TPS File Format Specification

The TPS file is an ASCII text file that contains all data to define the geometry of a truss (or batch of trusses). The format uses simple space delimited text entry, with the following basic formatting:

```
START {TrussID}
T {ComponentID} 4
   X1 Y1
   X2 Y2
   X3 Y3
   X4 Y4
   X1 Y1
T {ComponentID} 4
   …
B {ComponentID} 5
   …
W {ComponentID} 4
   …
P {PlateID} 4
   …
START {TrussID2}
…
EOD
```

The START header indicates a new truss definition is beginning. Any data following the space after START is considered part of the truss name, so careful attention must be paid to the syntax. Using ` and " indicators for foot and inch in the truss description should be avoided, as well as commas or excessive spaces. Underline and dash characters are valid and acceptable characters.

Component definitions start with component type, followed by component name identifier, then number of vertices defining the component. Then, the coordinates for each vertex are listed, each on a separate line, with the first point repeated to close the component polygon. As with the Truss ID above, avoid non-standard characters and spaces (which will indicate end of data). The component name is assigned within the engineering software, and matches component cut lists and build diagrams. In the case of nail plate components, the component name is typically given as a combination of plate size and grade (e.g. M2.0x3.0).

Component Identifiers are as follows:

T = Top Chord
B = Bottom Chord
W = Web
P = Plate
O = Other (wedge blocks, bearing sticker locations, etc)

There are other possible entries into the TPS format, such as #BEARING or #QUANTITY designations, which are ignored by the laser projection software – any line beginning with # is typically ignored.