5

TABLE OF CONTENTS

PART 1: GENERAL

CHAPTER 1 GENERAL

- 1.1—Scope of ACI 318, p. 9
- 1.2—General, p. 9
- 1.3—Purpose, p. 9
- 1.4—Applicability, p. 10
- 1.5—Interpretation, p. 12
- 1.6—Building official, p. 13
- 1.7—Licensed design professional, p. 13
- 1.8—Construction documents and design records, p. 13
- 1.9—Testing and inspection, p. 14
- 1.10—Approval of special systems of design, construction, or alternative construction materials, p. 14

CHAPTER 2

NOTATION AND TERMINOLOGY

- 2.1—Scope, p. 15
- 2.2—Notation, p. 15
- 2.3—Terminology, p. 31

CHAPTER 3 REFERENCED STANDARDS

- 3.1—Scope, p. 47
- 3.2—Referenced standards, p. 47

CHAPTER 4

STRUCTURAL SYSTEM REQUIREMENTS

- 4.1—Scope, p. 51
- 4.2—Materials, p. 51
- 4.3—Design loads, p. 51
- 4.4—Structural system and load paths, p. 52
- 4.5—Structural analysis, p. 54
- 4.6—Strength, p. 55
- 4.7—Serviceability, p. 56
- 4.8—Durability, p. 56
- 4.9—Sustainability, p. 56
- 4.10—Structural integrity, p. 56
- 4.11—Fire resistance, p. 57
- 4.12—Requirements for specific types of construction, p. 57
- 4.13—Construction and inspection, p. 59
- 4.14—Strength evaluation of existing structures, p. 59

PART 2: LOADS & ANALYSIS

CHAPTER 5 LOADS

- 5.1—Scope, p. 61
- 5.2—General, p. 61
- 5.3—Load factors and combinations, p. 62

CHAPTER 6 STRUCTURAL ANALYSIS

- 6.1—Scope, p. 67
- 6.2—General, p. 67
- 6.3—Modeling assumptions, p. 72
- 6.4—Arrangement of live load, p. 73
- 6.5—Simplified method of analysis for nonprestressed continuous beams and one-way slabs, p. 74
- 6.6—Linear elastic first-order analysis, p. 75
- 6.7—Linear elastic second-order analysis, p. 84
- 6.8—Inelastic analysis, p. 85
- 6.9—Acceptability of finite element analysis, p. 86

PART 3: MEMBERS

CHAPTER 7 ONE-WAY SLABS

- 7.1—Scope, p. 89
- 7.2—General, p. 89
- 7.3—Design limits, p. 89
- 7.4—Required strength, p. 91
- 7.5—Design strength, p. 91
- 7.6—Reinforcement limits, p. 92
- 7.7—Reinforcement detailing, p. 94

CHAPTER 8 TWO-WAY SLABS

- 8.1—Scope, p. 99
- 8.2—General, p. 99
- 8.3—Design limits, p. 100
- 8.4—Required strength, p. 103
- 8.5—Design strength, p. 109
- 8.6—Reinforcement limits, p. 110
- 8.7—Reinforcement detailing, p. 113
- 8.8—Nonprestressed two-way joist systems, p. 125

