Safety Issues
Sidewalk Canopies

Tech Tip

When designing and erecting a sidewalk canopy, keep in mind that its primary purpose is to protect the public.

Whenever a building or structure is being constructed, demolished, repaired or altered, suitable protection against falling debris must be provided. This can be accomplished by closing the sidewalk to the public or by erecting overhead protection. The latter solution can be provided by sidewalk canopies (also known as sidewalk sheds) which are intended to protect the general public from falling objects during construction, maintenance or demolition of buildings.

Building Codes

Unlike scaffolds, which are governed by State or Federal OSHA regulations, sidewalk canopies must be built in accordance with building codes. The difference is that OSHA regulations are intended to protect and provide safety for workers at their place of employment, while building codes are intended to protect the general public. Virtually all municipalities have a building code. It may be a local code written specifically for the municipality, such as the Chicago Building Code. It may also be a state code or one of the three model building codes. These codes protect the public by setting minimum requirements for such factors as design loads, building materials, electric wiring, mechanical systems and many other components that go into a building or structure used by the public.

Many municipalities have adopted one of the model building codes. They are:

- Uniform Building Code (UBC) by the International Conference of Building Officials;
- BOCA National Building Code (BNBC) by the Building Officials and Code Administrators;
- Standard Building Code (SBC) by the Southern Building Code Congress International.
- International Building Code (IBC) by the International Code Council;
- Building Construction and Safety Code by the National Fire Prevention Association (NFPA).

Note: The UBC, BNBC and SBC codes will no longer be updated. These three organizations have merged to form the ICC and will publish only the IBC. However, some municipalities still use one of the three other codes and have not yet adopted the IBC or other code.

Although the specific requirements for sidewalk canopies will vary from code to code, they will cover such items as loading, minimum clear height/width, railings, lighting, etc.

Types of Canopies

Safway has three products designed specifically for use as sidewalk canopies. The FO7SP is a walk-through style scaffold-type frame that is used with standard Sectional Scaffold base plates, screw jacks and cross braces. The FO767SP is a heavy-duty walk-through style frame that requires the use of shoring screw jack and base plate components. The WC Series sidewalk canopy is a heavy-duty post system designed to meet the higher load requirements of the Chicago and New York City Building Codes. Although other scaffold products may be used to construct sidewalk canopies, they should only be designed by a qualified designer or engineer.

Canopy Considerations

There are several important factors that need to be evaluated for all canopies in addition to the live load requirement.

1. Decking

The canopy deck must be strong enough to support the loads specified by the Building Code. In most cases, this load will be 150 pounds per square foot or more. At a typical 7-foot span, scaffold plank will not support a load such as this. Many times a double layer of decking is required, or a deck must be constructed using stringers with joists and then decking. The canopy support framework and decking must both be designed to meet the load requirements. The Standard Building Code even has separate load requirements for the framework and decking. Consult with a qualified designer or engineer to ensure that the deck can safely support the required load.

SAFWAY®

2. Wind Loads

The Building Code will specify a minimum live load that the canopy must support, but wind loads must also be taken into account. Wind will not only impose horizontal forces on the canopy, but can also produce uplift forces on the deck. The decking should be secured to the canopy framework to prevent uplift. In addition, a parapet installed on the top deck to catch debris, an outside splash wall or an inside enclosure will act as a sail in the wind. The horizontal forces created by the wind on these vertical walls will require that the canopy be tied to an adjacent building or structure, guyed to the ground or stabilized by some other method. Analyzing the wind forces and determining the best tying method should be done by a qualified scaffold designer or engineer.

3. Scaffold Above

If scaffold is to be erected above the canopy, then it must be designed to support not only the required canopy live load, but also the dead and live loads imposed by the scaffold. The design of the scaffold must be in accordance with OSHA regulations. Use care when designing and erecting the scaffold above. It is best to have the scaffold legs come through the canopy deck and be supported directly on the canopy stringer beams. In most cases, the canopy deck is not strong enough to support the concentrated loads of the scaffold legs.

4. Vehicular Barrier

Canopies that are erected close to a street or road will need to be protected from vehicular traffic. Concrete barriers often work best for this purpose. If the outer canopy legs are a sufficient distance from the curb line, barriers may be placed on the sidewalk at the curb. If the canopy legs are close to the curb, then a traffic lane or parking lane will need to be closed down to allow room for the barriers in the street.

5. Access

A building that is undergoing repairs or renovations will require maintaining adequate access to the building. Openings will be necessary in the bracing along the run of the canopy at doorways where ingress and egress are needed. Adequate clearance must be provided to satisfy Building Codes and Fire or Life Safety Codes. Fire or other emergency exits must not be blocked. A proper design of the canopy must still provide adequate bracing for the canopy support framework while providing access.

6. Fire Codes

Another consideration for an existing building is additional requirements that the local Fire Marshal may have. For example, many buildings are equipped with a standpipe and hose system. These systems have an outside connection for attaching fire hoses. Allowing access to these connections will be crucial in case of an emergency.

Summary

- Know which Building Code applies to the municipality in which the canopy will be built.
- Make sure you understand and follow all of the code requirements.
- Any vertical walls, enclosures and parapets added to the canopy will create horizontal forces due to wind that must be taken into account.
- Protective barriers must be installed where required.
- Provide access to all exits or equipment to comply with Fire and Life Safety Codes.
- When designing and erecting a sidewalk canopy, keep in mind that its primary purpose is to protect the public.

Safway Services, LLC
Corporate Headquarters
N19 W24200 Riverwood Drive
Waukesha, WI 53188
Toll free: (800) 558-4772
Telephone: (262) 523-6500

Safway Services Canada, Inc.
11237 – 87 Avenue
Fort Saskatchewan, Alberta T8L 2S3 Canada
Toll free: (866) 842-4424
Telephone: (780) 992-1929

For a list of branch locations in the United States and Canada, visit our website at **www.safway.com**