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**The TEXT indicated with < > is to be selected or filled in by the Specifier to meet the requirements of the project.**

**If any of the SECTIONS (i.e. 1.02, 1.03, etc.) below are not required for the project do NOT delete the Section, but rather change the title of the Section to “NOT USED” (i.e. 1.02 NOT USED) so that numbering of specification references is preserved, and delete the specification language in this Section below the title.**

## **PART 1 GENERAL**

### **1.01 SECTION INCLUDES**

- A. Quality control and control of installation.
- B. Tolerances.
- C. References.
- D. Mock-up requirements.
- E. Inspection Record.
- F. Examination.
- G. Preparation.
- H. Installation.

### **1.02 QUALITY CONTROL AND CONTROL OF INSTALLATION**

- A. CONTRACTOR shall monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. CONTRACTOR shall comply with manufacturers' instructions, including each step-in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, CONTRACTOR shall request clarification from UTILITIES <and Engineer> before proceeding.
- D. CONTRACTOR shall comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. CONTRACTOR shall ensure that all Work is performed by persons qualified to produce the quality required in the Contract Documents.
- F. CONTRACTOR shall verify that field measurements are as indicated on Shop Drawings or as instructed by manufacturer.
- G. CONTRACTOR shall secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

### 1.03 TOLERANCES

- A. CONTRACTOR shall monitor fabrication and installation tolerance control of products to produce acceptable Work in accordance with the Contract Documents. CONTRACTOR shall not permit tolerances to accumulate.
- B. CONTRACTOR shall comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, CONTRACTOR shall request clarification from UTILITIES <and Engineer> before proceeding.
- C. CONTRACTOR shall adjust products to appropriate dimensions.
- D. CONTRACTOR shall position products before securing products in place.

### 1.04 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, CONTRACTOR comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
  - B. CONTRACTOR shall obtain copies of standards where required by product specification sections.
  - C. Should specified reference standards conflict with Contract Documents, CONTRACTOR shall request clarification from the UTILITIES <and Engineer> before proceeding.
  - D. The contractual relationships, duties, or responsibilities of the parties as set forth in the Contract shall not be altered from the Contract Documents by mention or inference of any reference document.
  - E. Abbreviations used in Drawings and Specifications are as specified in ASME Y14.38 and IEEE 260.
- A. Schedule of references:
- 1. AA - Aluminum Association
  - 2. AAMA – Architectural Aluminum Manufacturer’s Association
  - 3. AABC - Associated Air Balance Council
  - 4. AAMA - American Architectural Manufacturers Association
  - 5. AAN – American Association of Nurserymen
  - 6. AAR –Association of American Railroads
  - 7. AASHTO - American Association of State Highway and Transportation Officials
  - 8. ABMA - American Bearing Manufacturers Association
  - 9. ACI - American Concrete Institute
  - 10. ACGIH - American Conference of Governmental Industrial Hygienists
  - 11. ACIL - American Council of Independent Laboratories
  - 12. ADC - Air Diffusion Council
  - 13. ADSC - The International Association of Foundation Drilling
  - 14. AEIC - Association of Edison Illuminating Companies
  - 15. AF&PA – American Forest & Paper Association
  - 16. AFS – American Foundrymen’s Society
  - 17. AGA - American Gas Association
  - 18. AGMA - American Gear Manufacturers Association
  - 19. AHA - American Hardboard Association
  - 20. AHRI – Air-Conditioning, Heating and Refrigeration Institute
  - 21. AI - Asphalt Institute
  - 22. AIAO-BAR – American International Accreditation Organization Bureau of Accredited Registrars
  - 23. AIChE – American Institute of Chemical Engineers
  - 24. AISC - American Institute of Steel Construction
  - 25. AISI - American Iron and Steel Institute

26. AITC - American Institute of Timber Construction
27. ALSC - American Lumber Standards Committee
28. AMCA - Air Movement and Control Association
29. ANAB - ANSI-ASQ National Accreditation Board
30. ANSI - American National Standards Institute
31. APA – American Pulpwood Association
32. APA/EWA- APA -The Engineered Wood Association
33. API - American Petroleum Institute
34. APMO - International Association of Plumbing
35. ARI – American Refrigeration Institute
36. AREMA - American Railway Engineering and Maintenance-of-Way Association
37. ARRA - Asphalt Recycling and Reclaiming Association
38. ASA – Acoustical Society of America
39. ASCE – American Society of Civil Engineers
40. ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers
41. ASME - American Society of Mechanical Engineers
42. ASPA - American Sod Producers Association
43. ASSE - American Society of Sanitary Engineering
44. ASTM – International Standards Worldwide
45. AWI - Architectural Woodwork Institute
46. AWPA - American Wood-Preservers' Association
47. AWS - American Welding Society
48. AWWA – American Water Works Association
49. BHMA - Builders' Hardware Manufacturer's Association.
50. BIA – Brick Industry Association
51. BOCA - Building Officials & Code Administrators International, Inc.
52. CDA - Copper Development Association Inc.
53. CBM - Certified Ballast Manufacturers Association
54. CEMA – Conveyor Equipment Manufacturer's Association
55. CFR - Code of Federal Regulations
56. CGA - Compressed Gas Association
57. CISCA - Ceilings and Interior Systems Construction Association
58. CISPI – Cast Iron Soil Pipe Institute
59. CISPR - Comite International Special des Perturbations Radioelectriques
60. CLFMI - Chain Link Fence Manufacturers Institute
61. CMAA - Crane Manufacturers Association of America
62. CPSC - Consumer Products Safety Council
63. CRI - Carpet and Rug Institute
64. CRSI - -Concrete Reinforcing Steel Institute
65. CSA - Canadian Standards Association.
66. CSI – Cast Stone Institute
67. CSI – Construction Specifications Institute
68. CSSB - Cedar Shake and Shingle Bureau
69. CTI - Cooling Technology Institute
70. DASMA - Door and Access Systems Manufacturers Association International
71. DEMA - Diesel Engine Manufacturers Association.
72. DFI - Deep Foundation Institute.
73. DHI - Door and Hardware Institute
74. DIN - Deutsche Normen
75. ECTC - Erosion Control Technology Council.
76. EGSA - Electrical Generating Systems Association.
77. EIA - Electronic Industries Alliance
78. EIMA - EIFS Industry Members Association
79. EJMA - Expansion Joint Manufacturers Association
80. EPA - Environmental Protection Agency
81. ETL - Electrical Testing Laboratory
82. FAA - Federal Aviation Administration
83. FCC – Federal Communications Commission

84. FCI - Fluid Controls Institute
85. FGMA – Flat Glass Manufacturer's Association
86. FM – FM Global
87. FS - Federal Specification Unit
88. FSC – Forest Stewardship Council
89. Foundation for Cross Connection Control and Hydraulic Research at University of Southern California
90. GA - Gypsum Association
91. GANA - Glass Association of North America
92. GS – Green Seal.
93. HI – Hydraulics Institute
94. HI - Hydronics Institute
95. HMI - Hoist Manufacturer's Institute
96. HMMA - Hollow Metal Manufacturers Association
97. HPVA – Hardwood Plywood and Veneer Association
98. IAS - International Approval Services
99. IAPMO - International Association of Plumbing and Mechanical Officials
100. IBC - International Building Code
101. ICAC - Institute of Clean Air Companies
102. ICBO - International Conference of Building Officials
103. ICC - International Code Council, Inc.
104. ICEA - Insulated Cable Engineers Association
105. IEC - International Electrotechnical Council
106. IEEE - Institute of Electrical and Electronics Engineers
107. IES - Illuminating Engineering Society
108. IETF - Internet Engineering Task Force
109. IGCC - Insulating Glass Certification Council
110. ILI - Indiana Limestone Institute of America
111. IMI - International Masonry Institute
112. IMIAWC - International Masonry Institute All Weather Council
113. ISA – The Instrumentation, Systems, and Automation Society
114. ISO - International Standards Organization
115. ITU - International Telecommunications Union
116. KCMA - Kitchen Cabinet Manufacturers Association
117. LEED – U. S. Green Building Council
118. LPI - Lightning Protection Institute
119. MBMA - Metal Building Manufacturers Association
120. MFMA - Maple Flooring Manufacturers Association
121. MIA - Marble Institute of America
122. MMA - Monorail Manufacturer's Association
123. MS - Military Standardization Documents
124. MSHA - Mine Safety and Health Administration
125. MSS - Manufacturer's Standardization Society of the Valve and Fittings Industry
126. NAA - National Arborist Association
127. NAAMM - National Association of Architectural Metal Manufacturers
128. NAAMM - North American Association of Mirror Manufacturers
129. NACE – NACE International
130. NAIMA - North American Insulation Manufacturers Association
131. NARA – U.S. National Archives and Records Administration
132. NASSCO - National Association of Sewer Service Companies
133. NBHA - National Builders Hardware Association
134. NBGQA - National Building Granite Quarries Association, Inc.
135. NBS - National Bureau of Standards
136. NCMA - National Concrete Masonry Association
137. NCTA - National Cable Television Association
138. NCRP - National Council on Radiation Protection and Measurement
139. NDT - American Society for Non-Destructive Testing
140. NEBB - National Environmental Balancing Bureau

141. NECA - National Electrical Contractors Association
142. NELMA – Northeastern Lumber Manufacturer’s Association
143. NEMA - National Electrical Manufacturers' Association
144. NES - National Evaluation Service
145. NESHAP - National Emission Standard for Hazardous Pollutants
146. NETA – International-National Electrical Testing Association
147. NFPA - National Fire Protection Association
148. NFRC - National Fenestration Rating Council
149. NHLA - National Hardwood Lumber Association
150. NIBS - National Institute of Building Sciences
151. NIOSH - National Institute for Occupational Safety and Health
152. NIST - National Institute of Standards and Technology
153. NLA - National Lime Association
154. NLGA - National Lumber Grades Authority
155. NOFMA - National Oak Flooring Manufacturers Association
156. NPCA - National Paint and Coatings Association
157. NRCA – National Roofing Contractors Association
158. NRMCA – National Ready Mixed Concrete Association
159. NRTL - Nationally Recognized Testing Laboratories
160. NSF – International-National Sanitation Foundation
161. NSPI – National Spa and Pool Institute
162. NTMA – National Terrazzo and Mosaic Association
163. NUCA – National Utility Contractors Association
164. NVLAP - National Voluntary Laboratory Accreditation Program
165. NWWA – National Woodwork Manufacturer’s Association
166. NWRI – National Water Research Institute
167. NWWDA - National Wood Window and Door Association
168. OSHA – U. S. Department of Labor, Occupational Safety and Health Administration
169. PCA - Portland Cement Association
170. PCI – Precast/Prestressed Concrete Institute
171. PCMCIA - Personal Computer Memory Card International Association
172. PDCA – Painting and Decorating Contractors of America
173. PDI – Plumbing and Drainage Institute
174. PEI - Petroleum Equipment Institute
175. PFI - Pipe Fabrication Institute
176. PPI – Plastic Pipe Institute
177. PS - Product Standard
178. PTI – Post Tensioning Institute
179. RCSC – Research Council on Structural Connections
180. RIS – The Redwood Inspection Service
181. RUS – U. S. Department of Agriculture, Rural Utilities Services
182. SAE – Society of Automotive Engineers
183. SAMA - Scientific Apparatus Makers Association
184. SBCCI - Southern Building Code Congress International
185. SCAQMD – South Coast Air Quality Management District
186. SCMA – Southern Cypress Manufacturers Association
187. SCTE - Society of Cable Telecommunications Engineers
188. SDI - Steel Deck Institute
189. SDI - Steel Door Institute
190. SIGMA - Sealed Insulating Glass Manufacturers Association
191. SJI - Steel Joist Institute
192. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association
193. SPIB – Southern Pine Inspection Bureau
194. SPRI – Single Ply Roofing Institute
195. SSPC – The Society for Protective Coatings
196. STI – Steel Tank Institute
197. SWI – Steel Window Institute
198. SWRI – Sealant, Waterproofing, and Restoration Institute

- 199. TABB – Testing Adjusting and Balancing Bureau
- 200. TCNA – Tile Council of North America.
- 201. TEMA - Tubular Exchanger Manufacturers Association
- 202. TIA/EIA – Telecommunications Industry Association/Electronic Industries Alliance
- 203. TMS – The Masonry Society
- 204. TPI – Truss Plate Institute
- 205. TPI – Turfgrass Producers International
- 206. UL - Underwriters' Laboratories, Inc.
- 207. USACE – United States Army Corps of Engineers
- 208. USDA - United States Department of Agriculture.
- 209. USDOJ/USDOT ADA – United States Department of Justice / United States Department of Transportation Americans with Disabilities Act
- 210. USDOT - United States Department of Transportation.
- 211. WCLIB - West Coast Lumber Inspection Bureau
- 212. WDMA – Window and Door Manufacturers Association
- 213. WH – Intertek Testing Services, Warnock Hersey Listing Services
- 214. WIC – Woodwork Institute of California
- 215. WSPFA - Western Spruce-Pine-Fir Association
- 216. WWPA – Western Wood Products Association

#### 1.05 MOCK-UP REQUIREMENTS

- A. CONTRACTOR shall ensure all tests are performed in accordance with the Contract Documents.
- B. CONTRACTOR shall assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. UTILITIES will use accepted mock-ups shall as a comparison standard for the remaining Work.
- D. Where a mock-up has been accepted by UTILITIES <and Engineer> and is specified in a product specification section to be removed after acceptance, CONTRACTOR shall remove the mock-up and clear the area when directed to do so by UTILITIES <and Engineer>.

#### 1.06 INSPECTION RECORD

- A. CONTRACTOR shall arrange for all inspections to be performed by a qualified inspector at times appropriate based on the stage of construction.
  - 1. CONTRACTOR shall provide <5> <\_> days' notice to UTILITIES of any inspection.
  - 2. CONTRACTOR shall not schedule inspections on weekends or state holidays unless special arrangements have been made with and approved by UTILITIES.
- B. CONTRACTOR shall give UTILITIES <and Engineer> <5> <\_> days' notice that the Work is ready for required inspections, tests, or approvals required to be scheduled by CONTRACTOR and shall cooperate with inspection and testing personnel to facilitate required inspections or tests. CONTRACTOR is responsible for arranging for and scheduling the initial and subsequent inspections of Work to ensure that the Work conforms to the Contract Documents.
- C. CONTRACTOR shall ensure that each inspection is documented with the inspector's qualifications.
- D. UTILITIES <and Engineer> will also conduct routine inspections of the Work and/or the Site.
- E. CONTRACTOR shall employ and pay for the services of an independent testing laboratory or firm to perform all inspections, tests, or approvals required to be scheduled or performed by the CONTRACTOR in the Contract Documents and individual specification sections.
- F. If the Laws or Regulations of any agency having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such

agency, CONTRACTOR shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish UTILITIES <and Engineer> with the required certificates of inspection or approval. Tests required by the Contract Documents to be performed by CONTRACTOR and that require test certificates be submitted to UTILITIES <and Engineer> for acceptance shall be made by an independent testing laboratory or agency licensed or certified in accordance with the applicable Laws and Regulations. In the event state license or certification is not required, testing laboratories or agencies shall meet the following applicable requirements:

1. "Recommended Requirements for Independent Laboratory Qualification," published by the American Council of Independent Laboratories.
2. Basic requirements of ASTM E329, "Standard of Recommended Practice for Inspection and Testing Agencies for Concrete and Steel as Used in Construction" as applicable.
3. Calibrate testing equipment at reasonable intervals by devices of accuracy traceable to either the National Bureau of Standards or accepted values of natural physical constants.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION