Architecture, Engineering, and Construction Division

Structural Analysis, Design, and Drawing Checklist - Abbreviated

The latest version of this document is available to Church Employees and Consultants on the AEC Website without needing a password:

* <https://aec.churchofjesuschrist.org/design_guidelines/>: Select and download *Abbreviated Structural Analysis, Design, and Drawing Checklist* under “STRUCTURAL”.
* The template can also be directly downloaded using this hyperlink: [*Abbreviated Structural Analysis, Design, and Drawing Checklist*](https://aec.churchofjesuschrist.org/design_guidelines/SupportDocs/AbbreviatedStructuralAnalysis-DesignAndDrawingChecklist.docx).

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with questions or suggestions for improvement.

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All previous versions of this document are obsolete.

Contact AEC with questions, feedback, or suggestions for improvement.

Salt Lake City, Utah

**Abbreviated Structural Analysis, Design, and Drawing Checklist**

Project Name:

Project Number:

Date:

This abbreviated structural checklist is provided as a guide to encourage a thorough review of the structural contract documents. The “[*Extended Structural Analysis, Design and Drawing Checklists*](http://aec.churchofjesuschrist.org/aec/design_guidelines/SupportDocs/ExtendedStructuralAnalysisDesignAndDrawingChecklists.pdf?t=2015_2_5_16_24)” are also available on the [AEC Website](https://aec.churchofjesuschrist.org/design_guidelines/).

## Structural Calculations:

Obtain, read, and understand Owner guidelines and AEC Design Guidelines?

Use materials, methods, and design techniques as described in AEC guidelines and specifications to reduce maintenance and save costs long term?

Determine applicable codes, project address (location) and project function?

The structural calculations book is complete and is organized based on the structural calculations index at the beginning of the book?

Determine lateral loading requirements with authority having jurisdiction, but verify with Owner Guidelines?

The structural design criteria table/basis of design (code(s) used, gravity load criteria, wind criteria, seismic load criteria, materials used, geotechnical information, etc.) is complete and is included at the front of the structural calculations book?

Design calculations have been performed using the approved local jurisdiction building codes and standards, site structural design criteria and conditions and Owner guidelines?

Seismic, wind, and live load design criteria and coefficients are correct? Coordination with architectural and other design disciplines has been completed and calculations include gravity and lateral loads attributable to items from each discipline?

Load combinations used for design are accurate and complete?

Foundations are designed using the recommendations of the geotechnical evaluation report?

Foundations have been designed for the overturning and sliding forces of lateral loads?

Vertical (gravity) and lateral load analysis and design is complete?

Floor and roof diaphragms are designed for the required vertical (gravity) and lateral loads?

The design appears to be visually correct (such as long spans have larger members)?

Calculations have been included for architectural and ancillary structures (steeple, folding partition supports, equipment anchorage, fence, storage building, pavilions, stairs, handrails/guardrails, ceiling assemblies, interior partitions, suspended equipment and so forth)?

## Structural Drawings:

The structural design criteria is provided (codes, standards, design loads, design material stresses and so forth)?

Drawings and specifications should note the geotechnical evaluation report requirements?

Drawings show all primary structural elements (foundations, suspended floor slabs, columns, walls, beams, trusses and so forth)?

Structural layout has been coordinated with the architectural drawings?

Details for structural connections and attachments have been provided?

Vertical (gravity) and lateral load paths are complete, are defined and are detailed?

Attachment and anchorage of masonry or concrete to the structure is complete?

Observation, testing, and inspection requirements are noted in the structural drawings or in the specifications?

Reinforcement to meet design and minimum and maximum code requirements has been provided in masonry and concrete structural elements?

Details for architectural and ancillary structures (steeple, folding partition supports, equipment anchorage, fence, storage building, pavilions, etc.) have been provided?

The information on the structural drawings has been coordinated with the specifications?