**SECTION 316 ALTERNATIVE ENGINEERED DESIGN   
  
316.1 Alternative engineered design.**   
The design, documentation, inspection, testing and approval of an *alternative engineered design* plumbing system shall comply with [Sections 316.1.1](javascript:Next('./icod_ipc_2012_3_par080.htm');) through [316.1.6.](javascript:Next('./icod_ipc_2012_3_par085.htm');)

**316.1.1 Design criteria.**   
An *alternative engineered design* shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire resistance, durability and safety. Material, equipment or components shall be designed and installed in accordance with the manufacturer’s instructions.

**316.1.2 Submittal.**   
The registered design professional shall indicate on the permit application that the plumbing system is an *alternative engineered design*. The permit and permanent permit records shall indicate that an *alternative engineered design* was part of the *approved* installation.

**316.1.3 Technical data.**   
The registered design professional shall submit sufficient technical data to substantiate the proposed *alternative engineered design* and to prove that the performance meets the intent of this code.

**316.1.4 Construction documents.**   
The registered design professional shall submit to the code official two complete sets of signed and sealed construction documents for the *alternative engineering design* shall include floor plans and a riser diagram of the work. Where appropriate, the construction documents shall indicate the direction of flow, all pipe sizes, grade of horizontal piping, loading, and location of fixtures and appliances.

**316.1.5 Design approval.**   
Where the code official determines that the *alternative engineered design* conforms to the intent of this code, the plumbing system shall be *approved*. If the *alternative engineered design* is not *approved*, the code official shall notify the registered design professional in writing, stating the reasons thereof.

**316.1.6 Inspection and testing.**   
The *alternative engineered design* shall be tested and inspected in accordance with the requirements of Sections 107 and [312](javascript:Next('./icod_ipc_2012_3_par056.htm');).