

Ensuring Infrastructure Safety Standards From Coast To Coast

Deborah Sill

Mustang Sampling

Across the country, industrialized buildings quietly perform a key role in the nation's infrastructure by providing safe shelter for equipment and personnel working in the energy and transportation industries, often in remote or rarely seen locations. Mustang Sampling pioneered pipeline shelters in the early 1990s to house gas chromatographs and flow elements, equipment vital for analyzing the composition of natural gas. Constructed from noncombustible materials within a steel framework, these structures meet the design load and sizes required for vital pipeline communication, measurement and control.

Industrialized buildings range from simple, unmanned equipment stations (for example, data gathering or switches) to complex climate-controlled facilities housing workers, computers, analyzers and metering equipment. Mustang Sampling's dedicated construction, electrical and engineering crews in Ravenswood, West Virginia, specialize in the design and fabrication of such buildings. The Ravenswood facility crews build and wire each custom-designed building; install the necessary mechanical, electrical and analytical equipment; and host factory acceptance testing either in person or virtually for customers globally.

Thirty-five U.S. states require specific approvals for industrialized buildings to lawfully reside within their boundaries or even to cross state lines during transportation. The other 15 states rely on local jurisdiction and documentation approvals. Almost all states have a mandatory construction plan submittal process for review and approval. The submitted plans must meet the code compliance enforced by that state. The basic code sets that must be met cover NFPA 70, National Electrical Code, International Building Code, International Mechanical Code, International Fire Code and International Energy Conservation Code. The review takes into account local wind/snow loads when determining the structural requirements of the building. There are a growing number of states that require compliance with energy conservation programs including electricity consumption and minimizing environmental impact.

The execution of state approvals typically ranges from two to four weeks and progresses in steps from the design stage to final construction. The process begins with client approval of the building construction plans. In addition to state requirements, companies may wish to inspect the project as it advances through each stage. Progressive inspections should be outlined early in the design phases to match project needs. If the client makes a change to the electrical or structural components after it's already submitted for state approval, the process starts over with a new revision. Before submitting for state approval, Mustang Sampling prepares the construction plans with the required documentation, and compiles the paperwork with the structural plans and calculations for the proper PE seals. Some states will accept submittals straight from the manufacturer, but most require plans to be reviewed and submitted by a third-party review agency. Many states require a dual inspection for a rough-in and a final upon completion of build. Some states may also require a third inspection upon installation on-site.

Inspections are scheduled after approval as the building reaches the appropriate completion milestone. The rough-in inspection requires the inspector to witness the connection points of the building to the skid and interiors of the structural walls. The final inspection of an industrialized building is an electrical and mechanical functional test. Once the inspection is complete and everything is found in compliance, a report is generated by the inspector and decals/ insignias are recorded. The inspection agency will assign a third-party serialized decal along with a state serialized insignia to be adhered to the structure. Mustang Sampling in turn generates a data plate that reflects the code information for that building and provides space for the decals/insignias to be attached. If the state requires inspection upon installation on-site, the state insignia is controlled by the state official and will be installed at that point.

Even though industrialized buildings are often invisible to the public, their ability to perform safely is not hidden from the state. Mustang Sampling has assembled an impressive list of state certifications to legally construct, deliver and assemble bespoke industrialized buildings for interstate pipeline customers, culminating in today's listing with nearly every state in the U.S.

For more information, visit www.mustangsampling.com or call (713) 482-6930.