



# Online Documents Available to ACI Individual, Young Professional, and E-Student Members

## Practices: Guides, Reports & Technotes

1. 117.1R-14 Guide for Tolerance Compatibility in Concrete Construction
2. 121.1R-16 Guide to Quality Management Auditing in the Concrete Industry
3. 121R-08 Guide for Concrete Construction Quality Systems in Conformance with ISO 9001
4. 122R-14 Guide to Thermal Properties of Concrete and Masonry Systems
5. 131.2R-17 Guide to Use of Industry Foundation Classes in Exchange of Reinforcement Models
6. 131.1R-14 Information Delivery Manual for Cast-in-Place Concrete
7. 132R-14 Guide for Responsibility in Concrete Construction
8. 201.2R-16 Guide to Durable Concrete
9. 201.1R-08 Guide for Conducting a Visual Inspection of Concrete in Service
10. 207.6R-17 Report on the Erosion of Concrete in Hydraulic Structures
11. 207.1R-05 Guide to Mass Concrete
12. 207.2R-07 Report on Thermal and Volume Change Effects on Cracking of Mass Concrete
13. 207.3R-94 Practices for Evaluation of Concrete in Existing Massive Structures for Service Conditions
14. 207.4R-05 Cooling and Insulating Systems for Mass Concrete
15. 207.5R-11 Report on Roller-Compacted Mass Concrete
16. 209.2R-08 Guide for Modeling and Calculating Shrinkage and Creep in Hardened Concrete
17. 209R-92 Prediction of Creep, Shrinkage, and Temperature Effects in Concrete Structures
18. 211.6T-14 Aggregate Suspension Mixture Proportioning Method
19. 211.7R-15 Guide for Proportioning Concrete Mixtures with Ground Limestone and Other Mineral Fillers
20. 211.8R-15 Guide to Troubleshooting Concrete Mixture Issues as Influenced by Constitutive Materials, Jobsite Conditions, or Testing Practices
21. 211.1-91 Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
22. 211.3R-02 Guide for Selecting Proportions for No-Slump Concrete
23. 211.4R-08 Guide for Selecting Proportions for High-Strength Concrete Using Portland Cement and Other Cementitious Materials



24. 211.5R-14 Guide for Submittal of Concrete Proportions
25. 212.3R-16 Report on Chemical Admixtures for Concrete
26. 213R-14 Guide for Structural Lightweight-Aggregate Concrete
27. 214.4R-10 Guide for Obtaining Cores and Interpreting Compressive Strength Results
28. 214R-11 Guide to Evaluation of Strength Test Results of Concrete
29. 221.1R-98 Report on Alkali-Aggregate Reactivity
30. 221R-96 Guide for Use of Normal Weight and Heavyweight Aggregates in Concrete
31. 222.2R-14 Report on Corrosion of Prestressing Steels
32. 222.3R-11 Guide to Design and Construction Practices to Mitigate Corrosion of Reinforcement in Concrete Structures
33. 222R-01 Protection of Metals in Concrete Against Corrosion
34. 223R-10 Guide for the Use of Shrinkage-Compensating Concrete
35. 224.1R-07 Causes, Evaluation, and Repair of Cracks in Concrete Structures
36. 224.2R-92 Cracking of Concrete Members in Direct Tension
37. 224.3R-95 Joints in Concrete Construction
38. 224.4R-13 Guide to Design Detailing to Mitigate Cracking
39. 224R-01 Control of Cracking in Concrete Structures
40. 225R-16 Guide to the Selection and Use of Hydraulic Cements
41. 228.1R-03 In-Place Methods to Estimate Concrete Strength
42. 228.2R-13 Report on Nondestructive Test Methods for Evaluation of Concrete in Structures
43. 229R-13 Report on Controlled Low-Strength Materials
44. 230.1R-09 Report on Soil Cement
45. 231R-10 Report on Early-Age Cracking: Causes, Measurement, and Mitigation
46. 232.1R-12 Report on the Use of Raw or Processed Natural Pozzolans in Concrete
47. 232.2R-03 Use of Fly Ash in Concrete
48. 232.3R-14 Report on High-Volume Fly Ash Concrete for Structural Applications
49. 233R-17 Guide to the Use of Slag Cement in Concrete and Mortar
50. 234R-06 Guide for the Use of Silica Fume in Concrete
51. 237R-07 Self-Consolidating Concrete
52. 238.1R-08 Report on Measurements of Workability and Rheology of Fresh Concrete
53. 238.2T-14 Concrete Thixotropy (TechNote)
54. 241R-17 Report on Application of Nanotechnology and Nanomaterials in Concrete
55. 302.1R-15 Guide to Concrete Floor and Slab Construction



56. 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials
57. 303R-12 Guide to Cast-in-Place Architectural Concrete Practice
58. 304.2R-17 Guide to Placing Concrete by Pumping Methods
59. 304.3R-96 Heavyweight Concrete: Measuring, Mixing, Transporting, and Placing
60. 304.4R-95 Placing Concrete with Belt Conveyors
61. 304.6R-09 Guide for Use of Volumetric-Measuring and Continuous-Mixing Concrete Equipment
62. 304R-00 Guide for Measuring, Mixing, Transporting, and Placing Concrete
63. 305R-10 Guide to Hot Weather Concreting
64. 306R-16 Guide to Cold Weather Concreting
65. 308-213R-13 Report on Internally Cured Concrete Using Prewetted Absorptive Lightweight Aggregate
66. 308R-16 Guide to External Curing of Concrete
67. 309.2R-15 Guide to Identification and Control of Visible Surface Effects of Consolidation on Formed Concrete Surfaces
68. 309.1R-08 Report on Behavior of Fresh Concrete During Vibration
69. 309.5R-00 Compaction of Roller-Compacted Concrete
70. 309R-05 Guide for Consolidation of Concrete
71. 310R-13 Guide to Decorative Concrete
72. 311.4R-05 Guide for Concrete Inspection
73. 311.5-04 Guide for Concrete Plant Inspection and Testing of Ready-Mixed Concrete
74. 314R-16 Guide to Simplified Design for Reinforced Concrete Buildings
75. 325.14R-17 Guide for Design and Proportioning of Concrete Mixtures for Pavements
76. 325.9R-15 Guide for Construction of Concrete Pavements
77. 325.11R-01 Accelerated Techniques for Concrete Paving
78. 325.12R-02 Guide for Design of Jointed Concrete Pavements for Streets and Local Roads
79. 325.13R-06 Concrete Overlays for Pavement Rehabilitation
80. 327R-14 Guide to Roller-Compacted Concrete Pavements
81. 329R-14 Report on Performance-Based Requirements for Concrete
82. 330.2R-17 Guide for the Design and Construction of Concrete Site Paving for Industrial and Trucking Facilities
83. 330R-08 Guide for the Design and Construction of Concrete Parking Lots
84. 332.1R-06 Guide to Residential Concrete Construction
85. 334.1R-92 Concrete Shell Structures-Practice and Commentary
86. 334.3R-05 Construction of Concrete Shells Using Inflated Forms



87. 336.2R-88 Suggested Analysis and Design Procedures for Combined Footings and Mats
88. 336.3R-14 Report on Design and Construction of Drilled Piers
89. 341.4R-16 Report on the Seismic Design of Bridge Columns Based on Drift
90. 341.2R-14 Report on Analysis and Design of Seismic-Resistant Concrete Bridge Systems
91. 341.3R-07 Seismic Evaluation and Retrofit Techniques for Concrete Bridges
92. 342R-16 Report on Flexural Live Load Distribution Methods for Evaluating Existing Bridges
93. 343.1R-12 Guide for the Analysis and Design of Reinforced and Prestressed Concrete Guideway Structures
94. 343R-95 Analysis and Design of Reinforced Concrete Bridge Structures
95. 345.1R-16: Guide to Maintenance of Concrete Bridge Members
96. 345.2R-13 Guide for Widening Highway Bridges
97. 345R-11 Guide for Concrete Highway Bridge Deck Construction
98. 347.2R-17 Guide for Shoring/Reshoring of Concrete Multistory Buildings
99. 347.3R-13 Guide to Formed Concrete Surfaces
100. 347R-14 Guide to Formwork for Concrete
101. 349.1R-07 Reinforced Concrete Design for Thermal Effects on Nuclear Power Plant Structures
102. 349.2R-07(14) Guide to the Concrete Capacity Design (CCD) Method—Embedment Design Examples
103. 349.3R-02 Evaluation of Existing Nuclear Safety-Related Concrete Structures
104. 350.2R-04 Concrete Structures for Containment of Hazardous Materials
105. 350.3-06 Seismic Design of Liquid-Containing Concrete Structures and Commentary
106. 350.4R-04 Design Considerations for Environmental Engineering Concrete Structures
107. 351.1R-12 Report on Grouting between Foundations and Bases for Support of Equipment and Machinery
108. 351.2R-10 Report on Foundations for Static Equipment
109. 351.3R-04 Foundations for Dynamic Equipment
110. 352.1R-11 Guide for Design of Slab-Column Connections in Monolithic Concrete Structures
111. 352R-02 Recommendations for Design of Beam-Column Connections in Monolithic Reinforced Concrete Structures
112. 355.3R-11 Guide for Design of Anchorage to Concrete: Examples Using ACI 318 Appendix D
113. 357.2R-10 Report on Floating and Float-In Concrete Structures
114. 357.3R-14 Guide for Design and Construction of Waterfront and Coastal Concrete Marine Structures
115. 357R-84 Guide for the Design and Construction of Fixed Offshore Concrete Structures
116. 360R-10 Guide to Design of Slabs-on-Ground
117. 362.1R-12 Guide for the Design and Construction of Durable Concrete Parking Structures
118. 362.2R-00 Guide for Structural Maintenance of Parking Structures



119. 363.2R-11 Guide to Quality Control and Assurance of High-Strength Concrete
120. 363R-10 Report on High-Strength Concrete
121. 364.14T-17 Section Loss Determination of Damaged or Corroded Reinforcing Steel Bars
122. 364.11T-15 Managing Alkali-Aggregate Reaction Expansion in Mass Concrete
123. 364.12T-15 Repair of Leaking Cracks in Walls of Liquid Containment Structures
124. 364.13T-15 Repairs for Reinforcement with Shallow Cover
125. 364.3T-15 Treatment of Exposed Epoxy-Coated Reinforcement in Repair (TechNote)
126. 364.10T-14 Rehabilitation of Structure with Reinforcement Section Loss (TechNote)
127. 364.1R-07 Guide for Evaluation of Concrete Structures before Rehabilitation
128. 364.2T-08 Increasing Shear Capacity Within Existing Reinforced Concrete Structures (TechNote)
129. 364.3R-09 Guide for Cementitious Repair Material Data Sheet
130. 364.4T-10 Determining the Load Capacity of a Structure When As-Built Drawings are Unavailable (TechNote)
131. 364.5T-10 Importance of Modulus of Elasticity in Surface Repair Materials (TechNote)
132. 364.6T-02(11) Concrete Removal in Repairs Involving Corroded Reinforcing Steel (TechNote)
133. 364.7T-02(11) Evaluation and Minimization of Bruising (Microcracking) in Concrete Repair (TechNote)
134. 364.8T-02(11) Use of Hydrodemolition for Concrete Removal in Unbonded Post-Tensioned Systems (TechNote)
135. 364.9T-03(11) Cracks in a Repair (TechNote)
136. 365.1R-17 Report on Service Life Prediction
137. 369R-11 Guide for Seismic Rehabilitation of Existing Concrete Frame Buildings and Commentary
138. 370R-14 Report for the Design of Concrete Structures for Blast Effects
139. 371R-16 Guide for the Analysis, Design, and Construction of Elevated Concrete and Composite Steel-Concrete Water Storage Tanks
140. 372R-13 Guide to Design and Construction of Circular Wire- and Strand-Wrapped Prestressed
141. 374.3R-16: Guide to Nonlinear Modeling Parameters for Earthquake-Resistant Structures
142. 374.2R-13 Guide for Testing Reinforced Concrete Structural Elements under Slowly Applied Simulated Seismic Loads
143. 408.2R-12 Report on Bond of Steel Reinforcing Bars Under Cyclic Loads
144. 408.3R-09 Guide for Lap Splice and Development Length of High Relative Rib Area Reinforcing Bars in Tension and Commentary
145. 408R-03 Bond and Development of Straight Reinforcing Bars in Tension
146. 421.3R-15 Guide to Design of Reinforced Two-Way Slab Systems



147. 421.1R-08 Guide to Shear Reinforcement for Slabs
148. 421.2R-10 Guide to Seismic Design of Punching Shear Reinforcement in Flat Plates
149. 423.10R-16 Guide to Estimating Prestress Loss
150. 423.3R-17 Recommendations for Concrete Members Prestressed with Single-Strand Unbonded Tendons
151. 423.4R-14 Report on Corrosion and Repair of Unbonded Single-Strand Tendons
152. 423.8R-10 Report on Corrosion and Repair of Grouted Multistrand and Bar Tendon Systems
153. 435.8R-85 Observed Deflections of Reinforced Concrete Slab Systems, and Causes of Large Deflections
154. 435R-95 Control of Deflection in Concrete Structures
155. 437.1R-07 Load Tests of Concrete Structures: Methods, Magnitude, Protocols, and Acceptance Criteria
156. 437R-03 Strength Evaluation of Existing Concrete Buildings
157. 439.3R-07 Types of Mechanical Splices for Reinforcing Bars
158. 439.4R-09(17) Report on Steel Reinforcement—Material Properties and U.S. Availability
159. 440.2R-17 Guide for the Design and Construction of Externally Bonded FRP Systems for Strengthening Concrete Structures
160. 440.1R-15 Guide for the Design and Construction of Structural Concrete Reinforced with Fiber-Reinforced Polymer Bars
161. 440.9R-15 Guide to Accelerated Conditioning Protocols for Durability Assessment of Internal and External FRP Reinforcement
162. 440.3R-12 Guide Test Methods for Fiber-Reinforced Polymer Composites for Reinforcing or Strengthening Concrete and Masonry Structures
163. 440.4R-04 Prestressing Concrete Structures with FRP Tendons
164. 440.7R-10 Guide for the Design and Construction of Externally Bonded Fiber-Reinforced Polymer Systems
165. 440R-07 Report on Fiber-Reinforced Polymer (FRP) Reinforcement for Concrete Structures
166. 441R-96 Report on High-Strength Concrete Columns
167. 445.1R-12 Report on Torsion in Structural Concrete
168. 445R-99 Recent Approaches to Shear Design of Structural Concrete
169. 446.1R-91 Fracture Mechanics of Concrete: Concepts, Models, and Determination of Material Properties
170. 446.3R-97 Finite Element Analysis of Fracture in Concrete Structures
171. 503.5R-92 Guide for the Selection of Polymer Adhesives with Concrete
172. 506.6T-17 Visual Shotcrete Core Quality Evaluation Technote
173. 506.1R-08 Guide to Fiber-Reinforced Shotcrete
174. 506.4R-94 Guide for the Evaluation of Shotcrete
175. 506.5R-09 Guide for Specifying Underground Shotcrete



176. 506R-16 Guide to Shotcrete
177. 515.2R-13 Guide to Selecting Protective Treatments for Concrete
178. 522R-10 Report on Pervious Concrete
179. 523.1R-06 Guide for Cast-in-Place Low-Density Cellular Concrete
180. 523.2R-96 Guide for Precast Cellular Concrete Floor, Roof, and Wall Units
181. 523.3R-14 Guide for Cellular Concretes above 50 lb/ft<sup>3</sup> (800 kg/m<sup>3</sup>)
182. 523.4R-09 Guide for Design and Construction with Autoclaved Aerated Concrete Panels
183. 524R-16 Guide to Portland Cement-Based Plaster
184. 533R-11 Guide for Precast Concrete Wall Panels
185. 543R-12 Guide to Design, Manufacture, and Installation of Concrete Piles
186. 544.2R-17 Report on the Measurement of Fresh State Properties and Fiber Dispersion of Fiber-Reinforced Concrete
187. 544.9R-17 Report on Measuring Mechanical Properties of Hardened Fiber-Reinforced Concrete
188. 544.6R-15 Report on Design and Construction of Steel Fiber-Reinforced Concrete Elevated Slabs
189. 544.7R-16 Report on Design and Construction of Fiber-Reinforced Precast Concrete Tunnel Segments
190. 544.8R-16 Report on Indirect Method to Obtain Stress-Strain Response of Fiber-Reinforced Concrete
191. 544.1R-96 Report on Fiber Reinforced Concrete
192. 544.3R-08 Guide for Specifying, Proportioning, and Production of Fiber-Reinforced Concrete
193. 544.4R-88 Design Considerations for Steel Fiber Reinforced Concrete
194. 544.5R-10 Report on the Physical Properties and Durability of Fiber-Reinforced Concrete
195. 546.2R-10 Guide to Underwater Repair of Concrete
196. 546.3R-14 Guide to Materials Selection for Concrete Repair
197. 546R-14 Guide to Concrete Repair
198. 548.5R-16 Guide for Polymer Concrete Overlays
199. 548.11R-12 Guide for the Application of Epoxy and Latex Adhesives for Bonding Freshly Mixed and Hardened Concretes
200. 548.1R-09 Guide for the Use of Polymers in Concrete
201. 548.3R-09 Report on Polymer-Modified Concrete
202. 549.5R-16 Report on Spray-up and Continuous Strand Glass Fiber-Reinforced Concrete
203. 549.1R-93 Guide for the Design, Construction, and Repair of Ferrocement
204. 549.2R-04 Report on Thin Reinforced Cementitious Products
205. 549.3R-09(17) Report on Glass Fiber-Reinforced Concrete Premix



206. 549.4R-13 Guide to Design and Construction of Externally Bonded Fabric-Reinforced Cementitious Matrix Systems
207. 549R-97 Report on Ferrocement
208. 550.1R-09(17) Guide to Emulating Cast-in-Place Detailing for Seismic Design of Precast Concrete Structures
209. 550.2R-13 Design Guide for Connections in Precast Jointed Systems
210. 551.2R-15 Design Guide for Tilt-Up Concrete Panels
211. 551.1R-14 Guide to Tilt-Up Concrete Construction
212. 555R-01 Removal and Reuse of Hardened Concrete
213. 560R-16 Report on Design and Construction with Insulating Concrete Forms
214. ACI Collection Index
215. CT-16 ACI Concrete Terminology
216. ITG-4.2R-06 Materials and Quality Considerations for High-Strength Concrete in Moderate to High Seismic Applications
217. ITG-4.3R-07 Report on Structural Design and Detailing for High-Strength Concrete in Moderate to High Seismic Applications
218. ITG-6R-10 Design Guide for the Use of ASTM A1035/A1035M Grade 100 (690) Steel Bars for Structural Concrete
219. ITG-9R-16: Report on Design of Concrete Wind Turbine Towers