



Construction Site-Adjacent: Hazards | Injuries | Safety

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After many years of depressed activity the construction industry is experiencing a renewed vigor. Along with a positive economic boost for the industry, the resumption of construction activity will also bring a predictable increase in construction related injuries. While there is tremendous awareness to site safety for construction workers, there is less awareness to the hazards created when construction activities conflict with the more routine world adjacent to construction sites.

People in the general public often move about construction site-adjacent areas with little to no awareness to the complex projects underway. Unlike the personnel on a construction site, the general public has not been trained to stay safe around ongoing construction; for this reason, adjacent areas must be maintained as predictable environments that conform to the public's usual rules and expectations. If the construction site and the area around the construction site are not maintained properly, people may be needlessly harmed by hazardous conditions that could have been avoided with an appropriately diligent approach to jobsite safety.

Safety Planning & Execution

The safety of people outside the construction site starts with the construction manager or general contractor's safety plan. The scope of the safety plan includes jobsite safety issues inside and outside of the fence. A well prepared, well executed safety plan will address adjacent areas and will specifically charge an individual with monitoring the condition of areas around the jobsite.



It is standard practice for the jobsite superintendent or another jobsite supervisor to make a job walk at the beginning and end of the day. During those daily walks, safety issues should be noted and addressed. Issues that commonly turn

up during these job walks include tools and materials that need to be relocated or secured; temporary traffic controls measures that need adjustments; and walkways that may require maintenance/repair or protection from falling items. When preparing a jobsite hazard analysis, the safety of the general public cannot be overlooked.

Issues in Pedestrian & Vehicular Safety

Roadways and walkways must be maintained in a safe condition through the use of temporary walkways, temporary traffic controls, shoring, and covers. Pedestrian hazards must be eliminated or prominently marked if they cannot be eliminated. Shipping containers are commonly used for covered walkways to protect pedestrians from falling tools or materials, but their use is also associated with slip and trip hazards at the transitions and internal walking surfaces. Steel plates that are used to cover open excavations are thick enough to pose a tripping hazard if the edges are not dressed properly and require tapered ramps if they are within a foreseeable pedestrian path.



Additionally, areas adjacent to construction sites must be appropriately lit, especially where a temporary enclosure blocks daylight or light from adjacent lighting.

Because construction sites involve regular deliveries, heavy equipment, and unusual access patterns, the hazard analysis must address traffic controls, especially temporary traffic controls for times when safety dictates partial or complete street and walkway closures. Safe alternate routes must be provided and the altered traffic patterns must be clear and understandable. When heavy materials or equipment are being hoisted, street and walkway closures may be necessary to prevent exposure to hazards associated with any kind of problem with the hoist.



Applicable Codes

The established standards for walkway safety, edge protection, and traffic control do not change because the walkway, parking lot, or roadway is next to ongoing construction. However, additional standards do exist to address the specific requirements for maintaining safety during construction work.

The US Army Corps of Engineers publishes EM 385-1-1, the Safety and Health Requirements Manual. This document is a comprehensive manual for workplace safety, and it includes specific requirements for separating construction activ-

ities from other activities. The Manual requires fencing, signage, traffic controls, and lighting, depending upon the proximity to other activities, exposures, and an analysis of the actions required to eliminate potential hazards. This manual applies specifically to construction projects on US Government reservations, but it should not be overlooked as a source for the standards of care for construction facilities, including safety adjacent to ongoing construction.

The American Society of Safety Engineers, in conjunction with the American National Standards Institute, publishes A10.34, Protection of the Public on or Adjacent to Construction Sites. This standard addresses protection of the general public directly and concisely sets forth the standards of care for separation of construction activities from adjacent areas. Each project must have Public Hazard Control Plan. The purpose of this plan is to evaluate potential hazards, and reduce or eliminate them. In order to reduce overlap and gaps, responses to potential hazards must be coordinated across all trades involved in the project. A10.34 addresses noise levels, including sudden or loud impact noises that can create hazards or startle people, as well as emissions of dusts, smoke, fumes and other airborne hazards. It also sets forth standards relevant to excavation or operations that cause ground vibrations. It requires the person or firm controlling the project to prepare the Hazard Control Plan, and requires the use of properly qualified personnel to inspect and monitor hazard prevention activities.

The Manual for Uniform Traffic Control Devices (MUTCD), published by the Federal Highway Administration and the American Traffic Safety Services Association includes a chapter entitled Temporary Traffic Control. The MUTCD is cited by both the Corps of Engineers Manual and A10.34 for the standards that apply to temporary roadways and walkways. The use of flaggers, temporary signage, cones, barrels, and tubular markers all must conform to the requirements of the MUTCD. Temporary pavement markings, channelization, pedestrian controls and protections, temporary walkways and ramps are all addressed by the MUTCD.



A Basis for Addressing & Mitigating Potential Hazards

Maintaining a safe, secure construction site includes paying an appropriate level of attention to adjacent areas and uses. Each circumstance is different, so these standards may not cover all possible hazards or methods of addressing hazards. However, a contractor or construction manager who uses these standards as the basis for addressing and mitigating potential hazards will create far fewer dangers for people whose only relationship to the project is physical proximity. Diligently applying the standards of care for safety adjacent to a construction site will not prevent all problems, but failure to do so increases the likelihood of injuries, including catastrophic injuries, to members of the general public.

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Will investigates cases involving construction disputes and defects, workplace and construction site safety, premises safety, and architectural professional practice. He has more than thirty years experience as an architect and construction manager. He has developed and administered workplace safety plans, operations and maintenance manuals, and supervised construction jobsites.

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