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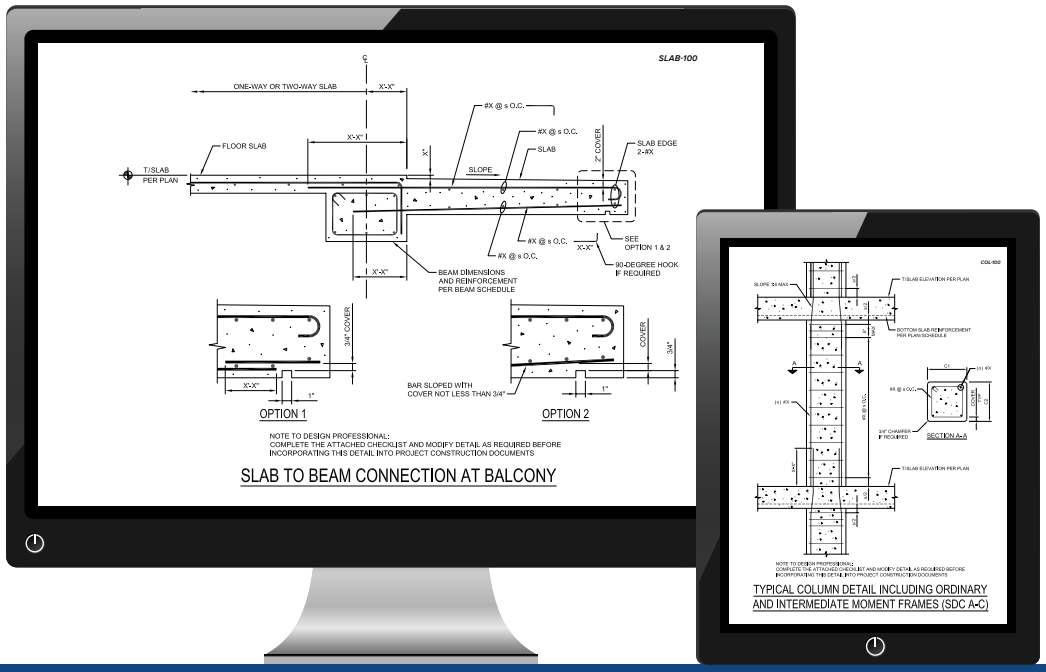

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ABOUT THIS BOOK

The 2020 edition of the *ACI Detailing Manual*, MNL-66, provides answers to many detailing questions asked by design engineers, architects, contractors, detailers, and engineering students. The Manual is divided in three sections: Section 1 includes a copy of ACI 315R-18, *Guide to Presenting Reinforcing Steel Design Details*; Section 2 includes individual details with corresponding checklists; and Section 3 includes a compilation of *Concrete International* articles chosen for their relevance to detailing reinforced concrete. Appendix A has tables to help the engineer in the detailing effort.

Section 1 guides designers of concrete structures in determining information and design details that are required to prepare reinforcing steel fabrication and placing drawings. The guide stresses the importance of this information to ensure that the reinforcing steel detailer effectively and accurately captures the intent of the designer, presenting it in a manner that is clear and unambiguous to the reinforcing steel fabricator and placer.

Section 2 illustrates methods for presenting necessary design information through over 100 individual details that provide examples of ways to communicate design information effectively and completely to the contractor. The details conform to "Building Code Requirements for Structural Concrete (ACI 318-19)" and were prepared with the assistance of a task group consisting of detailers, contractors, and practicing engineers. Each detail is placed on one page with dimensions and bar sizes left to be completed by the user. Alongside each detail, notes to the user are listed as a reminder of the main code requirements that need to be satisfied for that particular detail. This section is planned to be interactive with the engineering community. It is anticipated that engineers, architects, contractors, and detailers will not only submit comments to improve the details shown in this edition of the manual, but also submit other relevant details to be added to future editions at techinq@concrete.org.

Section 3 includes a collection of 37 articles published in *Concrete International* related to concrete detailing that were authored by detailers and practicing engineers. The articles identify constructability issues specific to reinforcing steel. Common problems found on engineering drawings are discussed along with solutions drawn from the experiences of knowledgeable practitioners in the industry. The article topics vary from describing the tolerance cloud to addressing constraints in reinforcing bar modeling to avoiding ambiguous callouts, among other topics. These solutions are not offered as official ACI-recommended practice.

Supporting reference data in Section 4 includes specific chapters on reinforcing bars, wires, bar supports, spirals, mathematical formulas and tables, and common symbols and abbreviations.

This guide is intended to provide examples and guidance for how licensed design professionals may satisfy the prescribed provisions of ACI 318-19, *Building Code Requirements for Structural Concrete*. It does not, however, purport to represent the only suitable way to satisfy the requirements for every project. Engineering judgment must be applied to the unique requirements of individual projects and the details should be modified accordingly before applying to a project.

ACKNOWLEDGMENTS

The development of MNL-66(20), "ACI Detailing Manual," is a must-have resource that provides answers to many detailing questions asked by design engineers, architects, contractors, detailers, and engineering students. The structural drawings conform to the "Building Code Requirements for Structural Concrete (ACI 318-19)."

ACI would like to thank the review group for this manual consisting of Chair Richard Birley, James Cornell, Jason Draper, John Hausfeld, Christopher Perry, and Tom Schaeffer. Their careful review and dedication to the project on top of all their other volunteer time made it possible to develop and revise this guide in a timely manner while maintaining the quality expected by the industry.

ACI would also like to thank Burns & McDonnell for providing examples of typical details that were used to develop the drawing in this detailing manual.

Khaled Nahlawi
Managing Editor

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ACI 315R-18