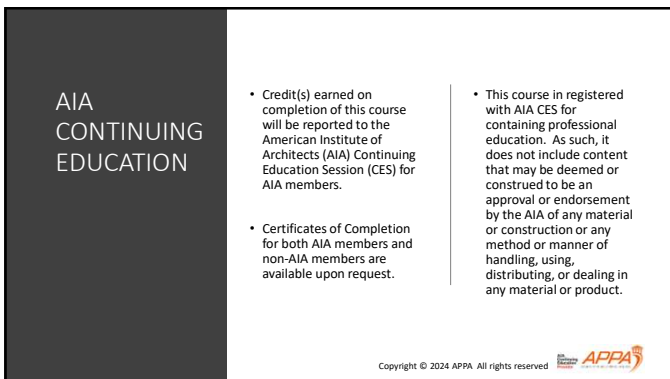




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Course Description

Labor shortages, supply chain and logistics challenges, micro-chip shortages, hyper-inflation, the “Great Resignation” and more are impacting our projects in various ways. However, you still need to complete projects on budget, on schedule and in alignment with your academic calendar. Is this a current moment in time? When will we get back to “normal?” This session will take a look at current and future trends in labor, materials and construction costs and discuss strategies for managing through turbulent times in construction.

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Learning Objectives

- Be aware of issues and trends that can adversely disrupt the construction process
- Learn steps that can be taken to mitigate disruptions
- Evaluate the pros and cons of different approaches to mitigations
- Identify issues that will not go away and will likely be prolonged

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Our Audience this afternoon

- What role do you have at your university/institution?
- Campus Architect
- Construction Project Manager
- Construction Manager
- Physical Plant Trade
- Other


AIA Continuing Education logo



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Have you encountered disruptions on your construction projects?


- Yes
- No



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What types of disruptions?


- COVID-related
- Labor
- Supply Chain: materials and logistics
- Construction Cost Increases
- Project Delays




8

What has the impact been to your construction project of these disruptions?

- Extended construction schedule
- Increased construction cost
- Missed academic calendar
- Lower quality of work
- Substitution of materials
- All of the above



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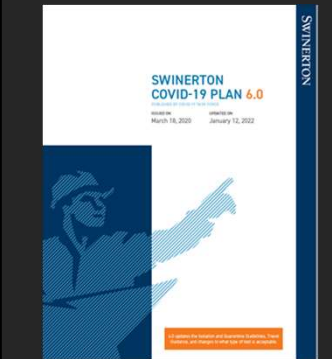


Setting the Stage

- Unprecedented disruptions to our lives
- The Pandemic
- Hybrid Work
- The Great Resignation
- 2008
- Hyper-inflation/Escalation



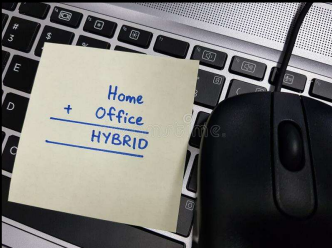
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The Pandemic


- Keeping staff safe
- Closing of campuses/offices
- Learning to work remote/virtual
- Keeping construction projects moving
- On-going challenges

11



Hybrid Work

- Flexibility
- Home School and After School
- Aging Parents
- Relocation



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The Great Resignation

- Over 40 million workers have left the workforce
- Multiple Reasons
 - Relocation
 - Remote work
 - Family Care
 - On-going concerns about the pandemic
 - Searching for satisfaction




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What Happened in 2008?




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Labor

- 2008
- Retiring baby boomers
- Different career dynamics
- Lower population and immigration
- The future workforce does not exist



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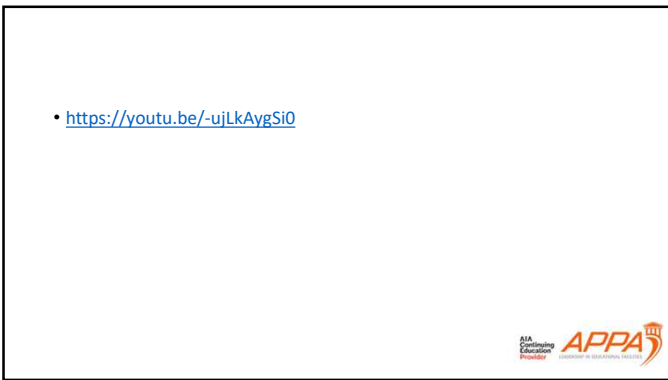


Supply Chain & Logistics

- Significant disruptions to the world-wide supply chain
 - Business Bankruptcies
 - Industry Consolidation
- Raw Materials
- Manufacturing
- Engineering and Installation
- Travel/International Travel

APMA

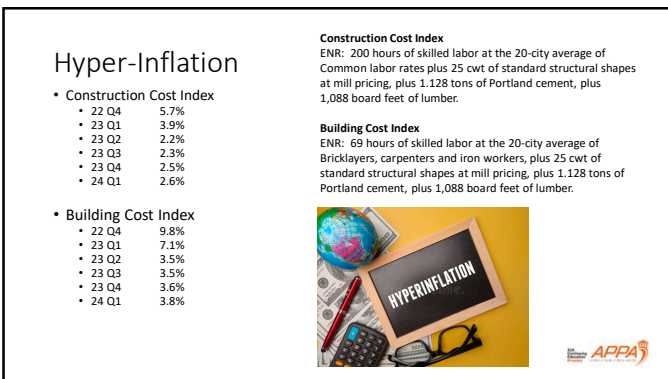
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- <https://youtu.be/-ujLkAygSi0>

APMA

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Hyper-Inflation

- **Construction Cost Index**
 - 22 Q4 5.7%
 - 23 Q1 3.9%
 - 23 Q2 2.2%
 - 23 Q3 2.3%
 - 23 Q4 2.5%
 - 24 Q1 2.6%
- **Building Cost Index**
 - 22 Q4 9.8%
 - 23 Q1 7.1%
 - 23 Q2 3.5%
 - 23 Q3 3.5%
 - 23 Q4 3.6%
 - 24 Q1 3.8%

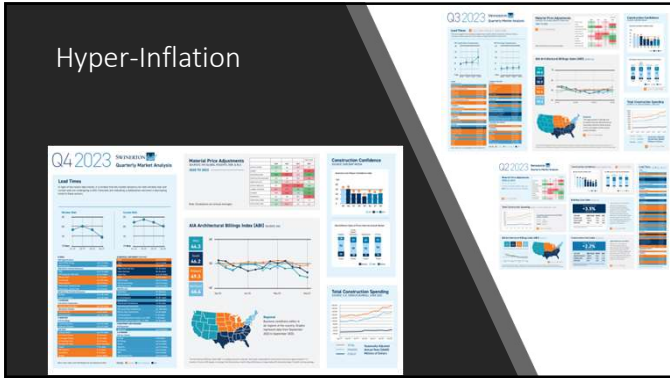
Construction Cost Index
ENR: 200 hours of skilled labor at the 20-city average of Common labor rates plus 25 cwt of standard structural shapes at mill pricing, plus 1.128 tons of Portland cement, plus 1,088 board feet of lumber.

Building Cost Index
ENR: 69 hours of skilled labor at the 20-city average of Bricklayers, carpenters and iron workers, plus 25 cwt of standard structural shapes at mill pricing, plus 1.128 tons of Portland cement, plus 1,088 board feet of lumber.



APMA

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A central diagram with 'PROJECT MANAGEMENT' in a blue cloud. Surrounding it are icons and labels: 'Analysis Planning Time', 'Teamwork', 'Control', 'Results', 'Communication', and 'Cost'. The diagram is set against a background of a desk with papers and a pen.

Project Delivery

- Construction Manager/General Contractor (CMGC)
- Design-Build
 - Traditional Design-Build
 - Progressive Design-Build
- Program Management/Construction Management (PMCM)

APPA logo at the bottom left.

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Contract Language

- "The Parties acknowledge and agree that, due to current extraordinary circumstances and market demands, there is the potential for material cost increases to various construction materials. Because of the unpredictable nature of such material shortages, price protection cannot be guaranteed for trades whose work includes the construction materials referenced herein. The construction materials affected include, but are not limited to all steel-related products, all wood-related products, concrete, petroleum related products, etc. Contractor has not included an escalation factor or contingency in the GMP. Contractor will use reasonable efforts to minimize any such price impacts; however, in the event the Cost of Work increases due to such material cost increase beyond Contractor's reasonable control, the Contract Sum shall be increased accordingly. In the event material (s) shortages impact the critical path schedule activities, Contractor is entitled to an extension of time."

A graphic with a teal background, a white box containing 'TERMS AND CONDITIONS', a signature line, and the word 'Agree' next to a green checkmark icon.

APPA logo at the bottom right.

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Contract Language

- "The GMP does include projected escalation and escalation allowances as indicated in the bid tallies. Any additional extraordinary escalation costs above or below these costs will be funded and/or refunded through Owner Contingency. "Extraordinary escalation" is defined as unforeseen escalation over 5% per year for this clarification. Reasonable escalation is included. According to the Department of General Services (DGS) California Construction Cost Index (CCCI), the Annual Percentage increase was less than 5% every year from 2011 through 2020."

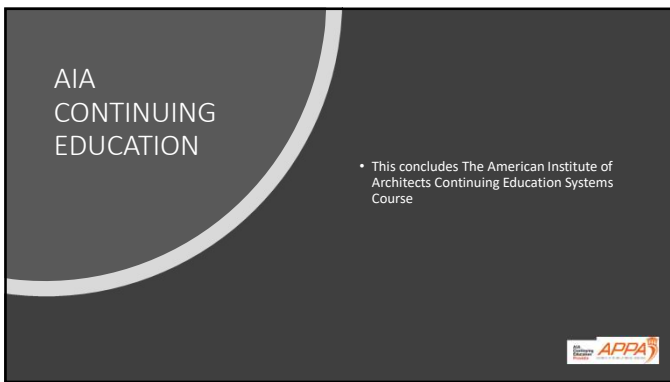
A close-up photograph of a hand holding a blue pen, signing a document titled 'CONTRACT'.

APPA logo at the bottom right.

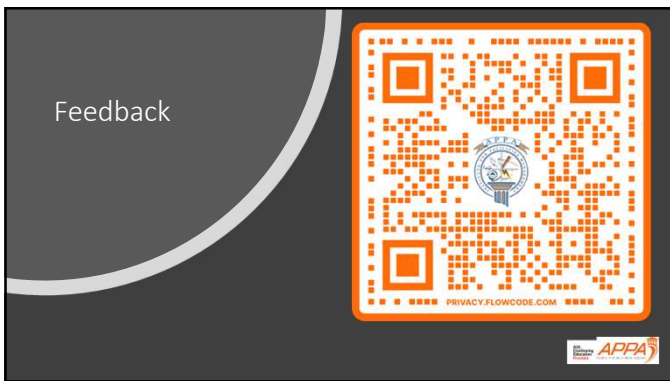
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Thank you!

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