

SESSION 5A

A View from the Trenches

Accurate + Complete Documents = Approved Project

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Rank the Most Influential Issues for Smooth Plan Approval

- ☐ Address all Comments prior to Back Check
 - ☐ Oversight by Responsible Design Professionals
 - ☐ Submit Correct Drawings & Specifications
 - ☐ Complete Submittal at Project Intake
 - ☐ Coordinate with Non-Structural Disciplines
 - ☐ Submit Complete Calculations
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Common Submission & Intake Issues

1. Complete Submittal at Project Intake
 - Provide all sheets listed on sheet index.
 - Accurate and complete scope definition on application.
 - Provide Geohazard/Geotechnical reports.
 - Provide material product data sheets.
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Common Submission & Intake Issues

1. Complete Submittal at Project Intake (Cont)

- Complete T24 Energy reports and calculations.
- Provide CALGreen Code requirements.
 - Energy Efficiency Regulations
 - Outdoor Water Regulations
 - DSA mandatory requirements (GL-4)

Common Submission & Intake Issues

2. Oversight by Responsible Design Professionals (DP)

- Avoid repeated errors; update office standards and details.
- Senior DP must transfer knowledge to junior DP.
- Junior DP's performing design and backcheck need oversight.
- DP should provide quality control of plans and training.

Common Submission & Intake Issues

3. Submittal of Complete and Correct Drawings and Specifications

- Provide and reference specific details on plans, including site plans.
 - Use typical details when specific details aren't required.
 - Update specifications.
 - Coordinate drawings with specifications.
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Common Structural Issues

4. Coordinate Structural Design with Non-Structural Disciplines

- Geotechnical design and site preparation.
- Site structures.
- Building finish materials.
- Mechanical, Electrical, Plumbing layout and anchorage of equipment and systems, including solar systems.
- Fire rated construction, sprinkler and suppression systems.

Common Structural Issues

5. Submittal of Complete Calculations

- Provide TOC, key plans and narratives describing design and analysis assumptions.
- Provide electronic output for structural software computer models.
- Include product evaluation reports.

Common Structural Issues

6. Comments Must be Addressed at Back Check
 - Avoid arguing plan check comments at backcheck.
 - Resolve issues between original plan review and back check.

Other Honorable Mentions

Other Honorable Mentions

- ☐ Alteration & Relocation of “Uncertified” Buildings
 - ☐ Over-the-Counter Project Submittals
 - ☐ Construction Change Documents (CCD) & Addenda
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Common Structural Issues

7. Alteration & Relocation of “Uncertified” Buildings

- See IR A-20: New Projects Associated With Existing Uncertified Projects.
- Certify prior to final back check.
- Project Certification Guide
- Common for relocatable buildings, especially with over-the-counter (OTC) plans.

Common Structural Issues

8. Over-the-Counter Projects for New Construction or Relocations

- Mix original with pre-check (PC) drawings.
- Submit plans with code-related changes through regular process.
- Minor changes may be made to non code-related elements.

Common Structural Issues

9. Submittal of Construction Change Documents (CCD) & Addenda

- Provide narrative of changes.
- Provide justifying calculations and product data sheets.

Common Structural Issues

- Any questions?
- Any other issues or feedback for us?

Fire & Life Safety Topics

George Barnes

Fire & Life Safety Topics

- Project Description
- Building Code Analysis
- Determinations: Height, Story, Allowable Area
- Building and Fire Code Applications
- Fire Resistance Rated Construction
- Exterior Projections
- Multiple Buildings On Site (Considered as 'One')

Fire & Life Safety Topics

- Three Component Egress System
 - Fire Alarm and Fire Sprinkler System Documentation
 - Consultant Drawing Coordination with Architectural Plans
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Fire & Life Safety Topics

1. Project Description (Scope of Work)

- Descriptive rather than broad or generic wording; outlines primary project elements.
- Consistent with project intent.
- *Indicates campus designation (existing vs. new)
- *Identifies project funding source (public vs. local)

Fire & Life Safety Topics

2. Building Code Analysis

- California Building Code (CBC) Chapter 5 elements reflected.
- Area calculations; factors and equations applied consistently.
- California Fire Code (CFC) Chapter 5 water supply - fire flow calculations provided for new buildings and additions.

Fire & Life Safety Topics

3. Determinations of Height, Story and Allowable Area

- CBC equations reflected.
- Factors for increases applied consistently between tables 504.3, 504.4 and 506.2.
- Footnote directives considered.
 - OSFM Amendment: Can not combine height and area increases using fire sprinklers.

Fire & Life Safety Topics

4. Application of Building and Fire Codes, and Amendments Thereto
 - CBC and CFC are companion regulations.
 - Most restrictive provisions apply.
 - Amendments to adopted standards in chapters 35 (CBC) and 80 (CFC) applied.

Fire & Life Safety Topics

5. Fire-Resistance-Rated Construction

- Types and functions of rated walls indicated by a unique graphic symbol.
- Provide and reference construction details; indicate function, hourly rating, tested assembly number.
- Use 'Listed' construction details.
 - Underwriters Laboratories, Warnock Hersey, Gypsum Assoc.
 - Manufacturer's installation details

Fire & Life Safety Topics

6. Exterior Projections

- Location of property lines (real or assumed) affects exterior wall construction and criteria for combustible projections.
- Fire separation distance measurement to be from the lot line (real or assumed) to the exterior wall, not the edge of the projection.

Fire & Life Safety Topics

7. Multiple Buildings Considered As One
 - Most restrictive requirements for each building and use apply.
 - Location of new building(s), or additions to existing buildings cannot place an adjacent building in jeopardy (allowable area, exterior wall rating & opening protection).

Fire & Life Safety Topics

8. Three Component Egress System

- Separate provisions; each component must meet specific criteria within code.
- Common path-of-travel provisions are not separate from travel distance criteria.
- Interior access stairways (exit access) vs. interior exit stairway (exit).

Fire & Life Safety Topics

9. Fire Protection System Documentation

- Provide complete, current manufacturer's data sheets and State Fire Marshal listing sheets.
- Fire sprinkler system hydraulic calculations to be consistent with design.
- Use DSA Guidelines:
 - GL 1: Automatic Fire Sprinkler Systems
 - GL 2: Fire Alarm and Detection Systems

Fire & Life Safety Topics

10. Coordination Between Architectural Plans and Consultant Drawings (Mechanical, Electrical, Plumbing)

- Floor plans and sectional details consistent with architectural plans.
- Locations of fire rated elements shown.
- Use of 'listed' fire damper and fire stop assembly details.

Fire & Life Safety Topics

- Any questions?
- Any feedback for us?

Work collaboratively – Let us help you

Common Access Issues

Ida A. Clair AIA, LEED AP, CASp

Accessible Route & Path of Travel Improvements

ACCESSIBLE ROUTE A continuous unobstructed path connecting accessible elements and spaces of an accessible site, building or facility that can be negotiated by a person with a disability using a wheelchair and that is also safe for and usable by persons with other disabilities.

PATH OF TRAVEL IMPROVEMENTS An accessible route which connects the alteration with elements that serve the area of work, and includes:

- An exterior approach (sidewalks, parking areas, bus stops).
- An entrance to the facility.
- Other parts of the facility.
- Toilet and bathing facilities.
- Telephones.
- Drinking fountains.
- Signs.

Accessible Route & Path of Travel Improvements

There are no “paths of travel improvements” (POTIs) within an area of alteration or new construction, only accessible routes which are required to connect accessible elements within the project.

An *accessible route* is required as part of the project to connect the new construction or alteration to existing accessible routes on the campus at the perimeter of the improvement.

Path of travel improvements (POTIs) use an accessible route to connect the new construction or alteration to campus facilities, and require an upgrade to the accessible elements of specific campus facilities supporting the project.



Path of Travel Improvements

State and federal accessibility standards address path of travel improvements (POTIs) because the requirements:

- Ensure accessibility is provided where not provided before.
- Ensure maintenance of accessible features.
- Ensure a level of accessibility for existing facilities that is commensurate with the accessibility for new facilities in an incremental process.
- Provide an opportunity for risk management for facility owners.

Accessibility Issues that POTIs Address

- Issues on accessible routes
 - Tree uproot of walks.
 - Deficiency and wear of materials.
 - Obstructions placed in required clear spaces and maneuvering clearances.
- Accessible elements connected by POTIs
 - Facility maintenance issues.
 - Replacement of equipment and accessories that are not installed correctly.
 - Regulatory changes that provide increased accessibility.

Path of Travel Improvements

- **DSA PR 15-01** – Provides guidance on the required information to be shown on construction documents for path of travel improvements (POTIs)
- **DSA IR 11B-10** – Provides guidance on path of travel improvements (POTIs) based on scoping requirements of California Building Code (CBC) 11B-202.4

Architect's Statement

“The POT identified in these construction documents meets the requirements of the current applicable California Building Code (CBC) accessibility provisions for path of travel requirements for alterations, additions and structural repairs. As part of the design of this project, the POT was examined and any elements, components or portions of the POT that were determined to be noncompliant with the CBC have been identified and the corrective work necessary to bring them into compliance has been included within the scope of this project's work through details, drawings and specifications incorporated into these construction documents.....”

Path of Travel Improvements

Required path of travel documentation:

- Site plan showing the extent of the property.
- Indication of area of work.
- Indication of project-specific accessible route from site arrival points to area of work entrance.
- Indication of interior accessible route when the area of work is within an existing building.
- Indication of non-compliant path of travel elements to be improved.
- Plans and details for POTIs.
- Architect's POTIs statement.

Path of Travel Improvements

Consequences of failure to document POTIs or inadequate documentation of POTIs

- Project is not compliant with the California Building Code (CBC).
- Construction Change Directives (CCD) delay project.
- Delay of project increases project time and cost.
- A#s don't reflect as built conditions .
- Potential liability for School District and Architect.

Access & Path of Travel Improvements

- Any questions?
- Any feedback for us?

Wrap up!

- Did we meet your expectations?
 - What did you like about the day?
 - What area needs improvement?
 - Would you recommend DSA 2020: Focus on the Future to your colleagues?
 - What else should we be doing to build a solid partnership?
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