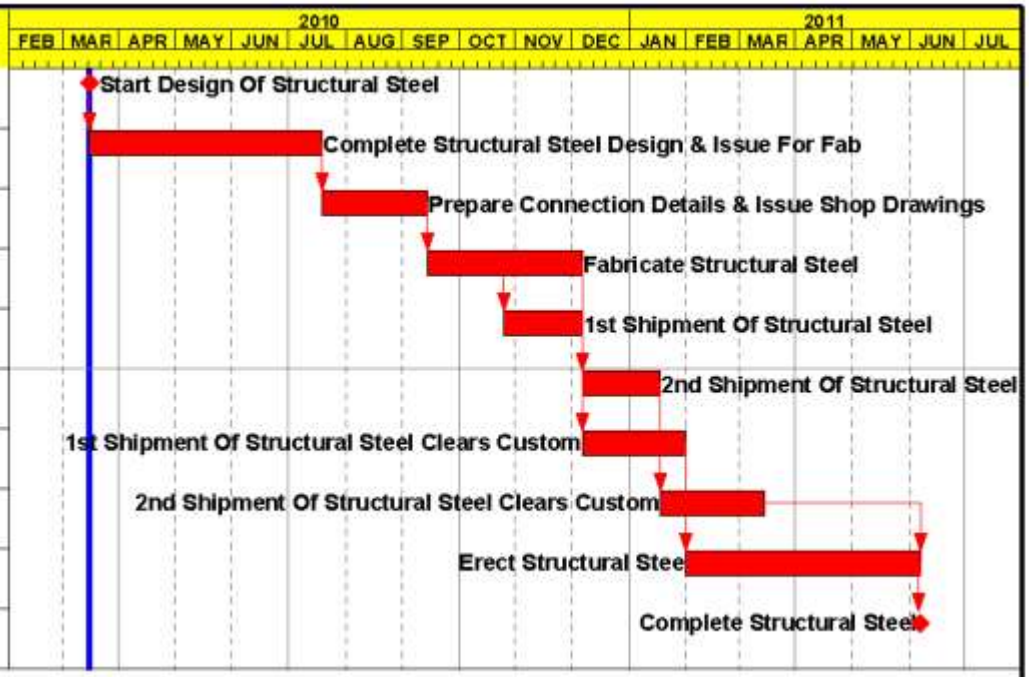

Start Date	16MAR10
Finish Date	06JUN11
Data Date	16MAR10
Run Date	16MAR10 16:29

Early Bar
Progress Bar
Critical Activity

PMI9

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Project Critical Path

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Date	Revision	Checked	Approved

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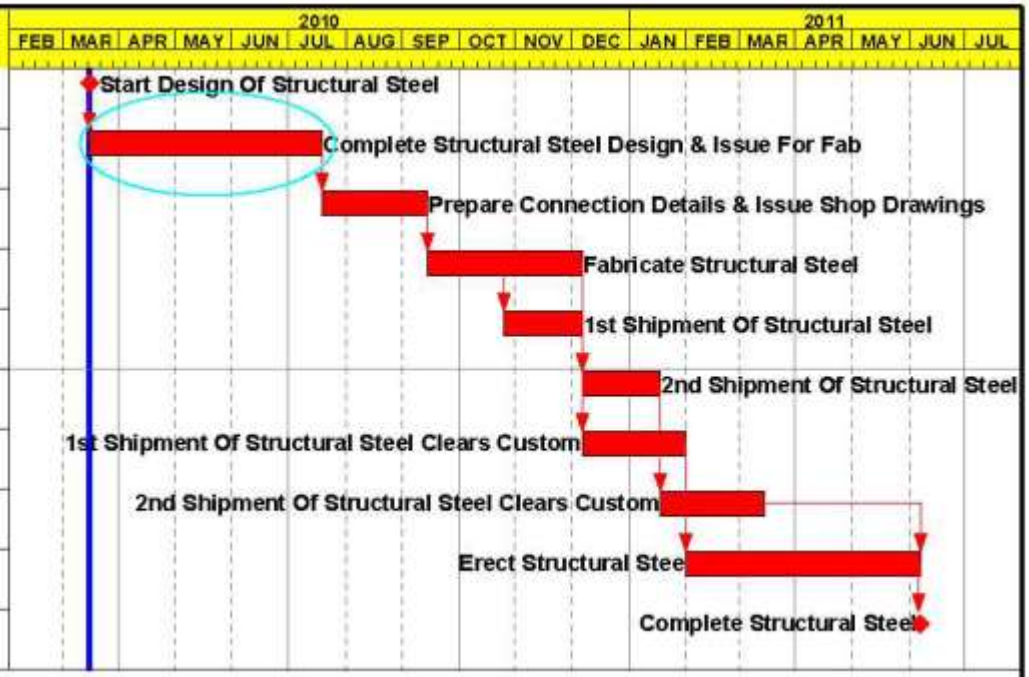

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Project Critical Path

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Validating Critical Paths

Glen's Approach

- Step One - Review Scope Definition
  - Does Everyone Agree On The Scope Of The Activity?
  - Anyone Ever Been On A Project Where The Team Did Not Agree On An Activity's Scope?
  - If Not, Re-define The Scope And Adjust Duration If Necessary

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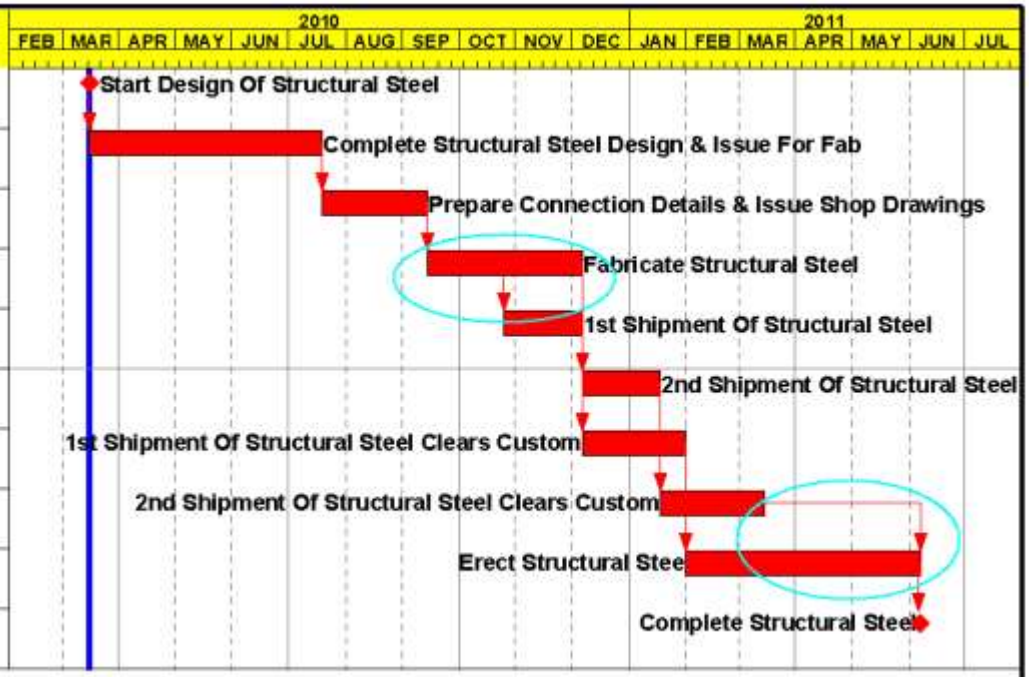

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Validating Critical Paths

Glen's Approach

- Step Two - Review Logic
  - An Incorrect Logic Tie May Change Critical Path
  - Changing A Constraint, Lead, Or Lag May Also Change The Critical Path

Validating Critical Paths

Glen's Approach

- Step Three - Review Resources Allocated
  - Get Agreement From Team That Resources Are Reasonable
  - Change Duration Based On Agreed To Resources If Necessary

Validating Critical Paths

Glen's Approach

- Review Activities
  - After the Logic Is Reviewed, The Scope Defined, And The Resources Are Finalized, The Critical And Near Critical Paths Need To Be Re-run

Validating Critical Paths

Glen's Approach

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- Review Activities
  - If The Schedule Is Has Sound Logic, Reasonable Resources, And All Known Risks Incorporated, Then The Problem Becomes:

    Can Each Activity's Scope Of Work Be Completed Within The Planned Duration?

Validating Critical Paths

Glen's Approach

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- Why Review Durations?
  - Some Durations May Have No Quantitative Basis – A Wild @$$ed Guess
  - Team Members May Have Changed – Different Execution Approach
  - Team May Have A Better Understanding – Learning Curve

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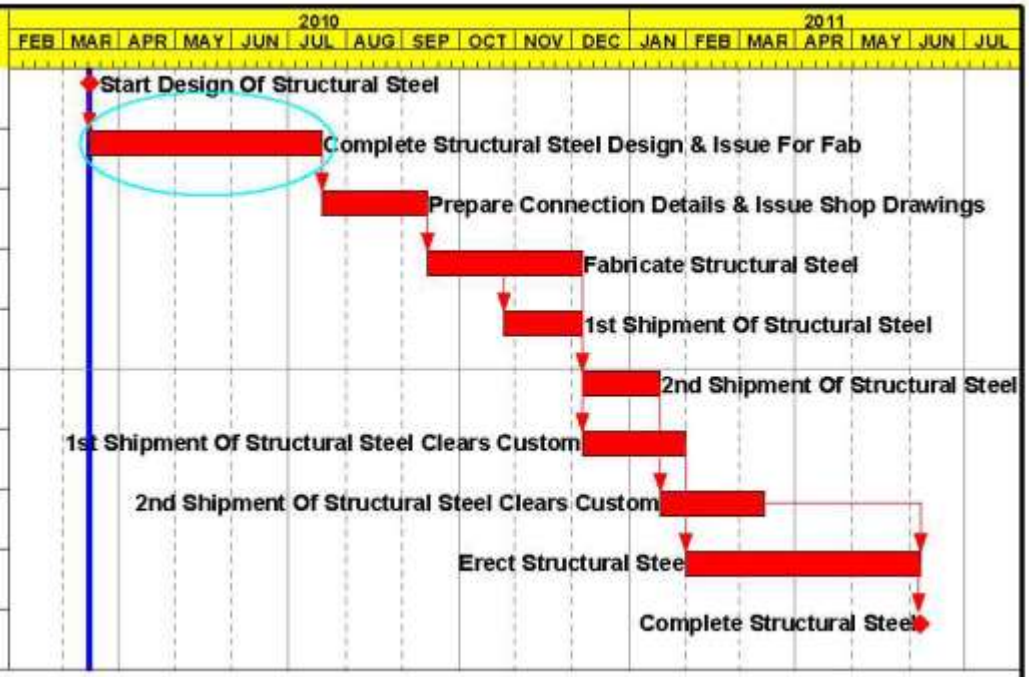

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Validating Critical Paths

Glen's Approach

- First Activity
  - What Is The Likelihood Of Completing This Activity In 90 Days?
    - Most Likely (9 out of 10 Times)
    - Likely (7-8 out of 10 Times)
    - Least Likely (Less Than 7 out of 10 Times)

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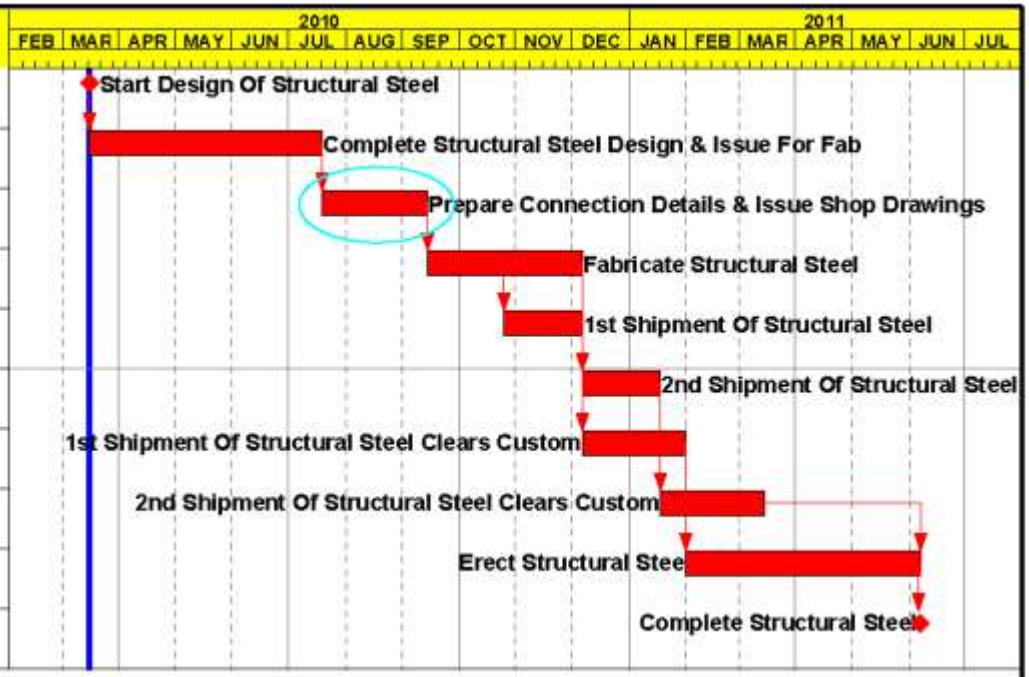

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Validating Critical Paths

Glen's Approach

- Second Activity
  - What Is The Likelihood Of Completing This Activity In 40 Days?
    - Most Likely (9 out of 10 Times)
    - Likely (7-8 out of 10 Times)
    - Least Likely (Less Than 7 out of 10 Times)

Validating Critical Paths

Glen's Approach

- "Most Likely" Activities
  - Those Activities That The Validation Process Determines Are "Most Likely" To Be Completed In The Planned Duration, Need To Be Reviewed For The Possibility Of Shortening Each Of Those Durations
  - This Is A Key Step

Validating Critical Paths

Glen's Approach

- "Likely" Activities
  - Those Activities That The Validation Process Determines Are "Likely" To Be Completed In The Planned Duration, Need To Have The Durations Remain As Is

Validating Critical Paths

Glen's Approach

- "Least Likely" Activities
  - Those Activities That The Validation Process Determines Are "Least Likely" To Be Completed In The Planned Duration, Are The High "Schedule Risk" Activities. These Are The Activities That Have To Be Managed For The Project To Have A Reasonable Opportunity To Succeed

Validating Critical Paths

Glen's Approach

- "Least Likely" Activities

  Why Is Least Likely Rated At (Less Than 7 out of 10 Times)?

  I Purposely Have Taken A Conservative Approach So That I Guarantee That The Team Evaluates Those Activities That Could Be Extended

Validating Critical Paths

Glen's Approach

- High "Schedule Risk" Activities
  - These Activities Are Listed And Given To The Entire Project Team So That Everyone Remembers Them

Validating Critical Paths

Glen's Approach

- Project Manager Actions
  - The Project Manager Meets With His Team Leaders To Determine Who On The Team Will Be Responsible For Managing Each High "Schedule Risk" Activities

Validating Critical Paths

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- Mitigation Actions
  - Each Chosen Team Member Is Responsible For Determining The Lowest Cost Mitigation Plan To Complete His / Her High "Schedule Risk" Activity Within The Planned Duration
  - These Mitigation Actions Are Discussed With The Project Team On A Weekly Basis During The Schedule Meeting

Validating Critical Paths

Glen's Approach

- How Often Should This Process Be Performed?
  - This Process Should Be Performed "Quarterly" At A Minimum And More Often If The Critical Paths Change Frequently

Conclusions

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- This Process Will Greatly Improve A Project Schedule Over Time
- This Process Will Make A Project Plan And Schedule More Transparent To The Project Team
- This Process Will Identify The Activities Within A Project Schedule That Have The Greatest Chance Of Determining The Project's Completion Date

Conclusions

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- How Many People Here Have Been On A Project Where The PM Identified A Critical Path Activity's Duration Being Too Short Only After The Activity Had Started?

Conclusions

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- This Is A Lengthy Process And I Often Hear That A Project Team Cannot Afford The Time And Money To Perform This Work
- In Reality, On A Fixed Price Project With LD's (Sometimes $100K/Day), A Project Team Cannot Afford To Ignore This Process
- Companies Always Find The Money To Pay The Lawyers And The Claims Consultants

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Thank You
For Attending!

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