

The formulae $\frac{\partial x_i}{\partial t} + \frac{\partial}{\partial x_j}(\rho U_j x_i) = -\frac{\partial p}{\partial x_i} + \frac{\partial}{\partial x_j}(\mu \frac{\partial U_i}{\partial x_j}) + g_i(\rho - \rho_0)$ for building $\frac{\partial}{\partial x_j}(\rho U_j U_i) = -\frac{\partial p}{\partial x_i} + \frac{\partial}{\partial x_j}(\mu \frac{\partial U_i}{\partial x_j} - \rho u_i u_j) + g_i(\rho - \rho_0)$ state of the art $\frac{\partial}{\partial x_i}(\rho U_i H) = \frac{\partial}{\partial x_i}(\lambda \frac{\partial T}{\partial x_i} - \rho u_i h)$ biomedical research facilities.

Delegated Design in the Design Process

As building systems become more complex and specialized, fabricators and product manufacturers play increasingly important roles in the design of building elements. This evolution has promoted project delivery strategies that link design professionals with specialty contractors and allow product manufacturers to leverage their respective expertise. In particular, delegated design transfers the design responsibilities of manufacturer-specific systems or complex building elements from the **Project Designer** (Architect/Engineer of Record, or A/E) to a third-party **Contractor** (Contractor, Fabricator, or Manufacturer). The Project Designer may use this approach to give the Contractor some latitude in how a proprietary or specialized element is built, or to delegate the design of a building element to a subcontractor who has greater expertise with their specialty. This article reviews the general concept of delegated design from a design aspect and is not intended to provide legal advice.

What is Delegated Design?

The Construction Specification Institute defines delegated design as “when a construction contract expressly assigns to the contractor responsibility for the final design (and construction) of a specific element of the completed, functioning project.”¹ The ‘completed, functioning project’ qualifier is important because it distinguishes delegated design from the temporary construction that falls under the construction contractor’s means and methods.

Design Roles and Responsibilities

Under delegated design, the Contractor retains a qualified, registered **Delegated Designer** to complete the design of a specified building element. The two designers on the project (the Project Designer and the Delegated Designer) typically have no contractual relationship with each other but have complementary design roles and responsibilities which must be clearly defined to avoid schedule, communication, coordination, or design discrepancy or other conflicts.

- The Project Designer is responsible for designing the project as a completed, functioning whole as documented in the construction documents. The construction documents indicate which elements will be delegated design and include all the criteria to which the designated elements must be designed. This includes Delegated Designer qualifications and licensing, performance criteria for the elements, design intent, and submittal requirements.
- The Delegated Designer is responsible for designing the element in a way that is safe, responsible, code compliant, and compliant with the design intent and criteria in the construction documents. The design must be signed and sealed by the Delegated Designer and submitted for review by the Project Designer in accordance with the submittal requirements, which may include drawings, specifications, calculations, certifications, and reports.
- The Project Designer is responsible for reviewing the delegated design but does not assume liability for the Delegated Designer’s

technical work. The review should confirm that the submission is compliant with:

- Performance criteria and submittal requirements, including the qualifications of the Delegated Designer and the signing and sealing of appropriate documents.
- The design intent and the coordination and transition with all adjacent and associated elements.
- All other criteria in the construction documents.

Specific delegated design performance and design criteria for an element are included in the relevant specification section, and general requirements are included in Specification Section 013573 Delegated Design Procedures.

Examples of Delegated Design

The list of delegated design elements varies by project but may include:

- **Architectural:** Curtain walls, metal panels, wall and roof systems, casework, millwork, waterproofing systems
- **Structural:** Metal stairs, handrails and guardrails, steel connections, precast and/or pre-stressed concrete, foundations
- **Specialty components:** Elevators, escalators, lighting, theater acoustics, fountains, arts
- **MEP:** Fire suppression systems, building automation systems, sprinklers, fire and security alarm systems, accessory parts (hangers and supports for heavy pipes, ducts, and equipment), large chillers and boilers

Conclusion

Delegated design utilizes the expertise of contractors to design proprietary and highly specialized building elements. Essential aspects of success include the definition of criteria (Delegated Designer qualifications, design intent and criteria, submittal requirements) and the complimentary roles of the Project Designer and Delegated Designer.

References

1. O’Beirne, Kevin. (2021, May 11). *Shop drawings and submittals—Delegated design submittals*. Construction Specifications Institute. <https://www.csiresources.org/blogs/kevin-obeirne-pe-fcsi-ccs-ccca-cdt1/2021/05/11/shop-drawings-and-submittalsdelegated-design-submi>

Additional Reading

1. AIA Contract Documents. (2022, October 20). *What contractors need to know about delegated design in construction*. <https://learn.aiacontracts.com/articles/what-contractors-need-to-know-about-delegated-design/>
2. AIA Contract Documents. (2024, January 23). *Delegated design, what does it really mean?*. <https://learn.aiacontracts.com/articles/delegated-design-what-does-it-really-mean/>