

Section 14 - Computer Programs

14.1 Design Calculations (Consultants)

1. The use of computers as a tool in the performance of design computations and other applications such as determination of dimensions and grades is acceptable provided:
 - All computer work is under the direct supervision of an experienced structural engineer familiar with computer techniques.
 - The Designer assumes responsibility for the logic and results of the program.
2. Documentation of all computer programs written by the Designer or obtained from other sources (including computer services) must be based on the use of the *AASHTO LRFD Bridge Design Specifications*.
3. In the event that questions arise concerning the use of any software, the following information is to be maintained by the Designer:
 - a. A description of the program, explaining exactly what the program does, what options are available, what methods are used and AASHTO conformance.
 - b. The input required by the program, including a description of each value, an input form (if one is used), and sample input.
 - c. The output given by the program, including a complete description of each value, any keys used in interpreting the output, and sample output from the given input.
 - d. Any constants or parameters used in the program.
 - e. An explanation of how the program was checked, including a copy of computations relative to test.
4. Use of computer software does not relieve the Designer of the responsibility of ascertaining that the program is satisfactory for the use intended.
5. When computer output is included in a set of computations for submission, a copy of the input forms necessary to interpret the data should also be included.

14.2 Computer-Aided Drafting (Consultants)

1. Contract Plans prepared with the use of computer aided drafting systems will be acceptable provided that they are consistent with the provisions of this Manual. Guidance provided in the NJDOT CADD Standards Manual should be followed.
2. Changes required on drawings as a result of the Final design review must be made by the computer drafting system.