

MANAGING THE RISKS OF CORONAVIRUS

CONSTRUCTION SITE SHUTDOWN



Whether planned or unplanned, a construction shutdown can have a significant impact on a project's potential for loss. The following guidelines may assist in mitigating exposures associated with projects that have been suspended, at any stage of construction, for a designated or unknown period of time. Minimizing risks before and during work suspension, especially through a check list approach, may lessen the impacts of complex project execution issues when re-starting construction. The information below is not meant to be a complete list but should assist you as you conduct your risk assessment and take necessary site specific actions moving forward in your site control plan.

RISK ASSESSMENT

Conducting a risk assessment is the critical first step to prepare for a shutdown. The risk assessment helps determine potential exposures to loss and serves as the foundation of your site control plan.

Pre-Shutdown Inspection

The assessment should involve a documented inspection to identify conditions that could result in loss during the shutdown. Examples may include material storage, points of access to the job site and immovable equipment. Be sure to consider different types of losses, including bodily injury, property damage and construction defects. Take photos and/or videos, and keep detailed notes documenting the pre-shutdown condition of the job site.

Site Access & Security

Determine the extent of activity that will need to take place during the shutdown. If work will continue intermittently, create a list of personnel authorized to access the site. Share security and safety protocols with all affected parties. Identify the resources needed during work activities, such as on-site power, water supply, equipment and safety gear.

If no work will be performed during the shutdown, the assessment should provide an estimated site closure and reopening time frame.

Liability and property risk considerations:

- » Attractive nuisance, as in those areas or parts of construction that the public would deem desirable
- » Continued operation of critical systems or equipment, such as fire suppression, HVAC, dewatering, etc.
- » Unlawful occupancy, by persons or entities that have no legal right to occupy the property
- » Environmental such as groundwater contamination, erosion, etc.
- » Increased potential for weather-related damage
- » Theft
- » Vandalism
- » Arson

Other Considerations

Use and maintenance of surveillance systems; site inspection frequency and responsibility; coordination between trades; emergency communications; location-specific exposures (weather, theft/vandalism, accessibility to emergency responders); anticipated shutdown; and reopening procedures.

Project execution risks:

- » Degradation of partially completed or temporary supports, structures, equipment and materials
- » Cost escalation
- » Increased mobilization and demobilization costs
- » Extended overhead
- » Potential loss of key individuals and project knowledge

- » Potential loss of labor resources
- » Expiration of permits and/or the need to obtain new approvals
- » Extensive coordination required for re-start; increased potential for conflicts between parties
- » Potential need for partial acceptance/partial occupancy



SITE CONTROL PLAN

Once the risk assessment is complete, develop and implement a written site control plan. The plan should address all areas of concern identified in the risk assessment, such as the examples provided below.

Materials & Equipment

Reduce or eliminate material inventory and make alternative storage arrangements. Redirect or cancel incoming deliveries. Materials left on-site should be properly protected, inventoried and cataloged. Use a protective film or wrap over materials stored outdoors to minimize contact with moisture. Protect immovable materials with a secured tarpaulin cover.

Implement enhanced controls when storing critical equipment like switchgear or materials with a long lead time. Secure tools and equipment in locked containers or sheds. Keep high-value commodities out of view. Coordinate with subcontractors to ensure that nonessential tools and equipment are removed from the project, if possible.

Once the site reopens, inspect all materials and equipment prior to use. Dry out or replace materials exposed to moisture. Be sure to conduct a thorough inspection of systems installed prior to the shutdown to verify they are in good condition and operational. Remove or repair damaged materials, as needed.

Cranes

Extended project shutdowns provide unique exposures for cranes. Secure cranes from unauthorized access. Store and maintain cranes in accordance with manufacturer recommendations and approved crane notice application drawings. Lower lattice boom cranes and fully retract telescopic booms. If booms are left in the air, initiate a process to check for boom creep, eroding ground conditions, vandalism, etc., and monitor weather that may require lowering booms. Tower cranes are required to weathervane unless approved by manufacturer. Don't leave equipment or supplies hanging from cranes. Consider gas tank locks on equipment. Consider returning rental equipment to suppliers. Cranes should be removed from low-lying areas.

Fire Prevention

Review the project's fire prevention plan and document specific actions taken to remove, isolate and protect fuels, combustibles and flammables. Identify sources of ignition such as electrical systems and temporary heating. Ensure that all fire detection and suppression systems are in place and monitored.

Equipment Stability & Ground Conditions

Inspect all excavations, trenches and site drainage areas. Backfill or cover and secure all open excavations. Eliminate any potential for trench collapse. Verify that all scaffolding is secured and inaccessible. A competent person should inspect scaffolding through the duration of the shutdown before and after weather events.

Water & Weather Intrusion

Identify personnel responsible for monitoring weather throughout the shutdown. Establish protocols for weather event responses, including communication to impacted trades.

Confirm that all buildings are weather tight, with windows and doors securely boarded up. Inspect permanent and temporary roofs to ensure that they can properly protect against the elements. Inspect all water removal gutters, downspouts and drainage systems, including drain guards. Seal or install curbs on all slab penetrations to prevent floor-to-floor water transmission.

Property

- » Maintain and secure all scaffolding, debris netting, sidewalk sheds, and temporary walkways.
- » Maintain all adjoining property protection.
- » Maintain all guardrails, edge protection systems such as netting and cocoon systems, and floor and shaft opening protection.
- » Ensure the proper shoring of excavated sites or backfill.
- » Ensure construction equipment is safely stored and maintained in accordance with manufacturer recommendations.
- » Ensure construction materials are safely stored. Any light-weight materials susceptible to becoming wind-borne must be removed from the site, tied-down, or ballasted.
- » Verify location of, and properly secure, stored materials (offsite or onsite).
- » Determine if any material deliveries are still in transit and make arrangements to either accept and store those materials, or have them returned to the supplier
- » Maintain any fire suppression and detection systems.

- » Secure/lock out all essential utilities (electrical power, gas service, water service, etc.) or otherwise disconnect to prevent accidents, leaks, etc.
- » Remove any volatile gases and liquids.
- » Gather up and remove construction debris and perform a general jobsite cleanup.
- » Remove or dry up any standing water located inside buildings and structures. Determine if a pumping system needs to be maintained or established in locations susceptible to water accumulation.
- » Consider regrading or backfilling areas to prevent ponding water.
- » Evaluate elements of construction that may require installation of temporary protection measures (areas and equipment susceptible to water, weather exposure, temperature changes, etc.).
- » Ensure all emergency, temporary and permanent egress is maintained and unobstructed; maintain hoists and elevators in emergency readiness.

People

- » Ensure employees are out of harm's way.
- » Based on the project suspension circumstances, consider the feasibility of establishing skeleton crews to maintain critical systems or equipment
- » Secure the site to prevent access from any unauthorized personnel. This includes maintenance of construction fencing and posting of permits.
- » Inform local authorities having jurisdiction (Fire, Police, Building Department, etc.) regarding site access and security.
- » Protect the public, i.e. ensure adjacent public sidewalks are maintained safely, free of hazards.

Documentation

Maintain all documentation related to the shutdown with the job file, including risk assessments, inspections, photos, notes, control plans and correspondence with project personnel throughout the inactive periods.

- » Document what has been constructed up to the point of project suspension.
 - Preserve a record of conditions up to the point of work stoppage visually, including video and photographs of what the site looked like when construction stopped.
 - Preserve the baseline and updates to the CPM schedule and prepare current update to the CPM schedule to document the delay, status of impacted activities and as-built conditions; include applicable fragnet(s) with narrative to document work stoppage order.
 - Prepare as-built drawings.
 - Preserve contractual records (contract, contract amendments, change orders and all other documentation) leading up to the project suspension.
- » Review the construction agreement closely for contractual responsibilities.
 - Find the Excusable Delays clause, also known as the force majeure clause and determine if your circumstance is expressly included in its definition; even if not precisely included. Common boilerplate language in such clauses is intended to address issues or occurrences that are unanticipated and beyond the reasonable expectation or control of the project stakeholders. The General Conditions Delays and Extension of Time section in some standard construction contract forms such as AIA A2011 or the Consensus Docs 2002 might include terms such as: acts of God, terrorism, civil disturbance, unusual or adverse weather, and even epidemics or pandemics.
- » Resolve payment issues including billings, retention and demobilization costs and other subcontract risks.
 - Verify the status of any construction / installation relative to the subcontract agreement for that scope, i.e. costs may be due for items that are sold / bought as part of an assembly but have not been delivered.
 - Verify what materials are required to complete the scope, and if procured confirm where they are, i.e. stored offsite or onsite.
 - Culminate subcontract agreements or open issues when possible; obtain letters of agreement or partial lien releases from subcontractors, vendors, professional teams for all completed work and monies paid, etc.; obtain lien releases and/or legal correspondence for subcontractors and vendors to document circumstances and contractual provisions around termination for cause and convenience.

- » Confirm which party has responsibility for site security and safety costs, damages and inspections.
- » Identify and separate costs related to shut down and maintenance during the suspension.
- » Review insurance coverage/requirements/responsibility, for builder's risk, OCIP/CCIP, and workers' compensation. For example, confirm when the builder's risk coverage ends, and property coverage begins. Confirm if business interruption coverage is in place and its terms and conditions.
- » Address surety considerations
 - Engage subcontractors in the suspension negotiations
 - Obtain subcontractor lien releases (where applicable)
 - Confirm any special considerations which must be addressed during the suspension phase
 - Evaluate start-up costs/remobilization challenges.
 - Subcontract risks such as labor availability and wage increases

- Commodity/material price increases at time of remobilization
- Subs or suppliers that went out of business
- Weather damage, vandalism and theft
- Deterioration of work that has been installed, accepted or partially complete, as well as stored materials
- Building code or other governmental changes
- Obsolescence of original (mechanical/electrical/ control) systems
- » Review warranty support. When materials and equipment are not completed, commissioned and started, the issue of warranty support is often unclear (especially high exposures for electrical equipment, HVAC and boiler machinery).



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