AIM 3D Signpost - Physics Setup

Author: Madison Hill, ANSYS

Problem Specification

- 1. Pre-Analysis & Start-Up
- 2. Geometry
- 3. Mesh
- 4. Physics Setup
- 5. Numerical Results

Physics Setup

The video below demonstrates how to specify the materials and boundary conditions. Instead of the spatially varying wind load in the problem description, we will specify a uniform pressure for WX2 equal to the maximum value, which is a worst-case scenario.

Summary of steps in above video:

- Change the material of the sign and application surface to Massless Steel.
 Apply a force to the side of the sign, with 8000 lbf in the Y direction, naming it FY1.
- Apply another force to the top of the sign, with -11700 lbf in the Z direction, naming it WZ1.
- Apply a pressure to the application surface, with a pressure of 34.722 psi, naming it WX2.
- Apply an inertial load in the negative Z-direction.
- Apply a fixed support to the bottom face of the post.
- Solve the physics.

Go to Step 5: Numerical Results

Go to all ANSYS AIM Learning Modules