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ASCC Working on Constructability Index – But Need Case Studies

For the past few years, ASCC has been reviewing literature on constructability, especially that from the Construction Industry Institute (CII). CII started their constructability efforts in the mid-1980's and have continued with a number of publications. We also reviewed constructability publications by AISC, ASCE, AASHTO, State Departments of Transportation publications and scholarly papers.

ASCC has heard from concrete contractors that the quality of drawings was decreasing. A few years ago, ASCC had informal interviews with contractors that reiterated the same point. We had been following the Council of American Structural Engineers (CASE) and their document "A Guideline Addressing Coordination and Completeness of Structural Construction Documents", first published in 2003, then revised in 2013. ASCC wants to support CASE efforts as a constructability review can't be accomplished without coordination and complete construction documents.

ASCC adopted the CII approach to constructability that utilizes a corporate constructability manager, a project constructability coordinator, and a database custodian to lead the Constructability Index on an informal basis in the design process. We want an Index that will not inhibit owners' imaginations or designers' creativity. We also did not want to create an Index for every building type in different locations. Thus, some of the Constructability Index items in the Concrete Scorecard are more general, to apply as necessary to each concrete project, such as "Adverse Weather." We also included an "Other" category that can be used as needed to create a special item.

The ASCC Technical Committee has reviewed the working document and provided feedback at a September ZOOM meeting. The Concrete Constructability Scorecards for the Constructability Index are shown in the Table. But what's next? We need ASCC contractors to identify projects where constructability efforts occurred, that we can use as case studies to evaluate the index. Don't be shy, volunteer early and often by emailing bsuprenant@asconline.org.

ASCC Draft for Constructability Index for Cast-in-Place Concrete Buildings

<p>A. Coordination and Completeness of Drawings (300 points)</p> <ul style="list-style-type: none">a. Drawing Coordination (CASE) (100 points)<ul style="list-style-type: none">i. General drawing formatii. BIMiii. Architectural-Structural Coordinationiv. Civil-Structural Coordinationv. MEP-Structural Coordinationb. Structural Drawings (CASE) (122 points)<ul style="list-style-type: none">i. General Structural Drawingsii. General Foundation Systemsiii. Driven Pile Foundation Systemsiv. Drilled Pier Foundation Systemsv. Concrete Systemsc. Dimensions (48 points)d. Drawing Revisions (30 points)	<p>D. Clash Detection (80 points)</p> <ul style="list-style-type: none">a. Structural Componentsb. Intersectionsc. Disciplinesd. Construction
<p>B. Standardization (115 points)</p> <ul style="list-style-type: none">a. Columnsb. Beams/Girdersc. Slabsd. Walls<ul style="list-style-type: none">i. Element Shapesii. Element Sizesiii. Surface Finishiv. Reinforcement (quantity, size, spacing, splices)	<p>E. Tolerance Compatibility (75 points)</p> <ul style="list-style-type: none">a. Structural Componentsb. Building Systemsc. Exteriord. Interior
<p>C. Concrete (70 points)</p> <ul style="list-style-type: none">a. Specificationsb. Materialsc. Construction	<p>F. Deflection Compatibility (60 points)</p> <ul style="list-style-type: none">a. Building Systemsb. Exteriorc. Interior