

**TABLE OF CONTENTS**

1603 Construction Documents ..... 4  
 1604 General Design Requirements ..... 5  
 1605 Load Combinations ..... 8  
 1606 Dead Loads ..... 9  
 1607 Live Loads ..... 10  
 1608 Snow Loads ..... 15  
 1609 Wind Loads ..... 15  
 1610 Soil Lateral Loads ..... 25  
 1611 Rain Loads ..... 25  
 1612 Flood Loads ..... 26  
 1613 Earthquake Loads ..... 28

**CHAPTER 16A STRUCTURAL DESIGN ..... 53**

Section

1601A General ..... 53  
 1602A Definitions and Notations ..... 53  
 1603A Construction Documents ..... 55  
 1604A General Design Requirements ..... 56  
 1605A Load Combinations ..... 59  
 1606A Dead Loads ..... 60  
 1607A Live Loads ..... 60  
 1608A Snow Loads ..... 66  
 1609A Wind Loads ..... 66  
 1610A Soil Lateral Loads ..... 71  
 1611A Rain Loads ..... 71  
 1612A Flood Loads ..... 72  
 1613A Earthquake Loads ..... 74  
 1614A Modifications to ASCE 7 ..... 78

**CHAPTER 17 STRUCTURAL TESTS AND SPECIAL INSPECTIONS..... 87R**

Section

1701 General ..... 87R  
 1702 Definitions ..... 87R  
 1703 Approvals ..... 88R  
 1704 Special Inspections ..... 88R  
 1705 Statement of Special Inspections ..... 98R  
 1706 Contractor Responsibility ..... 99R  
 1707 Special Inspections for Seismic Resistance .. 99R  
 1708 Structural Testing for Seismic Resistance... 101R  
 1709 Structural Observations ..... 102R  
 1710 Design Strengths of Materials ..... 102R  
 1711 Alternative Test Procedure ..... 102R  
 1712 Test Safe Load ..... 102R  
 1713 In-situ Load Tests ..... 102R

1714 Preconstruction Load Tests ..... 102aR  
 1715 Material and Test Standards ..... 102bR  
 1716 Certified Licensed Contractors ..... 102bR  
 1717 Certified Security Bar Installer ..... 102dR  
 1718 Prefabricated Construction ..... 102eR

**CHAPTER 17A STRUCTURAL TESTS AND SPECIAL INSPECTIONS ..... 105**

Section

1701A General ..... 105  
 1702A Definitions ..... 105  
 1703A Approvals ..... 106  
 1704A Special Inspections ..... 107  
 1705A Statement of Special Inspections ..... 117  
 1706A Contractor Responsibility ..... 118  
 1707A Special Inspections for Seismic Resistance ... 118  
 1708A Structural Testing for Seismic Resistance ... 119  
 1709A Structural Observations ..... 120  
 1710A Design Strengths of Materials ..... 120  
 1711A Alternative Test Procedure ..... 120  
 1712A Test Safe Load ..... 120  
 1713A In-situ Load Tests ..... 120  
 1714A Preconstruction Load Tests ..... 121  
 1715A Material and Test Standards ..... 122

**CHAPTER 18 SOILS AND FOUNDATIONS .. 125R**

Section

1801 General ..... 125R  
 1802 Foundation and Soils Investigations ..... 125R  
 1803 Excavation, Grading and Fill ..... 128  
 1804 Allowable Load-bearing Values of Soils ... 129R  
 1805 Footings and Foundations ..... 129R  
 1806 Retaining Walls ..... 140  
 1807 Dampproofing and Waterproofing ..... 140  
 1808 Pier and Pile Foundations ..... 141R  
 1809 Driven Pile Foundations ..... 146  
 1810 Cast-in-place Concrete Pile Foundations ..... 149  
 1811 Composite Piles ..... 153  
 1812 Pier Foundations ..... 153

**CHAPTER 18A SOILS AND FOUNDATIONS .... 157**

Section

1801A General ..... 157  
 1802A Foundation and Soils Investigations ..... 157  
 1803A Excavation, Grading and Fill ..... 160