



CONTRACTOR SAFETY HANDBOOK



TABLE OF CONTENTS

WELCOME

[Purpose of Contractor Safety Handbook](#)
[Contractor Responsibilities](#)
[Contact for Handbook Content](#)

IMPORTANT TELEPHONE NUMBERS

[Emergency Contacts](#)
[Home Office Complex](#)
[Grandview Yard Campus](#)
[Other Central Ohio Locations](#)
[Regional Service Center Locations](#)
[All Other Office Locations](#)
[Building Closure or Emergency Situations](#)

SITE SECURITY

[Building Access](#)

GENERAL SITE INFORMATION

[Egress \(Entry / Exit\)](#)
[Exit Signs](#)
[Fire Alarms](#)
[Lighting](#)
[Housekeeping](#)
[Material Storage](#)
[Medical and First Aid: Injuries / Illnesses](#)
[Smoking Policy](#)
[Substance Free Workplace Policy](#)

EMERGENCY PROCEDURES

[Bomb Threats](#)
[Evacuation Procedures](#)
[Fire or Smoke](#)
[Severe Weather/Natural Disaster](#)
[Spills or Releases – Hazardous Substances](#)
[Suspicious Packages](#)

OSHA, EPA, AND SITE SAFETY REQUIREMENTS

[Introduction](#)
[Safety Enforcement](#)
[Asbestos](#)
[Barricades and Signage](#)
[Overhead Work and Falling Object Protection](#)
[Compressed Gas Cylinders](#)
[Concrete and Masonry](#)
[Confined Space](#)

[Electrical](#)
[Lock-Out/Tag-Out \(LOTO\)](#)
[Elevated Work/Fall Protection](#)
[Mobile Elevated Work Platforms \(MEWP\)](#)
[Excavation Safety](#)
[Fire Extinguishers](#)
[Machinery, Equipment, Tools](#)
[Hazardous Chemicals and Materials](#)
[Ladders](#)
[Mold](#)
[Personal Protective Equipment \(PPE\)](#)
[Scaffolds](#)
[Silica](#)
[Storm Drains and Sanitary Sewers](#)
[Welding, Cutting, and Brazing \(Hot Work\)](#)
[Trash, Waste, and Scrap Disposal](#)

APPENDIX

[Appendix A: Tenant Improvement Project Safety Requirements and Expectations](#)

[Appendix B: Contractor Safe Work Practices for Data, Technology, and Low-Voltage Projects](#)

WELCOME TO THE NATIONWIDE CONTRACTOR SAFETY HANDBOOK

Nationwide is committed to the safety and well-being of its associates, vendors, contractors, visitors, the public and the protection of our environment. Nationwide's goal is zero injuries. This can only be achieved by working as a team with our contractors.

Purpose of Handbook

The purpose of this Contractor Safety Handbook is to guide the contractor through Nationwide-specific rules, procedures and policies as they pertain to the work and/or services being conducted at any Nationwide facility.

This Contractor Safety Handbook is not intended to be a complete statement of all safety and environmental laws, rules, regulations or industry standards applicable to the work being performed by the Contractor.

Responsibility for, identification of and compliance with all applicable laws, rules, regulations pertaining to the work outlined in the Master Service Agreement (MSA), AIA, or Time & Materials Contract scope of work and ensuring job sites safety rests solely with the Contractor.

This Handbook details Nationwide's expectations as to how work is to be performed at Nationwide facilities, including but not limited to, certain safety-related behaviors that are expected from contractors while on-site, training that must be completed and current before work is initiated, and compliance documentation as required or requested.

The guidelines contained in this Handbook, which may be reviewed and updated by Nationwide from time to time, are companion documents to the Standard of Care agreed to in the applicable MSA, AIA, or Time & Materials contract between Nationwide and the contractor. Specifically, by virtue of that contract, the contractor agrees to:

- Maintain proper licensing and certifications for the work being conducted and to provide copies of licenses and certifications upon request by Nationwide;
- Perform all services in compliance with applicable federal, state, and local laws, ordinances, codes, rules, regulations, decisions, and opinions;
- Be solely responsible for developing, maintaining, and enforcing compliance with all workers/workplace safety programs and procedures required by law or otherwise necessary to perform the services in a safe manner; and
- Perform all services in a manner that is consistent with the skill, competence and knowledge customarily exercised by similarly experienced and qualified engineering/construction/maintenance firms.

Contractor Responsibilities

Prior to starting a project, each contractor is required to review the work to be performed and identify potential hazards that may arise while performing the work. Contractors are responsible for following all environmental health and safety regulations issued by the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) as set forth in the Code of Federal Regulations (CFR) as they apply to

the contract job.

- Nationwide also requires contractors to be responsible for:
 - Monitoring and evaluating jobsites and contracted work regularly to ensure safe work practices are followed as outlined in applicable regulations and this Contractor Safety Handbook.
 - Reviewing specific requirements of this handbook with each of their employees;
 - Providing Nationwide with any specific environmental, health, and safety program for a particular subject matter based on contracted work.
 - Providing training records to Nationwide as requested;
 - Informing each of their employees working at the site of potential hazards;
 - Providing each of their employees working at the site with proper safety equipment to prevent accidental injury; and
 - Communicating all requirements of this handbook to any additional subcontractor they hire.

Permits, Registrations, and Notifications

The Contractor is responsible for obtaining all necessary permits or registrations from applicable regulatory agencies (e.g. OSHA, EPA, Air Quality Management District, Air Resources Board, etc.) **prior** to beginning any work that requires such a permit. Copies of all permits/registrations/ notifications will be provided to the Nationwide contact when requested **in advance** of such work.

Training Documentation

Contractors are responsible for all training of their employees. Contractors working at Nationwide facilities must have received all safety training as required by OSHA and EPA, and training applicable to the work being performed.

Contractors must keep current training records for each employee assigned to perform work under the Nationwide contract.

Nationwide also requires contractors to be responsible for:

- Ensuring documentation of required training for all contractor personnel is readily available for review by Nationwide, if requested.
- Training employees on all tools and equipment, including personal protective equipment, that they provide to their employees for use.

Contact for Handbook Content

For questions regarding anything in this Handbook or Nationwide's safety program, please reach out to your Nationwide contact.

IMPORTANT TELEPHONE NUMBERS

Emergency Contacts

The Contractor’s first point of contact for all things related to work being performed at a Nationwide facility will be their assigned Nationwide contact. It is this designated associate within Nationwide who is responsible for coordinating and managing contractor work performed at Nationwide facilities on a project-specific basis.

In an emergency situation, please contact Nationwide Corporate Security for the building location where your work is being performed prior to calling your Nationwide contact. If the Contractor is performing work in a property that is not managed by Nationwide, the contractor is to follow the building or property manager’s emergency action plan for emergency situations.

It is advisable that the contractor know how to easily contact Nationwide Corporate Security and their Nationwide contact, regardless of circumstances.

In addition to the Nationwide contact, the contractor should be aware of other emergency contact numbers, specific to each Nationwide location they may be working.

Home Office Complex

LOCATION	BUILDINGS	SECURITY TELEPHONE #
Columbus, OH	Plaza 1 One Nationwide Plaza	614-249-6060
	Plaza 2 280 North High Street	614-249-6060
	Plaza 3 Three Nationwide Plaza	614-249-6060
	215 215 North Front Street	614-249-6060
	10 West 10 West Nationwide Blvd.	614-249-6060

Grandview Yard Campus

LOCATION	BUILDINGS	SECURITY TELEPHONE #
Grandview Heights, OH	Building H 1000 Yard Street	(614) 435-1000
	Building I 1050 Yard Street	(614) 435-1000
	West Building 995 Yard Street	N/A

Other Central Ohio Locations

LOCATION	BUILDINGS	SECURITY TELEPHONE #
Other Central Ohio Nationwide Locations	Nationwide Hotel & Conference Center	(614) 840-7222
	Southpark (Grove City)	(614) 277-5002 (Main Entrance)
	Aviation Hanger (John Glenn Intl Airport)	(614) 607-2020

Regional Service Center Locations

LOCATION	BUILDINGS	SECURITY TELEPHONE #
Regional Offices outside of Central Ohio	Des Moines, IA	(515) 508-6060
	Scottsdale, AZ	(480) 365-5500 (1N Main Lobby) (480) 338-0267

All Other Office Locations

In all other locations where Nationwide is not the property manager, follow the property manager's emergency notification process and protocols in emergency situations.

Building Closures or Emergency Situations

In the event of a building closure or other emergency situations, the Nationwide contact will communicate to the contractor what is expected and procedures to follow. Regardless of location, information regarding building closures or other emergencies impacting Nationwide operations can be obtained 24/7/365 through Corporate Security by calling (614)-249-6060.

SITE SECURITY

Nationwide Corporate Security provides security to associates 24 hours a day, 365 days a year. To ensure the safety and security of all Nationwide associates, visitors, and Contractors, Security Officers:

- Patrol buildings, garages, parks, streets and sidewalks by foot and bicycle.
- Monitor building functions including cameras, fire and access control systems.
- Respond to all medical emergencies and assist the Associate Wellbeing & Safety nursing staff.
- Respond to all fire emergencies, assisting the fire department as needed.
- Provide escorts to and from associate vehicles.
- Provide security for events on Nationwide property.
- Conduct investigations of criminal activity involving personnel and property.

Although the availability of these functions varies based on location, Corporate Security performs these services, and many others, for associates, visitors, and Contractors of Nationwide. To inquire about using one of these services, contact Corporate Security where available.

Building Access

In order to gain access to any Nationwide building, suite, or office location, the contractor must be cleared for entry. Each Contractor is to work with their Nationwide contact to assign an individual as a ClearID approver through Nationwide Corporate Security. Once approved, this individual will coordinate badge requests through Nationwide's ClearID system. Please allow for up to 72 hours for this individual to be approved through the ClearID system so that they can begin assigning and requesting badge access for their employees.

The Nationwide contact will have ultimate approval authority for their contractors regarding access and building clearances along with Corporate Security.

As with all Nationwide associates, contractors are required to wear and always display a Nationwide issued ID badge while working in Nationwide facilities. General information regarding those badges includes:

- Contractors are required to obtain the Nationwide issued ID badge as a means to access the facility and prior to beginning any on-site work.
- Where applicable, Nationwide issued ID badges are electronically coded to provide access to authorized areas as required by the contract work. Should the Contractor have a need to access other restricted areas during the course of work, access can be coordinated through your Nationwide contact.
- Afterhours access at any Nationwide facility must be approved by your Nationwide contact and coordinated through Corporate Security.

Not all Nationwide locations have on-site Corporate Security personnel. For information regarding the availability of security personnel and specific Nationwide issued ID Badge requirements at affiliate or regional offices, check with your Nationwide contact.

GENERAL SITE INFORMATION

Nationwide facilities are generally equipped with typical building amenities including those areas where contract work is typically conducted. It is everybody's responsibility to ensure that buildings are maintained and kept in good order.

Egress (Entry/Exit)

A means of egress is a continuous and unobstructed path of travel from any point in a building or structure to a public way. The function of an egress system is to direct occupants of a building to a safe place in case of fire or other emergency.

Among the most common egress problems that facility modifications present are changes in common paths of travel, the introduction of dead ends, violations of minimum egress widths, and obstructions that result from work activity related to building maintenance, construction work, or improper material storage.

Nationwide requires contractors to:

- Ensure all walkways, exit paths, paths of discharge, and other similar paths maintain a minimum of 36

inches of clear space.

- Maintain a clear means of egress within a work area, regardless of project or work-related circumstances.
- Keep all doorways, docks, gates or any other type of exits from a Nationwide building free and clear of clutter, debris, supplies or equipment at all times.
- Maintain access to and visibility for all emergency equipment, including fire extinguishers, hoses, hydrants, pumps, deluge systems or associated valves.
- Maintain access to and visibility for all medical equipment such as AED kits, bleeding control kits, eyewash stations, and other medical or emergency equipment.
- Notify Nationwide when contracted scope of work may result in modifying an existing exit path.
- Install any visual management that may be required to direct associates, the public, visitors, or contractor employees to the nearest exit path in scenarios where existing walkways or exit paths may be impacted.

Exit Signs

Exit signs are prominently displayed throughout all Nationwide-occupied facilities, indicating where emergency exits are located. These signs are permanently illuminated.

Nationwide requires contractors to:

- Notify Nationwide if the contracted scope of work will result in obstruction, removal, or modification of an existing exit sign.
- Install temporary exit signage, which is compliant with all OSHA, ADA, IBC, and other applicable regulations, when existing exit signage is removed or modified.
- Install temporary exit signage, which is compliant with all OSHA, ADA, IBC, and other applicable regulations, when exit paths and exits are relocated to different locations.
- Mark any doors or exit routes as “Not An Exit” where appropriate if an existing exit door is removed, blocked, or no longer appropriate to use as an exit route.

Fire Alarms

Fire alarms must remain operational at project sites involving Nationwide-occupied buildings. In the event that the alarm system must be deactivated for active construction projects or contractor related work, the Contractor must notify the Nationwide contact. Corporate Real Estate must authorize deactivation of the fire alarm through the Building Operations shop and will notify Corporate Security for the contractor. Approval to shut down a system will be given only with sufficient prior notice where there is a demonstrated need, and the occupants of the building are not exposed to undue risk.

Nationwide also requires contractors to:

- Install a TattleTale alarm system in the impacted area when project work involves deactivation of the building's fire alarm system.
- Follow all requirements found in the Welding, Cutting, and Brazing (Hot Work) section of this handbook whenever hot work will occur.

Lighting

Walkways must remain lighted for pedestrian safety. When project activity impacts the lighting of the surrounding area or walkways, the Contractor must provide temporary lighting to compensate for the loss as required by code. Nationwide facilities require a minimum of one (1) foot candle for walk-ways and parking lots. Building entrances must be maintained at five (5) foot candles.

Housekeeping

When hired to perform any work at Nationwide, contractors are responsible for managing their own housekeeping within work areas. Contractors are permitted to use dumpsters at a facility if coordinated and approved by the Nationwide contact, but day to day cleanup of materials, debris, and trash is the responsibility of each contractor. Work areas must be cleaned daily as work progresses. Security and theft protection for any tools, equipment, or materials is the responsibility of each contractor.

Nationwide also requires contractors to:

- Follow all other relevant and applicable requirements in this handbook that will assist in Nationwide's efforts to prevent safety concerns from occurring due to poor housekeeping practices.
- Regularly clean the project or work area to prevent the accumulation of dirt, dust, and debris.
- Provide adequate trash receptacles for all employees or subcontractors performing the contracted scope of work.
- Empty trash receptacles regularly which were provided to the project or work areas.
- Clean the work area after project work activities have been completed.
- Cleanup and put away tools and equipment when completed with them.

Material Storage

Proper storage of tools, equipment, and any other materials necessary to perform work is critical to ensuring that work areas are not cluttered and do not lead to the creation of safety concerns. Contractors are permitted to store equipment and some materials at Nationwide for the purposes of completing a project, but due to limited space within facilities, the amount of storage space available may vary. Each contractor must coordinate with their Nationwide contact prior to starting a project to determine lay down areas or available storage space.

Nationwide also requires contractors to:

- Initiate material storage conversations with the Nationwide contact for any subcontractor they hire.
- Only store materials in areas designated by the Nationwide contact.
- Utilize a “just in time” delivery approach for all projects when possible.
- Store no more than two weeks of excess material on the property outside of a designated lay down area. In some scenarios, the allowable time for material to be placed outside of a designated lay down area may be less than two weeks, as directed by the Nationwide contact.
- Store materials “outside of a designated lay down area” only when permitted and only in the location permitted by the Nationwide contact.
- Never store tools, equipment, or materials in an area that is accessible to a Nationwide associate, visitor, or the public without approval and coordination from the Nationwide contact.
- Never store tools, equipment, or materials in a manner that would block or impact the evacuation of the property. This includes material storage in stairwells, exit paths, exits, and exit discharges.
- Never allow material storage to block access to any fire protection equipment, building safety equipment, eyewash stations, thermostats, or electrical panels.
- Never store tools, equipment, or materials in front equipment control panels, equipment disconnects, or areas which require maintenance access in mechanical areas.
- Secure any materials on roofs which could get picked up or blow in the wind. Nationwide’s requirements to secure materials includes both during and after the work shift.
- Place all materials on pallets, carts, or other devices to keep materials off the ground and allow for ease of movement.
- Store all materials which can roll or easily displace (pipe, conduit, all-thread, nuts, bolts, screws, etc.) off the ground. This can involve the use of racks, pallets, or keeping material in appropriate storage containers.
- Refrain from storing any tools, equipment, or materials in an electrical room or electrical closet.
- Refrain from storing any tools inside of electrical enclosures, cabinets, or other pieces of electrical equipment.
- Follow other applicable requirements in this handbook that will assist in Nationwide’s efforts to prevent safety concerns from occurring due to material storage practices.

Medical and First Aid: Injuries / Illnesses

Nationwide has lifesaving equipment strategically placed through facilities. AED stations are mounted in all Nationwide facilities on select floors or areas. Additionally, Nationwide has bleeding control kits mounted in

elevator lobbies or near exit doors on each mechanical floor in Plaza 1, Plaza 3, and 1100 Locust. These bleeding control kits are not replacements for first aid kits and must only be opened in the event of a significant bleeding event which requires immediate action.

Nationwide also requires contractors to:

- Have received appropriate first aid and CPR training in accordance with OSHA requirements.
- Provide first aid supplies in work area.
- In the event of a medical emergency, contact Nationwide security to dispatch 911 and emergency services as identified in the emergency contacts section above.
- Report all work related incidents, including injuries, illnesses, near misses, and property damage to the Nationwide contact and contractor leadership.

Smoking Policy

Nationwide maintains a smoke-free environment. Smoking is not permitted anywhere on the premises, including parking garages.

Substance Free Workplace Policy

Nationwide is committed to providing a substance-free workplace and maintains a comprehensive substance free workplace policy. It is expected that all Contractors will work substance free. Nationwide requires that all contractors working for Nationwide are enrolled in a substance free workplace program.

Nationwide has the right to audit a contractor's enrollment in a substance free workplace program. This may include confirmation of an employee's new-hire drug screening, or verification that the contractor's substance free workplace program performs random drug screenings.

EMERGENCY PROCEDURES

The following emergency response procedures are to be followed by all Contractors performing work on behalf of Nationwide. These are the same procedures provided to Nationwide associates. It is the Contractors' responsibility to familiarize themselves with these emergency procedures as well as appropriate emergency contact telephone numbers.

The first step in any emergency response, regardless of its nature or severity, is to listen to any emergency announcements which can be heard from the property's intercom system. (ex: shelter in place away from exterior windows, evacuate building, etc.).

It is the goal of Nationwide to keep all associates, visitors, and contractors safe during emergencies of any type. The following types of emergencies are specifically addressed in this Handbook:

- Bomb Threats
- Evacuation Procedures
- Fire or Smoke

- Medical and First Aid: Injuries/Illness
- Severe Weather/Natural Disaster
 - General Safety Tips
 - Tornado
 - Flood
 - Hurricane/Typhoon
 - Earthquake
- Spills and Releases – Hazardous Substances
- Suspicious Packages

If an emergency occurs within the scope of the project, contact Corporate Security. Any questions or concerns involving these emergency procedures should be directed to your assigned Nationwide contact.

Bomb Threats

If you suspect the presence of an explosive device or bomb in your work area, take the following steps immediately:

- Evacuate the area roughly 500 feet around it.
- Remain calm and businesslike – don't panic.
- Notify Corporate Security office (refer to pages 6 – 8) of the situations.
 - If in a building that is not managed by Nationwide, follow the property manager's process for notifying emergency or security personnel, for bomb threats.
- Don't touch the suspect device and don't let others touch it.
- Don't move it.
- Don't wet it down - don't spray it with a fire extinguisher.
- Don't cover it.

Bomb threats are always taken seriously without exception. No bomb threat is ignored!

In the event of a bomb threat, the premises will likely be evacuated. If so, the same building evacuation procedure as used for a fire will be initiated. Be sure to listen and obey all instructions from building management, building Security, the contact, or other emergency response personnel.

Evacuation Procedures

Evacuation Basics

An evacuation is defined as the orderly removal of all persons from an area. The area could be a room, suite, building, or surrounding exterior area. The reason for evacuation is always the same - to save the lives of the persons in the area.

Evacuations are initiated for a multitude of reasons, most commonly for: fire, earthquake, flood, tornado, or toxic fumes.

The decision to evacuate is made after careful consideration of the circumstances of the event unfolding and its

possible impact on associates in the affected area. The key to a successful evacuation is the willingness of those involved to remain calm, follow direction, and help those around them.

For information or assistance on evacuations specific to your work area, contact your assigned Nationwide contact to the initiation of work.

Evacuation Tips

Some tips for a safe and orderly evacuation include:

- Take any evacuation seriously. You might be helping to save someone's life, including your own.
- Keep evacuation routes clear of blockage at all times.
- Take your car keys, wallet, purse, or medications with you.
- Remain calm and quiet so that you can hear directions during the evacuation.
- Assist others who may have problems getting out of the area.
- Use stairwell exits only. Do not use elevators.
- Stay to the right in stairwells and form single file lines. Use hand rails when in enclosed stairwells. Watch for Fire Department personnel coming up stairwells to assure them clear passage.
- Go directly to the designated assembly areas after evacuation has taken place.
- Wait until the "All Clear" announcement before you return to your work area.

Evacuation Routes

- The route you must travel to evacuate an area is well-marked and as direct as possible. The routes are clearly designated on site/office maps using arrows. Emergency exit signs are clearly visible and designate egress points. Contractors should familiarize themselves with the evacuation routes for their project work areas.
- Evacuation routes are the same, regardless of emergency type.
- Know where the evacuation route is posted in your work area. Know how to read it. Ensure that you know what route to take in the event of an evacuation.
- There is generally more than one evacuation route available to evacuees. In the event that something happens to block one evacuation route, another can be used.

Evacuation Announcements

Contractors should be able to recognize the type of signal used to announce an evacuation. The signal is generally site-specific but all locations will have one as it is required by regulation and ordinance. Emergency evacuation signals are simple and typically include public address systems, cellular phones, and police whistles.

Ask your Nationwide contact what type of signal is used in your specific location. Site specific emergency action and fire prevention plan documents are available to your contact. They can provide copies of site-specific maps.

Fire or Smoke

For those project work situations involving some risk of fire, the Contractor should ensure that:

- Fire extinguishing equipment is readily available at the job-site;
- The Contractor's employee(s) know how to use it; and
- It is in close proximity to the risk/work area.

At a minimum, contract workers should know and be able to recall the following general rules for ensuring their own protection in the event of a fire:

- Review the job-site building evacuation plan.
- Each Nationwide-occupied building has an evacuation assembly area or refuge floor. Identify the assembly area or refuge floor for the location by looking at evacuation route map posted at each of the exits on your floor and in your building.
- Know the location of fire extinguishers and escape routes.
- Anyone spotting an unintended fire should sound the nearest alarm.
- Only those who are properly trained to do so should use a fire extinguisher in the event of a fire.

If a fire is discovered in the workplace, the following steps should be taken to ensure a timely and effective response:

1. Go to the nearest fire alarm station and trigger the alarm.
2. Warn others in the area.
3. Call Corporate Security or the building emergency number based on location from a safe place (all numbers listed above by location).
4. Identify who you are, where you are, where the fire is by building, floor, and location, and give any details about the fire.
5. Walk immediately to the nearest exit and leave the building, following any evacuation route that provided. Do not run!
6. If caught in heavy smoke, stay low to the ground, take short breaths, and crawl if necessary. Use a water-soaked cloth to breathe through. Smoke inhalation can kill. Good air is usually close to the floor.
7. Test closed doors by gently touching them with the back of your hand. If they are hot, the fire is behind them. Do not open! Use another route.
8. As you leave, help any disabled or injured persons.
9. Close doors around the fire area to help contain the fire.
10. In stairwells, stay to the right. Watch for Fire Department personnel coming up stairwells to handle the emergency.

Do not go back to the area for any reason until an all-clear signal is given. Contractor employees should expect to receive an all-clear from security or their Nationwide contact.

Severe Weather / Natural Disaster

Corporate Security and facility management teams monitor weather situations at all major company locations, tracking weather events 24 to 48 hours in advance. (NOAA) broadcasts weather alerts for a variety of severe weather conditions. NOAA issues alerts to make the public aware of impending tornados, high winds, flooding, and any other threatening atmospheric conditions.

In the event of an actual weather alert, occupants of company facilities are advised to begin severe weather procedures up to, and including, evacuation or closure of business.

If a warning is issued and the condition is severe, an office closing will occur and the premises will be secured to prevent loss. If the condition strikes before closing can take place, non-evacuation emergency measures are in place to protect all on-site personnel and property.

General Safety Tips

To ensure Contractor safety and well-being in the event of a natural disaster or weather-related event, practice these general safety tips:

- Keep a working flashlight in the assigned work area and check the batteries regularly. Take it with you if you leave.
- Know where the designated shelter areas and evacuation routes are for the project work area.
- Know where the first-aid kits are located in your work area.
- Follow all instructions given by Corporate Security (in those locations where Corporate Security has a presence) or the Nationwide contact.
- Remain calm. The first priority is your safety and well-being.
- Depending on conditions, a decision will be made and communicated to evacuate the facility or seek shelter in it.
- Assist disabled or confused persons to safety.
- Do not go outside the building while a weather emergency condition is in progress.

Tornado

- Do not leave the building.
- Turn off all powered tools, machines and equipment.
- Secure any hazardous materials in the area.
- Close any drapes or window coverings.

- Get away from the outside walls of the building and any outside-facing glass.
- Go to the inner core of the building. This is usually the main corridor on each floor of the building.
- First floor occupants should go to rest rooms or stairwells. DO NOT go to areas with large windows like the lobby.
- Protect your head. Get under heavy furniture or equipment. If no cover is available, lie flat and put your arms over your head.
- Sit down and put your head as close to your lap as possible, or simply kneel in a manner protecting your head.

Flood

- Turn off all powered tools, machines and equipment.
- Secure any hazardous materials in the area.
- Move to higher ground, away from rising water.
- Avoid making contact with electrical devices during a flooding event.
- Remember that in the dark, flood dangers are hard to see and recognize – be especially cautious.

Hurricane/Typhoon

- Secure outdoor materials and equipment. Tools, garbage cans, awnings, and other loose objects can become deadly missiles during hurricane-force winds. Windows should be covered using wood or cardboard and masking tape to prevent flying glass.
- Be alert for sources of electricity or gas leaks during the storm.
- In hurricane-prone areas, have supplies on hand. Items that require no cooking or refrigeration include packaged food, water, and canned goods. These should be stored in airtight containers and in sufficient quantities to last several days.
- Store a number of battery-operated radios and flashlights with a supply of fresh batteries.
- Have a well-stocked first aid kit.

Earthquake

Earthquakes are always a possibility, no matter where you live. You may live and work in regions where the danger of recurrent earthquake is prevalent. If so, you probably have extensive knowledge of how to protect yourself during an earthquake. Just remember that if an earthquake should occur, you will have little or no time to react.

- During the actual earthquake, follow these safety tips:
 - Stay indoors if you are already there. Do not go outside.
 - If indoors, seek shelter under sturdy furniture like worktables or heavy desks.

- Stay away from large glass surfaces and heavy items that might fall over.
- Don't re-enter damaged buildings - aftershocks may knock them down.
- Safety Team Members, Corporate Security team members, and maintenance personnel will be pressed into service when an earthquake occurs. Their primary responsibility is to protect the lives of all on-site personnel.
- If the event is community-wide, help from civil authorities may be slow in coming. Company personnel and Contractors may have to work on a voluntary basis to help others.
- Maintenance personnel will turn off systems that are likely to present a hazard.
- Structurally-sound escape routes will be established and associates remaining in the structure will be directed safely out after the earthquake subsides.
- Be prepared for aftershocks that may occur after the main quake. Aftershocks may last for a few seconds to minutes.

Spills or Releases – Hazardous Substances

If a Contractor experiences a spill or release of any material or substance, immediately contact Nationwide Corporate Security and the Nationwide contact. Be prepared to provide the following information:

- Copy of the Safety Data Sheet(s) (SDSs)
- Chemical name of product/material/substance
- Approximate and/or known quantity spilled or released
- Location where the spill or release has occurred (i.e. building, floor, floor drain, alley, roof, etc.)
- Manufacturer of product/material/substance

Corporate Security and Corporate Real Estate personnel are properly trained in responding to a hazardous substance spill or release and, consequently, will take charge in such situations.

Suspicious Packages

Although unlikely, there may be a situation where a Contractor receives or observes an unexpected package. Some tips for identifying suspicious letters or packages include:

- Suspicious mail or packages may bear restricted endorsements such as "Personal" or "Private" to ensure the letter/package goes directly to the targeted individual. It is important to note if the addressee does not normally receive such mail at the office.
- The name or title may be noted inaccurately.
- Return address may be fictitious or missing.
- Handwriting may be distorted or barely legible.
- Labels may be made in a cut and paste non-professional manner.

- May be unprofessionally wrapped using several combinations of tape/paper.
- The letter/package may feel rigid, thick or appear uneven or lopsided.
- A package may have protruding wires, strings, aluminum foil, oil stains, or may emit an unusual odor.
- It may have an irregular shape, soft spots, or bulges.
- The postmark may show a different location than the return address marked on the letter/package.
- It may have excessive postage.
- It may feel like a spring is in the letter (spring detonation device).
- Letter bombs, which are different from package bombs, usually detonate by pressure release.
- The letter/package may bear "Fragile-Handle with Care" or "Rush" tags.
- It may make a buzzing, ticking or sloshing noise.
- Pressure or resistance may be noted when removing the contents from an envelope or parcel.

If a threatening letter or package is suspected, take the following steps to ensure a successful resolution:

- As soon as you realize the letter/package contains a threat, avoid handling the surface of the paper.
- Pick the letter/package up by the edges and place it and the envelope into a plastic sleeve.
- Immediately notify your CRE Coordinator and/or Project Manager and Corporate Security that you have received a threatening letter or package.
- The suspect letter/package will be forwarded to Corporate Security in Columbus, OH. If you have reason to think that the letter may be contaminated, call the local police immediately.
- Make a note of who handled the letter and envelope before you realized it was a threatening letter/package – if police want to test for fingerprints this will help in isolating those of the author.
- Turn over all information and required forms to your CRE Coordinator and/or Project Manager, Corporate Security team member or law enforcement agency as soon as possible so they can properly deal with the threat.

OSHA, EPA, AND SITE SAFETY REQUIREMENTS

Introduction

In completing any work at a Nationwide facility, the Contractor must comply with all applicable federal, state, and local laws, rules, and regulations. This includes, but is not necessarily limited to, all laws pertaining to the protection of health, safety, and the environment, including all applicable OSHA and EPA regulations. Additionally,

all Contractors must comply with any additional Nationwide safety requirements outlined in this contractor safety handbook.

Nationwide also requires contractors to be responsible for:

- Performing regular inspections of their work areas to ensure compliance with applicable laws and regulations, Nationwide policies, and that general safe working conditions are maintained.
- Developing, maintaining, and enforcing their own safety related programs, policies, and procedures where necessary.
- Ensuring that documentation or work practices, compliance verification, training records, and safety programs, policies, or procedures are readily available for review if requested.
- Providing Nationwide or its affiliated companies, with immediate notice of any regulatory notices or citations, or property damage or personal injuries occurring on (or adjacent to) Nationwide properties or that is in any way associated with the work.
- Notifying the Nationwide contact immediately if an officer of a regulatory agency such as OSHA, EPA, or other, arrives on the property to conduct an inspection. Nationwide requests to be part of all regulatory inspections.
- Providing Nationwide or its affiliated companies, with immediate notice of any regulatory notices or citations, in writing, that occurred while they were working on a Nationwide property.
- Notifying Nationwide of any incidents, including injuries, near misses, or property damage events.

Safety Enforcement

Throughout this Handbook, Nationwide will outline all site-specific policies for work that is performed by contractors within a Nationwide facility. In scenarios where there are observations or instances in which conditions are violated, disciplinary action against the contractor or individual personnel may occur.

The following are zero-tolerance safety violations that shall result in immediate removal from the facility if observed:

1. Fall protection violations where personal fall arrest is required
2. Work on energized electricity >50 volts
3. Failure to properly perform lockout/tagout
4. Improper entry into permit required confined spaces
5. Any other observation that puts Nationwide associates, visitors, or the public at risk

The above observations **do not** require any previous verbal or written warnings, or any previous documentation of safety observations. When the above observations are identified, Nationwide will stop work immediately and engage the contractor's management with a discussion regarding the observation. The contractor is required to obtain the employee's contractor badge and return to Nationwide security upon removal from the facility.

In scenarios where contractors or subcontractors have repeated or multiple observations that occur in the above "zero tolerance" category, Nationwide has the right to proceed with any of the following:

1. Stop all of the contractor's work until additional training is provided, in person, by a 3rd party training organization.
2. Require the contractor to develop and submit a safety improvement plan.
3. Remove the contractor's field or project leadership (foreman, superintendent, project manager, etc.) from the facility/project.
4. Terminate the contract with the contractor due to safety concerns.

It should be recognized that for observations other than those listed above, Nationwide reserves the right to make personnel decisions regarding removing contractors from the facility based on the following:

1. Repeated safety observations.
2. Clear disregard for safe work practices.
3. Display of a poor attitude towards safety.

Nationwide will communicate observations to the project or contractor leadership, but Nationwide does not utilize a policy of progressive enforcement for general observations of unsafe actions or behaviors (ex: verbal warning, written warning, and then site removal).

Failure of a contractor's field or project leadership to report a work-related incident, including an injury, illness, near miss, or property damage, to Nationwide may result in removal from the project.

Asbestos

Asbestos Containing Materials (ACM) may be located in building materials inside of Nationwide-owned buildings. Information concerning the status of ACMs within the work area will be discussed with the Contractor directly by the Nationwide contact, as appropriate. Nationwide only permits qualified and licensed asbestos removal contractors to perform this work.

Nationwide requires contractors to be responsible for:

- Refraining from disturbing any ACM unless asbestos abatement is part of the contracted scope of work.
- Stopping work immediately and contacting the Nationwide contact if potentially ACM is suspected or identified.

Nationwide will hire a 3rd party to perform an exposure assessment and report determining that all ACMs have been removed, if necessary.

Barricades and Signage

Barricades and appropriate warning signage is required around all construction or renovation work areas. This includes mechanical floors and mechanical spaces, in addition to work on general associate floors. Each contractor must safeguard their work area to prevent exposure to unsafe conditions to associates, visitors, or the public. It is the responsibility of the contractor to maintain the location and condition of all required signage which are part of Nationwide requirements.

Signage – Areas Closed for Construction

Nationwide will have scenarios where contractor work is performed inside of an occupied facility when lack of barricades or signage will create risk for Nationwide associates, visitors, and the public. Adequate construction signage must be installed at the entry point to every location which is deemed "closed for construction" in a Nationwide facility. For the purposes of specific signage requirements at the entry to projects, areas considered

“closed for construction” include floor renovations, new construction areas, major equipment installations which result in shutting down an area, or locations enclosed in Edge Guard barrier (or similar) walls.

In these scenarios, Nationwide requires contractors to meet the following requirements:

- The contractor must install appropriate signage at each access point to the project work area which is considered “closed for construction.” This includes, but is not limited to:
 - Elevator lobbies
 - Access doors from stairwells
 - Exterior doors which lead into the construction area
 - Entry doors on containment walls
 - Other access points
- At minimum, the following signage is required at all areas identified above for areas under construction:
 - “DANGER: DO NOT ENTER”
 - PPE required beyond this point
 - Area Closed for Construction
- Other signage related to other types of projects, project locations, or hazards may differ from the above. These expectations and requirements can be found below.

Barricades – Exterior and Publicly Accessible Work Areas

Scenarios will occur where work is performed on the exterior of a Nationwide building or in an area where the work is accessible to the public. In these scenarios, Nationwide requires contractors to meet the following requirements:

- Nationwide requires that the work area be fully enclosed and barricaded using a method that is approved by the Nationwide contact. Neither danger tape or caution tape is permitted to be used as a primary barricade in areas where work is accessible to the public or performed outside of a Nationwide building.
- Warning signs are required to be placed throughout the installed barricade at intervals not exceeding six feet. At minimum, warning signage must read “DANGER: DO NOT ENTER.”
- Additional warning signage which better addresses a hazard, risk, or work being performed, may be requested by Nationwide, and is required to be placed throughout the installed barricaded area at intervals not exceeding six feet.
- Warning signs must be kept and maintained for the duration of the project.
- In scenarios where public and pedestrian walk paths, roads, or other navigable locations are impacted by the contractor’s barricaded work area, appropriate wayfinding and directional signs are required to be installed by the contractor. These signs must effectively direct Nationwide associates, visitors, and the public to safe walk paths and assist them in navigating around barricading work areas.
- When necessary, it is the responsibility of the contractor to contact local authorities (City of Columbus, City of Des Moines, etc.) to obtain necessary permits or permissions to close sidewalks which are to be barricaded as part of construction activities.
- Installed barricades must be constructed and supported in a manner that prevents it from easily falling. It is expected that appropriate repairs and maintenance of the barricades are performed once changed conditions are identified.
- Installed barricades must be constructed and maintained in a way that prevents tripping hazards.

Barricades – Mechanical Work Areas

Contractor and project work may occur inside of functioning mechanical rooms and in areas of building operation. Due to the nature of building operation and critical infrastructure in mechanical work areas, it is not always feasible for mechanical rooms (including electrical and data closets) and mechanical floors to be fully closed or barricaded during construction or any other contracted work.

In these scenarios, Nationwide requires contractors to meet the following requirements:

- In general, barricades are not required for work in mechanical work areas except in situations where overhead work is occurring or work tasks are performed which can lead to material being dropped to the ground below. Barricade and signage requirements in these locations, along with other safety measures, can be found in the “Overhead Work and Falling Object Protection” section of this handbook.
- In scenarios where Nationwide or the contractor requests installing barricades for specific phases of work to keep Nationwide maintenance technicians, or other contractors, out of the area, a particular type and style of barricade and appropriate signage will be mutually agreed to by Nationwide and the contractor. It is the responsibility of the contractor to maintain the condition of these barricades.

Barricades – General

Other scenarios may occur which have not been identified in this section. In those scenarios, Nationwide requires contractors to meet the following requirements:

- The contractor is expected to discuss barricade expectations with their Nationwide contact as part of preconstruction conversations.
- A plan for barricading the work area, when necessary, in non-enclosed locations on associate floors will be developed with the Nationwide contact prior to the start of work.
- Barricades must be erected before any applicable work requiring barricade protection begins.
- Barricades shall not create a trip hazard. Any potential trip hazards shall be clearly marked.
- Warning signs placed on barricades or fences must be maintained for the duration of the project.

Fencing

For projects where it is deemed that fencing is required, Nationwide requires contractors to:

- Install signs to direct pedestrians to a safe walkway if the fencing blocks a sidewalk or a common navigable pathway.
- Use signage which is required by any local municipalities in scenarios where sidewalks, crosswalks, or public paths are blocked or impacted.
- Install signs on the perimeter fence and where required by local municipalities where applicable.
- Install fencing and signage in the manner that is stated in the barricade and signage requirements section of this handbook.

Overhead Work and Falling Object Protection

Holes

Special consideration is required for work tasks or projects where holes can be created. Holes in construction, mechanical, and industrial environments, in addition to any other environments, can create conditions for falls and falling objects.

Nationwide requires contractors to meet the following requirements:

- Holes, openings, or gaps in the floor or walking working surface which are greater than 2" in the least dimension must be covered or protected by other means.
- Hole covers must be secured or cleated so they cannot slip, and they must extend adequately beyond the edge of the hole. Each hole cover must be marked "HOLE."
- Holes must be covered at any time when left unattended.
- Barricaded areas which contain an opening or hole must be protected during working hours and must be covered and secured at the end of each day.
- Nationwide does not permit open holes which are large enough for an employee to fall through to be left open inside of barricaded work areas at the conclusion of the workday unless physical barriers in the form of guardrails or a secured chain link fence (which also meets requirements for guardrails), are installed.

Overhead Work and Falling Objects

For the purposes of this section, Nationwide defines overhead work as work performed at heights from elevated floors, platforms, equipment, or working surfaces. This work creates scenarios where materials, equipment, and tools can fall, leading to injury for those below. All ladders taller than 6 feet are applicable to overhead work and falling object requirements identified in this section.

Nationwide requires contractors to do the following:

- Scenarios of overhead work during normal business hours occurring on associate floors, in common areas (lobby areas, cafeteria, etc.), or in other occupied sections of the building must always involve coordination with a Nationwide contact. No overhead work is to proceed in these locations unless permission and coordination is provided by Nationwide. Where possible, it is preferred that this work be performed off hours to limit business interruption and associate or visitor exposure.
- Work performed from lifts in common areas where associate or visitor traffic is unable to be eliminated requires a spotter to assist with walking traffic, communicating with the employee(s) working in lifts, and to prevent those walking through the area from getting too close to the lift, or barricades around the work area. Nationwide also requires that all hand and power tools in lifts be tethered using tool tethering devices in these scenarios.
- If barricades are used in addition to, or in lieu of a spotter, the method of barricade to be installed in the common area must be coordinated with the Nationwide contact.
- Ground barricades must be established by a competent person to determine the size of the barricaded area.

- When work is performed that has potential for tools or material to fall to a lower level, all protective measures to prevent material from falling must be taken. Specifically, if the work is performed over an occupied floor, this work must be conducted on off-hours or must be coordinated with the Nationwide contact and occupants on the floor below.
- When work that has the potential to fall to a lower floor is performed, the Contractor must ensure that the work area be fully enclosed and barricaded using a method that is approved by the Nationwide contact. Neither danger tape or caution tape is permitted to be used as a primary barricade in areas that may be considered accessible to associates, visitors, or the public.
- When work is performed on a roof, the contractor must ensure that all materials which could fall or blow off the roof are secured during and at the end of each shift.
- Tool tethering is required to prevent falling objects in the following scenarios:
 - Work performed from suspended scaffolds,
 - Window washing operations performed from a mobile elevated work platform, suspended scaffold, or from any other mobile unit, and
 - Work performed from a mobile elevated work platform in a common area with exposure to Nationwide associates, visitors, or the public.
 - Work performed from ladders in common or occupied areas where associate exposure is possible (lobby areas, associate floors, etc.)
 - Work performed from ladders does not require the use of a tether if a spotter is placed on the ground.
- Refer to the Scaffolding and Ladders section for additional requirements regarding work performed at heights and for additional falling object protection.

Compressed Gas Cylinders

LP Gas

Special permission must be obtained from the Nationwide contact to use propane gas (LPG) powered equipment at any Nationwide jobsite. All LPG cylinders must be properly stored in accordance with NFPA 58 – Liquid Petroleum Gas Code.

Temporary Heating Systems

Nationwide requires contractors to be responsible for:

- Installing direct reading carbon monoxide detection devices next to any area where propane heaters are used.
- Ensuring that only trained personnel from a vendor contracted to install propane heating equipment perform the installation of propane lines, connecting devices, relief valves, shutoff valves, regulators, or any additional components of the propane heaters.
- Contacting the installation vendor to perform any maintenance or service of the propane heating system.

Only trained personnel are permitted to perform maintenance or service on a propane heating system.

- Shutting down work immediately for evaluation when any potential scenario occurs that may indicate a potential gas leak or high levels of carbon monoxide.
- Storing any flammables and combustibles at least 35 feet away from open flame propane heaters.
- Installing a temporary metal fence (i.e. cattle gate style fencing or temporary guardrail systems) at least five feet in front of the heater, and on three sides (front and sides) to prevent traffic between the open flame and fence.
- Ensuring that temporary heaters are located at least 6 feet from any LPG container. Blower and radiant type heaters shall not be directed toward any LPG container within 20 feet.
- Proper storage of LPG containers and tanks outside the building must follow Table F-3 found in 1926.453(K)(1). The total volume of LPG cylinders used to fuel equipment such as MEWPs and forklifts is factored into the total quantity of LPG storage, combined with tank storage for propane heaters.
- Providing at least one 20-pound portable fire extinguisher rated not less than 20-B:C at the storage locations of each LPG container and tank.

Compressed Gas

All applicable OSHA regulations will be followed when compressed gas cylinders are transported, used, and stored. Specific OSHA requirements related to using compressed gases that Nationwide would like to remind contractors of include the following:

- Secure gas cylinders in place to prevent tipping during use, transport, and storage.
- Compressed gas cylinders must be secured vertically to an adequate support or cart while in storage, transit, or use.
- Safety and valve protection caps must be in place and secured when cylinders are in storage or being transported.
- Any compressed gas cylinder which contains material which is flammable, combustible, explosive, or a fuel-gas, must not be stored within 20 feet of ignition or heat sources.
- Oxygen and fuel-gas cylinders must be separated by a minimum of 20 feet or a fire-rated wall at least five feet in height and rated for at least one half-hour.
- Legible labels which identify the gas inside of the cylinder must be placed on all cylinders.

Nationwide also requires contractors to be responsible for the following:

- Follow all above requirements on miniature compressed gas cylinders in addition to standard sized.

- Ensure that the divider wall for any carts used for oxygen and fuel-gas cylinder storage is manufactured and engineered as a fire-rated wall. Carts with divider walls which are not engineered or listed with a fire rating are not permitted to be used as the dividing mechanism for oxygen and fuel-gas cylinders.
- Use only carts which are designed for gas cylinder use, storage, or transport.
- Remove all hoses and regulators from fuel-gas cylinders at the end of each shift.
- Maintain the condition of pressure gauges. The pressure gauges must be covered, the pressure measurements must be legible on the gauge's chart, and the needle of the pressure gauge must be free from damage to be considered serviceable, at minimum.
- Refrain from rigging compressed gas cylinders from carts, or other means, which are not designed for the purposes of hoisting and rigging. If challenges arise which may require additional discussions for moving or transporting compressed gas cylinders, the Nationwide contact must be notified.

Concrete and Masonry

This section refers to any work involving concrete or masonry products that may occur within Nationwide properties. This includes work with concrete/cement, grout mixes, Portland Cement based products, and any quick setting compounds. The scope of work involving these products may include brick laying, blocking, flooring, and tiling, among others. Many of the tasks performed and products used during concrete and masonry work, have potential to create exposures to respirable crystalline silica. To prevent silica exposures, all Contractors must follow the Silica section of this handbook.

Nationwide requires contractors to be responsible for the following:

- All employees working with Portland Cement based products must wear gloves and safety glasses.
- Any concrete or masonry work involving any caustic products, or products that are Portland Cement based, requires an adequate eyewash station. The eyewash station must be able to provide 15-minutes of flushing capability and be no more than 55 feet away from the work area and on the same working level.
- Make available multiple eyewash stations, if necessary, due to proximity or work on different levels.
- During cold and freezing conditions, measures must be taken by the contractor to prevent eyewash stations from freezing.
- Hand washing stations must be available for any employee engaged in work with corrosive or Portland Cement based products. These stations must consist of potable water, non-alkaline soap, and clean towels.
- All concrete mixers must be equipped with suitable guarding to prevent contact with rotating blades.
- Industrial sized concrete mixers must only be used outside of the building to prevent dust from collecting in HVAC systems. Hand mixing or using small mixers, approved by Nationwide, are permitted to be performed indoors. Coordinate with the Nationwide contact to determine if the mixer is suitable for indoor use.

Confined Space

A “**confined space**” is a space that:

- Is large enough and so configured that a person can bodily enter and perform assigned work;
- Has limited or restricted means for entry or exit (i.e. tanks, manholes, pipelines, underground vaults, vessels, silos, storage bins, and pits); and
- Is not designed for continuous occupancy.

A “**permit required confined space**” is a confined space that has one or more of the following characteristics:

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material that has the potential to engulf an entrant;
- Has walls that converge inward or floors that slope downward and taper into a smaller area which could trap or asphyxiate an entrant; or
- Contains any other recognized safety or health hazard, such as unguarded machinery, exposed live wires, or heat stress.

Contractors are responsible for their own confined space entry procedures, permits, rescue plans, and training as required by OSHA's confined space regulations for construction and general industry.

All applicable OSHA regulations will be followed when contractors are working in confined spaces. Specific OSHA requirements related to confined spaces that Nationwide would like to remind contractors of include the following:

- All employees entering a confined space must be trained in confined space entry.
- A confined space permit must be documented for entry into a confined space.
- In scenarios of entry into a permit required confined space, the contractor must establish employee roles for the entry supervisor, attendants, and entrants.
- A rescue plan must be established for permit required confined space entry.
- Testing of atmospheric conditions must be performed prior to entry into a space that has or has the potential to contain a hazardous atmosphere.
- Account for any work tasks which could create a hazardous atmosphere in a confined space and install controls accordingly which will comply with applicable OSHA requirements and create safe work conditions.

Nationwide requires contractors to meet the following requirements:

- The contractor must have a written confined space entry program.

- The contractor must use their own confined space permit forms. Nationwide does not issue a standard confined space form to contractors.
- A copy of the confined space entry program must be made available if requested.
- Employee training records must be made available if requested.
- Completed confined space entry permits must be made available if requested.
- In scenarios, a permit required confined space is reclassified to a non-permit required confined space, the reclassification process must be documented and made available for review.

Nationwide has a zero-tolerance policy for entry into permit required spaces without training, a rescue plan, pre-entry monitoring (when necessary), or documented entry permits. Nationwide reserves the right in these situations to stop work, remove an employee from the site, and/or require the contractor to obtain confined space entry training provided by a third-party.

Electrical

Contractors are responsible for following all applicable OSHA electrical requirements. Contractors are also responsible for following NFPA 70E requirements while working at Nationwide.

Electrical Cords, Tools, and Equipment

Nationwide requires contractors to meet the following requirements:

- All electrical cords and tools must be marked with the name of the contractor to identify the equipment owner. It is not permissible to place tape on the cord or tool to use for a marking or labeling mechanism.
- All portable electrical tools must bear the label of a Certified Testing Agency, such as the Underwriters Laboratories, CSA, ETL, or the like.
- Tools and equipment must be inspected before use.
- Batteries used for battery operated tools are permitted to be used only if they have been tested by a Certified Testing Agency against UL standards for batteries, including lithium-ion batteries.
- Only round, heavy-duty cords, which are a minimum 12-gauge are acceptable for use on site.
- Cords must be maintained in their original manufactured state. Nationwide does not permit the use of any electrical cords which have been field repaired. All damaged electrical cords are to be removed from service once damage is identified.
- Flexible cords and other electrical equipment must be used in the manner that it is listed by the manufacturer. Flexible/extension cords must not be connected in series, or "daisy-chained."
- Portable ground-fault circuit interrupters (GFCI) must only be plugged directly into the power source

based on manufacturer labeling. Extension cords, used in conjunction with portable GFCIs, are permitted to be plugged into the female end of cords only. Cord splitters are not permitted to be plugged into the portable GFCIs. Electrical cord splitters are not permitted to be used to create additional cord length. Nationwide only permits the use of cord splitters on the output end of an extension cord to charge batteries.

- The use of cord splitters which are integrated into permanent furniture during projects and installs for associate workspaces to interconnect and energize tables and other furniture devices are permitted as long as it is installed per manufacturer specifications.
- Surge protectors and plug strips are not permitted to be used for any construction or industrial related projects. This includes using the devices to charge batteries or power tools and equipment.
 - Surge protectors and plug strips are permitted to be used in the office environment and at associate workstations in non-industrial areas to power electronic devices such as computer monitors, laptops, or sit-stand workstations.
- Flexible cords shall not be configured on or over any sharps which may damage the cord.
- Cords are not to be configured on or over any otherwise conductive materials (metal studs, metal floor track, unistrut, all-threads, pipe hangers, metal piping, etc.). Cords, however, can be hung from conductive items overhead using tools such as plastic S-hooks, twine, magnets, and other means.
- Flexible cords are not to be left on the ground. All cords are to be suspended overhead by non-conductive means or supported by installing devices such as overhead cord trees.
- If cords are unable to be elevated, they must be protected from vehicle traffic and configured in a manner to eliminate tripping hazards. It is the position of Nationwide that in most scenarios it is feasible to keep cords off the ground.

Electrical Wiring and Configuration

Nationwide requires contractors to meet the following requirements:

- Electrical ground-fault protection be provided on all portable electrical tools, equipment and all other 120-volt, single-phase, 15- and 20- ampere receptacle outlets on construction sites which are not part of the permanent wiring of the building or structure.
- All exposed energized wires and circuits 50 nominal volts or more must be protected from employee contact. Wire caps or electrical tape to cover the ends of electrical wires or circuits are not permissible as a means of employee protection.
- All energized wires and circuits 50 nominal volts or more must be enclosed in a covered box or other enclosure. This includes wire splicing for temporary lighting and the installation of any other temporary electricity.
- Electrical wiring for all light switches and receptacles must be covered prior to energization by either permanent or temporary cover plates. If work must occur around outlets or switches while energized, the devices must be covered to prevent accidental contact. Tape over the space between the outlet and wall

is not an acceptable means of preventing electrical exposures.

- Only employees qualified and trained to install electrical wiring are permitted to perform this work on Nationwide properties.

Temporary Power

Nationwide requires contractors to meet the following requirements:

- All stations which provide temporary power must be equipped with a local disconnecting means with the capability of being locked out.
- Temporary power stations are to be labeled to identify the source from which it is being fed.
- Temporary outlets must all be GFCI protected.
- Temporary electrical outlets must be firmly mounted. Outlet boxes must not be left on the ground or loosely hanging by wiring.
- Knockout holes and all other openings are to be covered on all electrical outlets to prevent accidental contact.

Temporary Lighting and Work Area Illumination

Nationwide requires contractors to meet the following requirements:

- Nationwide requires a minimum of 5 foot-candles of illumination in general construction areas and 15 foot-candles in electrical rooms, mechanical areas, or other locations deemed to require additional lighting.
- If contractor work is occurring in an occupied associate space, all efforts to not impact lighting in the work area must be taken. If work will impact associate workspace lighting, the contractor must coordinate with the Nationwide contact.
- Temporary lighting which is energized shall not be placed in a location where it is accessible or exposed to normal employee contact. Temporary lighting must be placed at a height of 8 feet or as high as feasibly possible.
- Light bulbs must be installed in every socket to prevent any exposures to uncovered electrical parts.
- All light bulbs which are part of temporary lighting must be covered with a protective cage to prevent accidental contact and to prevent the bulb from shattering.
- Temporary lighting is not to be secured to handrails, guardrails, or any other easily accessible materials.
- Wiring for temporary lighting shall not be configured on or supported by any conductive materials.

NFPA 70E- ELECTRICAL WORK PRACTICES, TRAINING, AND PPE

Contractors working on electrical equipment are required to follow all applicable requirements and safe work practices as required in OSHA 29 CFR 1910, 29 CFR 1926, and NFPA 70E, in addition to the requirements of this Handbook.

Related to electrical work practices, Nationwide requires contractors to meet the following requirements:

Any employee performing work within the limited approach boundary of electrical equipment and systems, live or de-energized, >50 volts must be considered an “electrically qualified” employee.

- For an employee to be considered “electrically qualified” to work at Nationwide, the contractor employee must have received NFPA 70E training (or other acceptable training).
- It is the responsibility of the contractor to provide this training to their workforce who will be performing work at Nationwide.
- Nationwide recognizes that NFPA 70E training alone may not be adequate training to perform specific jobs or tasks. It is up to the contractor to provide any additional training related to OSHA electrical requirements and task specific training to perform their work tasks in a safe manner.
- Documentation of NFPA 70E training (or other acceptable training) must be provided to the Nationwide contact upon request.
- It is the right of Nationwide to make the determination that training records, which are submitted upon request, are not adequate or acceptable to perform electrical work in a Nationwide facility.

Nationwide does not permit any energized electrical work to be performed on systems >50 volts and will not issue an energized work permit. The only exceptions for this policy include testing and troubleshooting related activities which do not require an energized work permit, including commissioning, infrared scanning, and testing. The items below identify additional requirements and considerations related to Nationwide’s position of “no energized electrical work.”

- All equipment and systems are to be placed into an electrically safe working condition prior to performing any planned or scheduled electrical work. This requires equipment undergoing service, maintenance, or construction related work be properly locked out. Additional information related to lockout/tagout and training requirements are found in the Lockout/Tagout section of this Handbook.
- Activities related to testing and troubleshooting, including the verification of zero-energy during lockout/tagout prior to proceeding with work, requires the use of proper electrical and arc flash PPE.
- It is Nationwide’s position that all equipment, systems, and assets in the Nationwide portfolio can be de-energized and locked out to eliminate the potential for shock, electrocution, and arc flash. Nationwide will assist contractors upon request with coordinating a shutdown of any equipment with appropriate personnel and business units.
- Nationwide has a zero-tolerance policy for energized work. Failure of a contractor or their employee(s) to follow this policy will result in immediate removal from the facility and potential termination of contract.

Nationwide has the right to stop any contractor performing electrical work if it is determined that tasks are not being performed in a safe electrical working condition. It is also the right of Nationwide to remove any contractor employee from the facility if an employee is not following electrically safe work practices, is working on energized equipment, or shows a clear lack of knowledge related to safe electrical work practices.

NFPA 70B

Any contractor performing servicing or maintenance activities on any electrical systems within Nationwide must follow the requirements set forth in NFPA 70B. Equipment maintenance performed following NFPA 70B, must also be performed in conjunction with NFPA 70 (The National Electric Code) and NFPA 70E.

Low-Voltage Projects

Nationwide recognizes that there are scenarios where electrical work may occur on equipment, circuits, and systems operating at voltages <50. Protective requirements found in NFPA 70E, in general, do not take effect until a voltage of 50 is reached. In scenarios where a contractor can confirm and verify that their employee's will have no potential of working in proximity to electricity >50 volts, energized or de-energized, the employee is not required to be trained in NFPA 70E or lockout/tagout.

Low-voltage work may be experienced in scenarios around Nationwide facilities for work such as installation or maintenance of control devices, audio visual wiring and devices, access control devices, and IT related devices. It should be recognized by the contractor that performing work on many of these pieces of equipment will result in an employee working within the limited approach boundary of adjacent wiring and circuits operating in excess of 50 volts. In these scenarios, lockout/tagout must be performed and the employee must be trained in NFPA 70E and lockout/tagout at a minimum.

Nationwide technicians are available to assist contractors in identifying voltage levels of devices or locating disconnects. Other additional resources from Nationwide are available to assist with project requests when necessary. However, it is ultimately up to each contractor to perform their own lockout/tagout, utilize safe electrical work practices in accordance with NFPA 70E, follow Nationwide policies, and provide training for their workforce. An attached guidance document for low-voltage related projects, including data cabling, technology projects, and many other similar projects, is attached in Appendix B of this handbook.

Electrical Shutdowns and Power Downs

Nationwide regularly schedules building power down and shutdown projects for maintenance related purposes. Prior to these projects beginning, Nationwide will conduct scope review meetings to determine who will manage the overall project (either Nationwide or a contractor). If the contractor is determined to have authority to manage a shutdown or power down, it is the contractor's responsibility to manage all components of the work, including de-energization and lockout tagout of affected equipment, in conjunction with Nationwide requirements.

The following sections listed below are part of Nationwide's standard electrical shutdown and power down project process that are to be followed by all contractors and personnel involved in the project.

Energy Marshal

For each power down and shutdown project, the contractor leading the project is required to appoint one

individual to the role of “Energy Marshal” for the project. If Nationwide is leading the project, Nationwide will appoint an individual from their Mission Critical team or from the Nationwide Electrical Shop to the role of Energy Marshal for the project. This individual is responsible for:

- Fulfilling a management role only for the project;
- Leading any MOP discussions, reviews, and field walks prior to project start;
- Overseeing and verifying proper LOTO and de-energization of the equipment;
- Ensuring work scope is maintained during the project;
- Serving as the primary person to answer questions from project personnel related to LOTO, MOPs, and project work scope;
- Requesting assistance, when needed, from Nationwide or other resources during power down or shutdown projects; and
- Performing no tasks which take away their attention from serving as the Energy Marshal. This employee is not permitted to perform any tasks with “tools in hand.”

Method of Procedure (MOP)

A method of procedure (MOP) is a document that provides a variety of information related to the project scope of work and the affected equipment. The MOP provides information related to the following:

- Proper shutdown of the equipment,
- Load shedding,
- LOTO,
- Work tasks,
- Equipment re-energization, and
- Properly putting critical equipment back online.

Nationwide requires MOPs for shutdown and power down projects, or in other scenarios where scope review meetings may determine that one is necessary.

If the scope review determines that Nationwide will lead the shutdown, Nationwide will:

- Develop the MOP for the work to be performed on the project,
- Lead a review of the MOP with those involved in the project through a combination of field walks and meetings prior to starting the project, and
- Make any changes or edits to the MOP based on feedback and information obtained during field walks and meetings.

In scenarios where a contractor is leading a shutdown or power down, it is the contractor’s responsibility to:

- Develop the MOP for the work to be performed on the project.
 - Nationwide can provide assistance for informational purposes, but it is ultimately the contractor’s responsibility to develop their own MOP.
- Lead a review of the MOP with those involved in the project through a combination of field walks and meetings prior to starting the project.
- Make any changes or edits to the MOP based on feedback and information obtained during field walks and meetings.

- Nationwide may provide recommendations to the contractor for their MOP, but the responsibility to correct and manage the MOP is assigned to the contractor.
- Nationwide does not approve MOPs developed by contractors.

Tool Check Out and Check In Program

When working on an electrical shutdown or power down project, Nationwide requires a tool check out and check in program to be followed and managed by each vendor and contractor. This helps to ensure that equipment, tools, and other devices are not left abandoned inside of an electrical panel, switchgear, transformer, or other electrical equipment. Abandoned tools inside of electrical equipment can trigger arc flash events.

As part of this program, Nationwide requires contractors to do the following:

- Establish their own documented process for managing their tool check out and tool check in during shutdowns and power downs.
- Assign an individual responsible for managing the tool check in and check out program during the project.
- Have tool check out and check in documentation readily available on a project if requested by Nationwide or the contractor leading the project.
- Each contractor participating in the project include on their MOP the process of checking out tools at the start of the shift and checking tools in at the end of the shift. This will assist in preventing re-energization while equipment or tools is still inside the equipment.

Coordination and Arc Flash Studies

It is likely that during the scope of projects, changes or impacts to existing electrical equipment may occur. If project work involves any impacts, changes, or modifications to existing electrical equipment, previously existing labels from the most recent arc flash study are no longer valid.

Nationwide will identify, when possible, all scenarios where these impacts could occur during pre-planning stages of projects or maintenance work and capture the work on an MOP where applicable. In these scenarios, Nationwide will coordinate with a properly trained vendor to complete arc flash analysis of the modified equipment as part of the project and prior to project completion.

It is expected that contractors stop work when they recognize needed modifications to electrical equipment that must occur due to project requirements or changing conditions. Nationwide will assist the contractor and engage a vendor to perform arc flash analysis if changes to the work scope are approved.

Lockout/Tagout (LOTO)

All contractors working in Nationwide facilities are required to comply with all OSHA regulatory requirements found in 1910.147, the control of hazardous energy, and methods to achieve an electrically safe working environment. Proper LOTO, in many cases, works in combination with utilizing NFPA 70E to establish safe working conditions.

Any contracted work on Nationwide equipment which requires LOTO must be coordinated with the Nationwide contact. In some scenarios, Nationwide maintenance and facilities teams may ask to be part of the shutdown

procedure. No contractor is permitted to shut down and lockout any equipment outside of an approved scope of work unless approval is provided by a Nationwide CRE supervisor, construction manager, or project manager.

Nationwide is available to provide assistance to any contractor related to performing LOTO in a Nationwide facility. However, the contractor is still required to perform their own personal LOTO. In these situations, Nationwide may help to:

- Identify lockout points and energy sources associated with equipment;
- Obtain one-line diagrams for any electrical systems in question;
- Determine potential interruption if equipment is de-energized; and
- Communicate and coordinate with the proper individuals when business interruption may occur.

Specific OSHA requirements related to LOTO that Nationwide would like to remind contractors of include the following:

- Each contractor employee who performs LOTO must be trained to perform LOTO and be an “authorized employee.” This distinction can only be established by their employer.
- All energy sources must be isolated and locked out.
- Methods to verify zero-energy after isolating the equipment energy sources must be followed.
- Each contractor employee involved in the work must place their own lock and tag onto each lockout point on the equipment.
- Locks used for LOTO must be individually keyed.

Nationwide requires contractors to meet the following requirements:

- All contractors are responsible for their own LOTO program, including providing their authorized employees with LOTO equipment and training.
- Training records must be available for review if requested.
 - It is the right of Nationwide to make the determination that training records, which are submitted upon request, are not adequate or acceptable to perform LOTO work in a Nationwide facility.
- Contractors must communicate with the Nationwide contact if assistance is required for any reason related to equipment shutdown or LOTO.
- Contact the Nationwide contact if shutdown is required for any equipment which may not have been directly planned or identified in the original work scope.
- All contractor employees must install a tag on all locks which contain the employee’s name, phone number, and the name of their employer.

- No “tagout” of equipment is permitted at Nationwide. All energy sources and isolation points must be locked out.
- At the end of each shift, or when leaving the facility, contractor employees must remove locks from the equipment to prevent abandoned locks.
- Notify Nationwide if equipment requires asset protection between shifts or for long term shutdown. In these scenarios, Nationwide will assist the contractor with using house locks on the equipment.
- Notify Nationwide when abandoned locks from Nationwide associates are found on equipment. Nationwide will initiate an emergency lock removal if necessary.

Nationwide does not permit any work to be performed on equipment which is not locked out. The only exceptions for this policy include testing and troubleshooting related activities, or in scenarios that are considered routine, repetitive, and integral for production. However, in these situations, the contractor must utilize alternative safe working procedures instead of LOTO to ensure employee protection.

- It is Nationwide’s position that all equipment in the Nationwide portfolio can be de-energized and locked out to eliminate the potential for electrical related hazards and to eliminate the potential for amputation, caught-in equipment events, or property/equipment damage.
- Nationwide will assist contractors upon request with coordinating a shutdown of any equipment with appropriate personnel and business units.
- Nationwide has a zero-tolerance policy for working on equipment that is not properly locked out. Failure of a contractor or their employee(s) to follow this policy will result in immediate removal from the facility and potential termination of contract.

Nationwide has the right to stop any contractor performing work if it is determined that work is not being performed using proper LOTO requirements in accordance with Nationwide, OSHA, and NFPA 70E requirements. It is also the right of Nationwide to remove any contractor employee from the facility if an employee is not following safe work practices related to LOTO, failed to lockout equipment properly, or shows a clear lack of knowledge related to LOTO.

Elevated Work/Fall Protection

Nationwide expects contractors to follow all applicable fall protection requirements listed in 29 CFR 1910 and 1926, depending on scope of work. It is the responsibility of the contractor to assess their work scope and tasks to determine applicability of either construction or general industry fall protection requirements when working at Nationwide.

Nationwide has a zero-tolerance policy for working without fall protection. Failure of a contractor or their employee(s) to follow this policy will result in immediate removal from the facility and potential termination of contract.

Nationwide requires contractors to meet the following general requirements for fall protection:

- Designate a competent person for fall protection on the project when work at heights is performed.
- Provide training records to Nationwide if requested at any stage of the project.
- Follow all general requirements for barricades and signage when overhead work is conducted.
- Determine applicable fall protection requirements as defined in OSHA 29 CFR 1910 and 1926 based on project scope.
- Nationwide permits the use of 29 CFR 1910 Subpart D's fall protection exemption for temporary and infrequent work performed on low-sloped roofs (4:12 pitch or less) in general industry applications only. In these scenarios, contractors must follow Nationwide's policy for temporary and infrequent work on low-sloped roofs. Contractors may also follow their own work rules for this application, permitted it is at least as stringent as Nationwide's.
- Stop work and coordinate with the Nationwide contact if there is no clear access to Nationwide equipment which is part of a construction project, or work on top of equipment creates additional fall protection concerns.

Fall Protection Systems and Criteria

In general, guardrail systems must meet the requirements set forth in 29 CFR 1910 and 1926. Additional work practices to maintain condition and safety of installed guardrails must be taken and considered to ensure adequate fall protection for employees.

Nationwide requires contractors to meet the following requirements:

- Regularly inspect and maintain any guardrail systems installed during the project.
- Install toe-boards on all temporary guardrail systems.
- Verify that bracing or support stanchions on wooden guardrail systems are free of cracks, splinters, and other deterioration which can weaken the structural integrity of the guardrail system.
- Install guardrail systems so that vertical bracing and uprights on wooden guardrail systems are spaced no more than 8 feet apart.
- The use of metal studs, or similar, for a guardrail system is prohibited to prevent cut and laceration hazards.
- Employees are not permitted to tie-off to cable guardrail systems unless approval is provided by an engineer.

Personal Fall Arrest Systems (PFAS)

As listed above, Nationwide has a zero-tolerance policy for fall protection. Nationwide requires contractor employees to utilize personal fall arrest (or other fall protection systems) when working above 4 feet or 6 feet, depending on if following 1910 or 1926 requirements based on work scope.

Nationwide requires contractors to meet the following requirements:

- The use of six-foot shock absorbing lanyards at Nationwide properties is not permitted. All contractor employees must use a self-retracting lifeline. Other devices such as restraint devices are acceptable in applicable scenarios and when used and installed properly.
- All anchorage points must be designed to support 5,000 pounds of force. If necessary, an engineer may be required to determine structural ratings of surfaces in the facility. Nationwide does not provide this information to contractors.
- Rigging devices are not permitted to be used in any fall protection systems at Nationwide.
- Steel erectors, connectors, and metal decking installers must utilize PFAS at all times when working over 6 feet. Nationwide does recognize fall protection exemptions for employees performing these operations.
- Unless permission has been provided by an engineer, lifting points on equipment are not permitted to be used as an anchorage point.
- Contractors who perform work on a leading edge, or in a location where there is cut or abrasion potential for the cable of the self-retracting lifeline, must use a connecting device that is leading edge rated.

Other Fall Protection Systems and Criteria:

Nationwide requires contractors to meet the following requirements:

- Nationwide does not permit the use of safety monitoring systems.
- Nationwide does not permit the use of a safety netting system as a primary means of fall protection.
- During construction operations on roofs, Nationwide permits the use of a warning line system, permitted that it is installed in accordance with 1926 Subpart M.
- Contractors whose scope of work falls under OSHA 1910 Subpart D, and is considered both temporary and infrequent, are permitted to follow Nationwide's policy for temporary and infrequent work on roofs, permitted that they receive training from Nationwide on the policy followed by Nationwide CRE technicians.
- All horizontal lifelines must be designed by an engineer and installed under the supervision of a qualified person.

Mobile Elevated Work Platforms (MEWP)

Mobile Elevated Work Platforms, commonly referred to as aerial lifts, scissor lifts, and other similar types of equipment, are used regularly in Nationwide properties. It is the responsibility of the Contractor to select and use MEWPs that are appropriate for the environment in which work will be performed.

Nationwide requires contractors to meet the following requirements:

- Fall protection is required in both aerial and scissor lift baskets. The preferred method of tie-off in MEWP is the use of a restraint tether. However, self-retracting lifelines are also permitted. Six-foot shock absorbing lanyards are not permitted on Nationwide properties.
- All operators of lifts must be trained in the safe use and operation of the equipment. Training records must be available upon request.
- Operators must perform an inspection of the lift prior to beginning operation of the lift that day.
- Inspections of lifts must be documented and available for review if requested.
- All aerial lifts must be equipped with anti-crush technology.
- All lifts must be equipped with an audible alarm that sounds while lifting and during movement.
- Homemade attachments or homemade devices are not permitted in lift baskets. Any attachment piece or accessory must be designed by a manufacturer and compatible with the lift in use.
- Both operator controls and ground control panels must be legible. Control panels which are missing labels, stickers, directional information, or items which assist towards the safe operation of the equipment must be prohibited from use until corrected.
- Access onto working surfaces from a lift must occur through an access gate. Climbing over guardrails for access to another surface is not permitted. 100% fall protection must be maintained when transitioning to another working surface or back into the lift basket.
- The floor of the lift baskets must be kept clean and in good repair to prevent tripping hazards. Best practices for housekeeping, including removing trash regularly, must be practiced by MEWP users.
- When performing hot work operations from a lift basket, the floor of the basket must be free of trash and other ordinary combustibles which could catch fire (paper, cardboard, etc.).

Excavation Safety

All applicable OSHA regulations will be followed when contractors are working in trenches and excavations. Specific OSHA requirements related to trenching and excavation work that Nationwide would like to remind contractors of include the following:

- Designating a competent person for trenching and excavation safety for the project.
- Permitting only trained personnel to work in a trench or excavation.
- Performing at least one visual and one manual inspection of the trench or excavation prior to entering to perform work.
- Documenting inspections of trenches and excavations. These inspections must be available for review if requested.

- Installing and using a protective system in accordance with OSHA requirements.

Nationwide requires contractors to meet the following requirements:

- Install and use a protective system once depths of 4 feet are reached.
- Contact a utility locator (ex: call 811) to locate and identify and mark utilities in the area where the trench or excavation will occur.
- Install fall protection when trenches reach depths of 6 feet or greater.
- Have tabulated data for trench boxes, shields, or shoring available for request.
- Follow all applicable requirements identified in this handbook for barricades, signage, and traffic control based on the work area.
- If work is performed on an active roadway on Nationwide property, physical barriers capable of stopping vehicular traffic (ex: concrete jersey wall barrier) must be installed around the worksite to prevent employees from being struck by vehicular traffic.
- All employees working in the area must wear ANSI Class 2 reflective vests if work is performed within 10 feet of an active roadway.

Fire Extinguishers

Appropriate fire extinguishers are located throughout Nationwide buildings and are available to contractors in an emergency, as needed. However, it is the responsibility of the contractor to provide fire extinguishers that are appropriate for the fire hazards in their designated work areas and jobsite(s). Moreover, it is expected that in so providing, the contractor's employees are fully trained in the use of fire extinguishers.

All fire extinguishing equipment brought onto Nationwide properties will be maintained, charged, and ready to use. Discharge of any fire extinguishing equipment for any reason will be reported to the Nationwide contact and Nationwide Corporate Security at the number provided for each property in the Important Telephone Numbers section above.

Nationwide requires fire extinguishers to be provided in the following scenarios, at minimum:

- All projects which meet Nationwide's definition of an "Area Closed for Construction,"
 - "Areas Closed for Construction" is defined and explained in the Barricades and Signage section of this Handbook.
- All projects which will result in impairment to the building's sprinkler or fire system,
- All projects or work areas where hot work activities will be performed,
- All other projects or work tasks which may create a risk of fire, and
- All other contractor work which the Nationwide contact requests a fire extinguisher be provided.

As part of fire extinguisher requirements, Nationwide has outlined the responsibility for who is to provide fire extinguishers for project or task specific scenarios:

- **“Areas Closed for Construction”** – The responsibility to provide fire extinguishers is assigned to the general contractor of the project, or the contractor with controlling responsibility of the project.
- **Impairment to the building’s sprinkler or fire system** – The responsibility to provide fire extinguishers is assigned to the contractor performing work that will impair the sprinkler or fire system.
 - In some scenarios, this work may occur in “Areas Closed for Construction.” In these situations, fire extinguishers provided by the general or controlling contractor will suffice.
- **Hot work activities** – The responsibility to provide fire extinguishers is assigned to the contractor(s) performing the hot work activities.
 - It is expected that each contractor performing hot work provide their own fire extinguishers.
- **Other projects or work tasks which create a risk of fire** - The responsibility to provide fire extinguishers is assigned to the contractor(s) performing the work tasks which create the risk of fire.
 - It is expected that each contractor performing these tasks provide their own fire extinguishers.

Nationwide requires contractors to meet the following requirements:

- When fire extinguishers are installed for projects or contractor work in “Areas Closed for Construction,” the extinguishers must be positioned as follows:
 - At each main entrance to the project; and
 - Installed additionally throughout, if necessary, so that travel distance between extinguishers does not exceed 100 feet
- All fire extinguishers which are installed in “Areas Closed for Construction” and when there is impairment to the building’s sprinkler or fire system must be placed on a stand approximately 3 feet off the ground.
- When fire extinguishers are installed for hot work scenarios, location and placement of the fire extinguishers must meet the requirements found in the Welding, Cutting, and Brazing (Hot Work) section.
- All fire extinguishers which are installed for “other projects or work tasks which create a risk of fire” must be suitable for the type of potential fire based on the hazard.
- The minimum sized fire extinguisher that contractors must supply when working in a Nationwide facility is 20 lbs.
- All fire extinguishers are to be easily accessible and not blocked.
- All fire extinguishers must have visible tags which provide date of annual and monthly inspections.

Machinery, Equipment, Tools

It is expected that the contractor will provide all the necessary equipment, tools, and machinery required for the work to be conducted. Should the contractor not have a particular tool or piece of equipment essential to the job, it is the contractor’s responsibility to secure it. At no time is the contractor authorized to use Nationwide machinery, equipment, or tools. Nationwide has some requirements which are specific to specific types of

machinery, equipment, and tools.

Nationwide requires contractors to meet the following:

- Contractors must ensure that machinery, equipment, and tools powered by gasoline or ones that are powder-actuated are not used inside Nationwide buildings unless prior permission is given by the Nationwide contact and safeguards are put in place to reduce exposure to building occupants.
- “Hot filling” to refuel equipment is not permitted. All equipment with fuel-powered motors must be turned off before refueling.
- All hand and power tools designed to be equipped with a guard must be used with a guard.
- Secondary handles on all power tools must be installed and used where designed by tool manufacturer.
- Pneumatically driven tools or equipment which are powered by air compressors must be equipped with anti-whip devices and a relief valve.
- Coupling devices and connection points for all pneumatic hoses must be equipped with safety latch pins. The use of homemade latch pins such as metal tie-wire, is not acceptable.

Hazardous Chemicals and Materials

According to OSHA, a material is considered hazardous if it is:

- Specifically listed in 29 CFR part 1910, Subpart Z, Toxic and Hazardous Substances.
- Assigned a threshold limit value (TLV) by the American Conference of Government Industrial Hygienists, Inc. (ACGIH); or
- Determined to be cancer causing, corrosive, toxic, an irritant, a sensitizer, or has damaging effects on specific body organs.

Wherever possible, Nationwide prefers that non-hazardous materials be used in its facilities. Where that is not possible (i.e., solvents, lacquers, sealers, propane, welding gases), the contractor is responsible for ensuring that such chemicals and materials are stored and used safely and in compliance OSHA and EPA requirements.

Nationwide requires contractors to do the following:

- Notify the Nationwide contact of any hazardous materials or chemicals that will be brought on-site while performing contracted work. This includes the materials or chemicals which may also be brought on-site by their subcontractors.
- Establishing an up-to-date list and inventory of each hazardous material or chemical which will be brought on-site for the project.
- Make available safety data sheets for all chemicals and materials on the up-to-date list for employees working on the project, and for Nationwide, if necessary.

- Coordinate with Nationwide when there is potential for a chemical exposure for any associate, visitor, public, or building occupant. The Nationwide contact will assist with notifying AWS and the affected business unit to determine an appropriate plan for coordinating and completing the work.

Container Labeling

Any container or secondary container used and maintained at a Nationwide facility will be appropriately labeled according to OSHA and EPA requirements.

Use

As the project progresses, and additional chemicals or materials are brought on-site, it is the responsibility of the contractor to update the existing chemical list and coordinate with Nationwide as necessary.

Storage

All materials or chemicals having potential safe storage requirements (i.e. paints, solvents, lacquers, sealers, liquid propane gas, welding gases, etc.) must be pre-approved for on-site storage for any duration of time by Nationwide **prior** to job start-up. It is expected that the contractor is knowledgeable with regard to hazardous chemical storage and is prepared to take into account the following:

- Flammable liquids in storage or being transferred must be stored in properly identified, approved-type containers or cabinets.
- Flammable liquids must be stored inside fire resistant safety flammable cabinet(s) in accordance with applicable NFPA and OSHA regulations.
- Adequate fire protection in work areas having flammable materials storage must be in place before storage commences and re-checks made at least daily.

Nationwide requires contractors to do the following:

- Ground all flammable storage cabinets at all times.
- Only store hazardous chemicals and materials on-site if permission has been provided by Nationwide.
- Provide appropriate secondary containment for hazardous or non-hazardous chemicals which could spill or release.
- Have available a spill kit, if necessary, if there is potential for a spill or release of a hazardous chemical.

Safety Data Sheets (SDSs)

Prior to the initiation of any project work, the contractor must verify that a SDS for each chemical listed on the site-specific chemical inventory is readily available on-site and kept throughout the duration of the project. When necessary or during inspections, Nationwide may review the SDS. Products containing asbestos and lead cannot be brought on-site and used for any project without prior approval from the Nationwide contact and AWS.

Previously used Material Safety Data Sheets are no longer permissible as part of a contractor's hazard communication program.

Spills, Releases, Cleanup, and Disposal

Regulatory agencies require containment and remediation of all spills of hazardous materials, including fuels and oil. Contractors who spill any such substances on Nationwide property are responsible for clean-up coordinated through Corporate Security, the Nationwide contact, Nationwide maintenance teams, and AWS.

As a reminder, regulatory agencies will require the following:

- Clean up of chemicals must only occur using methods considered acceptable by OSHA, the EPA, and what is listed on the SDS.
- Disposal of chemicals, and any waste that is generated, must only occur using methods considered acceptable by OSHA, the EPA, and what is listed on the SDS.

Nationwide requires contractors to do the following:

- Train their employees to perform all necessary clean up and disposal for any chemical spills and releases that may occur on the project.
- Report any spills immediately to the Nationwide contact and take immediate action to contain the spill.
- Provide the primary labor to perform the cleanup and disposal of a spill or release. Nationwide maintenance staff may provide assistance to the contractor, but the ultimate cleanup responsibility is with the contractor.
- Coordinate, with Nationwide, any subsequent tasks related to additional cleanup, remediation, disposal, and testing following a spill or release. Nationwide reserves the right to require testing by a third-party to determine a safe work environment at any point following a spill or release.
- Pay any costs associated with cleanup, remediation, disposal, and testing following a spill or release.
- Provide Nationwide with a notice or letter (or similar formal document) from a waste removal company or from the contractor that confirms wastes, spills, and releases which were removed from site were disposed of properly.

Ventilation/Indoor Air Quality

When work is conducted within Nationwide-occupied buildings, the contractor will work with Nationwide to furnish and maintain means to properly ventilate areas to the outside atmosphere, if needed. Venting requirements are based on proximity of associates, odors, and exposure potential, as well as applicable EPA and OSHA requirements. When there are concerns related to air quality or respirable exposures to chemicals during the course of contracted work, Nationwide has the right to request that a contractor perform industrial hygiene air monitoring from a third-party to obtain a negative exposure assessment.

Ladders

When using ladders, contractors are asked to follow the manufacturer's guidelines and applicable OSHA requirements. It is expected that the contractor will always use the appropriate ladder, specific to the task being performed.

Specific OSHA requirements related to ladder safety that Nationwide would like to remind contractors of include the following:

- Step, A-frame, or platform type ladders are not to be used for access to another working surface. Only straight ladders or extension ladders are permitted to be used for access to another working surface.
- Following manufacturer requirements, ladder users must refrain from working from the top step and the cap of the ladder.
- Adequate fall protection and guardrail systems must be established around ladder openings, ladderways, ladder hatches, ladder chutes, and in any other circumstance where a ladder is used to access a working level or platform six feet or higher above a lower level.
- Ladders must be free of any physical or structural defects. When these are identified, the ladders must be marked as not safe for use and be removed from the facility.

Nationwide requires contractors to meet the following requirements:

- Metal and wooden ladders are not permitted anywhere in Nationwide facilities. Fiberglass (non-conductive) ladders are the only approved type for use.
- Only straight ladders or extension ladders are permitted to be leaned against a vertical wall or surface to perform work. Step ladders must always be opened when used unless they are designed and manufactured to be used as a "Lean Safe" style ladder.
- All ladders must be equipped with legible capacity tags and applicable warning information. This assists in preventing ladders from being overloaded.
- All work requirements for barricades and signage which are part of this handbook must be used when performing overhead work from ladders.
- When work on a ladder places an employee above an existing guardrail system and the height of the ladder is the same distance or less away from the nearest guardrail, personal fall arrest must be worn while working on the ladder.
- Ladders shall not be left unattended in occupied buildings in locations accessible to associates, visitors, or the public.
- At the end of each shift, portable ladders used to access a roof, or elevated platform or surface outside of a Nationwide facility, must be removed and secured to prevent any potential unauthorized access onto a roof or elevated outdoor platform. For example, during a roofing project where exterior access is established to the roof using a portable ladder, the contractor must remove the ladder and secure it daily

to prevent any potential for an unauthorized individual from accessing the roof.

- For projects or contractor work scenarios which require the use of a ladder to reach a surface or level that is 20 feet or higher, contractors must build a stair tower, or use other means, to reach the elevated level. If other means are used, such as a MEWP, methods for immediate and emergency egress from the elevated level must be considered. Nationwide has the right to deny a contractor's proposed "other means" to access a surface other than a stair tower.

Mold

Nationwide requires contractors to meet the following requirements:

- To prevent mold, contractors are required to fully enclose a structure before installing insulation, drywall, or other materials that support mold growth. The enclosure should prevent rain or other moisture infiltration from creating water damage or affecting building materials. Temporary enclosures such as tarps or permanent measures such as installing windows, exterior walls, and roofs before the drywall and insulation may satisfy this requirement.
- Completed buildings, projects, and renovations at any Nationwide location should be designed to prevent moisture infiltration and mold growth.
- Whenever moisture intrusions or similar events occur which could damage building materials or create potential mold or health concerns, the contractor must report the situation to the Nationwide contact immediately.
- When moisture events occur, or there is a suspicion of mold on the project, it is the contractor's responsibility to pay for any requested or required testing, performed by a third party, if the event was the result of a failure of building protection, failure of building enclosure, or mechanical failures within the scope of work. This test must include an evaluation for airborne mold and mold spore particles.

Personal Protective Equipment (PPE)

The contractor is responsible for ensuring that their employees are equipped with, and trained in, the proper use of the appropriate personal protective equipment (PPE), including but not necessarily limited to:

- Hard hats,
- Safety glasses,
- Gloves,
- Boots,
- Hearing protection,
- Electrical and arc flash protection equipment,
- Fall protection equipment, and
- Respiratory protection equipment.

The Contractor is also responsible for ensuring the proper use of this equipment and that at least the minimum requirements for employee protection be provided by meeting 1910 Subpart I and 1926.28, OSHA's personal protective equipment requirements. This includes the requirement to perform PPE hazard assessments for tasks that employees perform.

Nationwide reserves the right to require additional PPE above and beyond OSHA requirements as it pertains to the work being performed by the contractor on company properties.

Eye and Face

The contractor is responsible for ensuring that each affected employee uses appropriate eye or face protection when exposed flying particles which could strike the eye or face, as well as dust, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

In addition to the general selection of the proper eyewear for the task, Nationwide requires contractors to:

- Wear a face shield whenever tasks have potential to create larger sized flying particles, or when tasks generate high levels of flying particles. Some tasks and tools which may be impacted by this include grinding, torch cutting, brazing, and welding.
- Wear safety glasses underneath face shields whenever a face shield is worn. The intent of the face shield is to protect the face from particulate matter and debris that is flying or has the potential to fly. Face shields do not protect the eyes from flying particles.
- Select and wear eye and face protection that is ANSI Z87+ rated only.
- Provide employees with over-shield safety glasses or prescription safety glasses when corrective glasses are worn. The use of side shields on lenses and frames which are not ANSI Z87+ rated do not create acceptable “safety glasses.”

Foot Protection

The contractor is responsible for ensuring that each affected employee uses protective footwear when working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole, and where such employee's feet are exposed to electrical hazards.

Employees must wear leather toed shoes or protective footwear when working in any area that is considered “closed for construction.”

Hand Protection

Appropriate protective gloves must be worn in all situations where the hands are potentially exposed to workplace hazards such as chemicals, infectious agents, cuts, lacerations, abrasions, punctures, burns, and harmful temperature extremes, unless the use of this equipment introduces greater hazards.

Head Protection

The contractor is responsible for ensuring that each affected employee uses appropriate head protection (i.e., protective helmets, hard hats) when working in areas where there is a possibility of a head injury due to impact with another surface, falling or flying objects, or from electrical shock and burns.

Hearing Protection

Wherever it is not feasible to reduce the noise levels or duration of exposures to those specified in Table D-2 of 1926.52 or Table G-16 of 1910.95, hearing protection devices must be provided by the contractor and used by contractor employees. With such use, the contractor may be required to demonstrate compliance with an effective hearing conservation program.

In scenarios where high noise levels will be generated by a contractor to perform work tasks for any extended period of time, Nationwide may request that the work be scheduled or coordinated to prevent noise exposures to other contractors, Nationwide associates, or visitors.

Respiratory Protection

When respiratory protection is required for the work being performed, the OSHA Respiratory Protection Standard requires the contractor to:

- Have a written respiratory protection plan,
- Provide their employees with all the necessary training,
- Provide fit-testing and medical clearances,
- Ensure that fit-testing is performed within the last year and that is performed on the type, style, size, make, and model of the respirator being worn, and
- Conduct exposure assessments for the chemical or containment to which the employees performing the task are exposed.

Nationwide requires contractors to meet the following requirements:

- Provide documentation of respiratory protection training, respirator fit test, and medical clearance if requested.
- Notify the Nationwide contact of tasks that they intend to perform using respiratory protection. Nationwide is often questioned by associates, technicians, or other contractors if there are safety and health risks they should be concerned with due to seeing others wearing respiratory protection. This assists with proactive safety communication.
- Coordinate with Nationwide, if necessary, any tasks which should be performed outside of normal business hours due to potential health risk to others.
- Keep record of any employee voluntarily wearing respiratory protection after they have been provided a copy of Appendix D of 1910.134. For this record to be valid, the employee's signature is required to indicate they have received a copy of Appendix D of 1910.134.
- For an employee's fit test to be considered valid, the fit test must have been performed on the specific type, size, make, and model of respirator within the last year. Additionally, any employee who wears a respirator for voluntary use must be provided with a copy of Appendix D of 1910.134 to review and sign. Record of the employee's signature for voluntary use must be available for review if requested.

Electrical PPE

It is up to the contractor performing work on or in proximity to electricity to wear the appropriate electrical PPE. This includes selecting the proper protective devices to protect against shock, electrocution, arc flash, and fire.

Equipment cabinets, electrical panels, switchgears, etc., within the Nationwide portfolio are outfitted with arc flash labels which identify voltage and incident energy. The provided voltage and incident energy will guide the contractor in the selection of proper electrical and arc flash PPE. It is the responsibility of the contractor to confirm hazard levels for scenarios involving work on or around equipment that does not have arc flash labels.

It is up to the contractor to ensure that equipment is tested at intervals required by the equipment manufacturer and NFPA 70E. It also up to the contractor that employees inspect the equipment prior to each use.

Other PPE

Any additional protective clothing or equipment, which may be required for the work being done at a Nationwide facility, will be provided by the contractor, including the training on proper use, care and maintenance, cleaning and inspections.

Nationwide reserves the right to stop work if proper PPE compliance is not being followed in accordance with OSHA requirements. Repeated observations of improper PPE usage will result in removal from the site.

Scaffolding

All applicable OSHA regulations and manufacturer requirements will be followed when contractors are working from, erecting, dismantling, and inspecting scaffolds. Specific OSHA requirements related to general scaffold usage that Nationwide would like to remind contractors of include the following:

- Designate a competent person for scaffolding as required by 1926 Subpart L.
- Perform an inspection of the scaffold prior to the start of each shift and after any event which may change the safe working condition of the scaffold.
- All individuals who are working on a scaffold, erecting a scaffold, or dismantling a scaffold must be trained in their duties as necessary.
- All scaffold platforms must be equipped with a standard guardrail system. This includes a top-rail 42" +/- 3" and a mid-rail that is 21" or half the height of the top-rail. Cross-bracing is acceptable to be used as a top-rail or mid-rail permitted that intersecting points are at appropriate heights listed in 1926 Subpart L.
- All open sides and ends of platforms must be equipped with guardrails.
- All platforms must be fully decked using scaffold grade lumber or approved planking or decking from the manufacturer.
- Scaffolds must be tied off to the building or structure at proper intervals (4:1 height to base ratio).

Nationwide requires contractors to meet the following requirements:

- Utilize fall protection when working from any type of scaffold at heights of six feet or higher above a walking working surface.
- Utilize fall protection while erecting or dismantling any type of scaffold at heights of six feet or higher above a walking working surface.
- Provide scaffold training records if requested.
- Provide the name of the competent person for scaffold responsibilities if requested.

Scaffold Competent Person

In accordance with 1926 Subpart L, the individual designated as the competent person must be able to perform the following duties:

- Be readily available at the worksite to answer any questions related to the scaffold;
- Perform scaffold inspections and document the inspection as required;
- Stop work when scaffold conditions change;
- Evaluate other safety concerns related to scaffold work (fall protection, proximity to electrical lines, etc.);
- Calculate scaffold capacity and allowable deflection; and
- Supervise any alterations to the scaffold system.

Supported Scaffolds and Scaffold Construction

Typical supported scaffolds in the construction industry may include scaffold types such as tube and coupler, fabricated framed, and system scaffolds, among others. For specific information pertaining to mobile scaffold types, see the “Mobile Scaffolds” section below. Nationwide does not permit the use of ladder jack or pump jack scaffolds.

Nationwide requires contractors to meet the following requirements:

- Meet all requirements for scaffold construction in 1926 Subpart L.
- Utilize guardrails, frames, scaffold components, and scaffold hardware (pins, bolts, etc.) only that fits the type of scaffold being used. Nationwide does not permit the use of tie-wire or other means to secure guardrails or other scaffold components.
- Utilize overhead protection or falling object protection (debris netting, canopies, etc.) when necessary.

The need for and type of overhead protection will vary by project and will be coordinated with the Nationwide contact during pre-project discussions.

- Install a green scaffold inspection tag onto each scaffold that has been inspected by a competent person that day. The inspection tag must be marked with the date of the inspection and initialed by the individual who performed the inspection.

Mobile Scaffolds

Some common types of mobile scaffolds include baker, perry, or rolling type scaffolds. Mobile scaffolds are to be used in accordance with manufacturer requirements, 29 CFR 1926.452(w), and other applicable regulations within 1926 Subpart L.

Specific OSHA requirements related to mobile scaffold usage that Nationwide would like to remind contractors of include the following:

- Mobile scaffolds must be braced properly in a way that will prevent racking. This may include the use of traditional cross-bracing, horizontal bracing, frame to platform bracing, diagonal bracing, or combination thereof. Bracing must be installed in the manner listed by the manufacturer.
- The casters and wheels of mobile scaffolds must be locked when in use to prevent accidental displacement.
- Mobile scaffolds must only be used on ground conditions which are determined to be firm and stable (concrete, asphalt, etc.).
- Mobile scaffolds must only be used on surfaces within 3 degrees of level. If manufacturers have more stringent requirements, it is expected that the contractor follows manufacturer's requirements for safe use of a mobile scaffold on sloped surfaces.
- Power systems used to propel mobile scaffolds shall be designed for such use. Forklifts, trucks, similar motor vehicles or add-on motors shall not be used to propel scaffolds unless the scaffold is designed for such propulsion systems.

Nationwide requires contractors to meet the following requirements:

- Mobile scaffolds must be equipped with guardrails at heights of six feet or more above a lower level. If it is not feasible to install guardrails, employees using the scaffold must wear personal fall arrest at heights six feet or more above a lower level.
- Utilize guardrails, frames, scaffold components, and scaffold hardware (pins, bolts, etc.) only that fits the type of scaffold being used. Nationwide does not permit the use of tie-wire or other means to secure guardrails or other scaffold components.
- Employees must have clear access to the scaffold platform. Use of manufactured gates are required so to prevent scaffold users from climbing over or through guardrails during access and egress.
- On rolling type scaffolds with fabricated ladder access built into the frames, ladder rungs must be aligned

on all scaffold frames.

- No riding is permitted on mobile scaffolds unless the scaffold is designed with a powered system to propel the scaffold. The scaffold must not be ridden if it is not within 3 degrees of level.
- Planking must only be placed on sections of the scaffold frame on which a scaffold platform was designed to be installed. It is not permissible to place scaffold planking on the ladder rungs of the fabricated ladders on rolling type scaffolds.
- All platforms must be manufactured for the purpose of use with the scaffold type. Homemade platforms are not permitted for use on any scaffold type system in Nationwide properties.
- Each mobile scaffold system must be marked with a sticker indicates the working capacity of the scaffold.
- No material is to be stored on ladder rungs, frames, or bracing of mobile scaffolds. If contractors choose to use a mobile scaffold system to store material, the material must only be placed on the scaffold platform. The scaffold must not be overloaded. It is acceptable to use scaffolds for this purpose, permitted the scaffold is marked and tagged to indicate that is only for material storage purposes.
- Nationwide does not permit the use of a mobile scaffold >10 feet in height. If heights of 10 feet are reached, the contractor must use a MEWP or build a supported scaffold.

Scaffold Access

Employees must have safe and clear access to scaffold platforms, regardless of scaffold type. Access to a scaffold by climbing on, over, or through guardrails or frames is not permitted.

Specific OSHA requirements related to scaffold access that Nationwide would like to remind contractors of include the following:

- When scaffold platforms are more than two feet above or below a point of access, a direct means of access (portable ladders, hook-on ladders, attachable ladders, etc.) shall be used.
- Direct access to or from another surface onto a scaffold platform shall be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.
- All ladders or stair towers used to access scaffolds must meet all applicable OSHA requirements for ladders found in this handbook.

Nationwide requires contractors to meet the following requirements:

- Scaffolds which are 20 feet or taller require access stairs or ramps instead of ladders.

Suspended Scaffolds

All work from a suspended or swing stage scaffold will be coordinated with Nationwide. Contractors are required to follow all applicable regulations found in 1926 Subpart L that are related to suspended scaffolds.

Silica

It is the responsibility of the contractor to ensure that exposures to respirable crystalline silica is mitigated during all tasks associated with contracted work.

Specific OSHA requirements related to silica that Nationwide would like to remind contractors of include the following:

- Contractors must follow Table 1 of 1926.1153 for the selection of engineering controls, administrative practices, and proper respiratory protection.
- Obtain industrial hygiene air monitoring or objective data for work practices that are not listed on Table 1 of 1926.1153.
- Obtain industrial hygiene air monitoring or objective data for work practices that are performed differently than what is listed on Table 1 of 1926.1153.
- Develop a silica exposure control plan for all work practices performed at the Nationwide facility which will create silica exposures. The exposure control plan must cover each of the following, at minimum:
 - List of all tasks which the Contractor performs that could produce respirable crystalline silica;
 - Engineering controls which are to be utilized to mitigate exposures to respirable crystalline silica;
 - List of all employees who are fit-tested to wear respiratory protection when required based on exposures in accordance with Table 1 of 1926.1153 or air monitoring data; and
 - Identification of competent person who will be assigned to the project.
- Train all employees on the hazards of silica, usage of appropriate engineering controls, safe work practices around silica, and other required topics within 1926.1153.
- Follow all respiratory protection requirements and utilize respiratory protection as required based on Table 1 of 1926.1153.
- Cleanup of environments with dusts that contain silica are not permitted to occur using compressed air or dry sweeping methods. Wet sweeping, HEPA vacuums, or other acceptable methods must be utilized.

Nationwide requires contractors to meet the following requirements:

- Notify the Nationwide contact of any products which contain silica or silica products. Safety data sheets for products containing silica must be available for review if requested.
- Notify the Nationwide contact of any work which will create silica exposures. This work shall be performed in a space not accessible to general associates or visitors (i.e. mechanical floor, construction enclosed barrier walls, etc.). Work which is unable to be performed in these locations must be coordinated with the Nationwide contact.
- Provide Nationwide with a copy of the silica exposure control plan if requested.
- Provide Nationwide with any silica training records if requested.
- Provide any industrial hygiene air monitoring data proving exposure to respirable crystalline silica does

not exceed 25 µg/m³ for an 8-hour time-weighted average (TWA) if requested.

- Follow all respiratory protection requirements listed in the Personal Protective Equipment section of this handbook.
- The contractor must incur the cost necessary to perform any required industrial hygiene air monitoring that is required by Nationwide if there are scenarios when work practices are performed that are different than or not listed on Table 1 of 1926.1153.
- Due to the inherent hazards of silica exposure, Nationwide has the right to shut down work immediately if there are potential concerns related to improper work practices that create silica exposures to contractor employees, Nationwide associates, visitors, or the public.

Storm Drains and Sanitary Sewers

No hazardous, toxic liquid or solid material(s) can be discharged to the storm drain and/or sanitary sewer system. Contractors performing planned work that will create potential runoffs (i.e., water blasting, wet method surface removal) must ensure proper protection of the drainage system and adequate runoff collection procedures.

Care must be taken to locate chemical storage and transfer areas to prevent the possibility of accidental spillage of chemical products into storm drains and/or sanitary sewers.

Welding, Cutting, and Brazing (Hot Work)

This section outlines requirements for safe use of gas cylinders and Nationwide hot work requirements. Fire prevention and protection measures must be taken whenever welding, torch cutting, spark producing, or flame heating operations are planned. Whenever hot work is performed, contractors are required to take steps to mitigate potential for property damage and injuries due to fires. Nationwide does not permit hot work to occur on Nationwide property unless prior approval is provided through a hot work permit issued by a Nationwide Permit Authorizing Individual (PAI). This process, and other work requirements, are outlined in this section.

General Requirements

Nationwide requires contractors to meet the following requirements:

- It is the responsibility of the contractor to prepare their work area for hot work activities (ex: removing flammable materials, using fire blankets, etc.). Nationwide can provide assistance in preparing an area if it is Nationwide material which requires relocation, or if other building resources are necessary to prepare an area for hot work.
- It is the responsibility of the contractor to provide their employees with the proper PPE to perform hot work related activities, specific to the type of hot work being performed. This includes the use of the correct welding helmet, welding shields, or tinted face shields related to welding or cutting work.
- Nationwide requires that safety glasses be worn under welding shields and face shields at all times when welding or cutting is performed.

- All arc welding must have a separate and adequate ground, pulled from the machine to work locations in all operating areas.
- All arcs are to be shielded in operating areas by the use of barriers such as welding curtains, screens, and enclosures.
- Special considerations must be included in any safety planning or work preparation when overhead hot work activities are occurring to consider potential fire hazards from dropping sparks and visibility to welding arcs. This would potentially include devices and practices such as spark catchers, fire blankets used to block visibility to light, barricades, ground spotters, etc.
- Adequate ventilation must be provided at all times when hot work tasks are performed.
- Fire extinguishers provided for hot work activities must be a minimum of 20 pounds. These extinguishers must be separate from existing Nationwide building fire extinguishers or other extinguishers provided on a project in scenarios identified in the Fire Extinguishers section of this document. Additional fire extinguisher requirements related to hot work are found below.
- Fire extinguishers used specifically for hot work must be within 25 feet of the hot work activity being performed.
- Nationwide requires that all flammables or combustibles within 35 feet of the hot work area are either removed or covered with an approved fire blanket. When fire blankets are used, Nationwide reserves the right to ask the contractor for new fire blankets if damage is present such as holes or degradation that would render the fire blankets ineffective.
- During any hot work operations, a fire watch is required at all times during the work and for a minimum of 60-minutes after the completion of the hot work activity. Additional detail regarding the fire watch's role is provided below.
- A fire monitor is required after completion of the fire watch's duties for an additional two hours. Additional detail regarding the role of the fire monitor is provided below.
- No welding is to be performed on stainless steel products which could create exposures to hexavalent chromium unless coordinated with Nationwide. Where possible, welding of stainless steel products and materials will occur outside of Nationwide property. If welding stainless steel products or materials is unable to be performed outside of Nationwide property, Nationwide will request that a negative exposure assessment from a previous project with similar working conditions is provided. Otherwise, Nationwide will request that the contractor perform air monitoring on the welding operation to ensure a negative exposure assessment. This cost must be paid by the contractor.
- No hot work is permitted to occur in any scenarios where work on active sprinkler systems is ongoing or work tasks will require the sprinkler to be isolated. In these scenarios, it is the responsibility of the contractor or Nationwide, whoever is managing the project or affected contractors, to coordinate and schedule work tasks accordingly.

Gas Cylinder Requirements

Nationwide identified requirements above for the transport, storage, and use of compressed gas cylinders in the “Compressed Gas Cylinders” section of this handbook. Those same requirements are applicable to gas cylinders in scenarios involving hot work, welding, cutting, and brazing.

Additional specific OSHA requirements related to using compressed gas cylinders in hot work scenarios that Nationwide would like to remind contractors of include the following:

- Flashback arrestors must be provided on all oxygen and fuel-gas cylinders.
- Hoses and regulators attached to cylinders which have not had gas drawn from them within a 24-hour period must be removed from the cylinder and the cylinder must be capped.
- Any compressed gas cylinder which contains material which is flammable, combustible, explosive, or a fuel-gas, must not be stored within 20 feet of ignition or heat sources.
- Oxygen and fuel-gas cylinders must be separated by a minimum of 20 feet or a fire-rated wall at least five feet in height and rated for at least one half-hour.

Nationwide requires contractors to meet the following requirements:

- Cylinders and hoses must not be placed where they are exposed to sparks and slag from a burning operation.
- Hoses are not to be placed over sharps or other surfaces which could result in cuts or damage, creating the potential for gas leaks.
- Additional requirements related to storage and transport of gas cylinders can be found in the “Compressed Gas Cylinders” section above.

Permit Authorizing Individual (PAI)

The Permit Authorizing Individual (PAI) is a Nationwide technician, trained in Nationwide’s hot work program, that is responsible for assisting in facilitating safe hot work activities. The PAI is the individual who either approves or denies the contractor’s request for a hot work permit.

The PAI has the following additional responsibilities:

- It is not the responsibility of the PAI to make an area “safe” to perform hot work for a contractor. The contractor holds the ultimate responsibility to prepare their work area for hot work in accordance with Nationwide requirements. It is also the responsibility of the contractor to have the proper equipment to perform hot work and stop work immediately when work conditions change.
- It is the right and responsibility of Nationwide’s PAI to deny any request for a hot work permit based on unsafe conditions in the work area.
- Nationwide’s PAI will deny all requests for hot work tasks on gas lines, tanks, or other pieces of

equipment which may contain or may have previously contained flammable gases or liquids. In these scenarios, additional coordination and pre-planning must occur.

Hot Work Operators

Nationwide refers to the hot work operator as the individual who will perform the hot work activity. This individual must be trained to perform hot work and use the equipment necessary to perform the applicable activities. It is also the responsibility of the hot work operator to do the following:

- Assist crew with prepping an area to perform hot work prior to contacting Nationwide for a hot work permit.
- Refrain from beginning any hot work operations until a hot work permit has been provided by a Nationwide PAI.
- Stop hot work operations if unsafe conditions develop and notify the Nationwide contact or the PAI for reassessment of the situation.
- Only perform hot work tasks using equipment and tools on which they are trained to use.

Fire Watches

Contractors are required to have a competent and trained employee assigned as a fire watch when performing any work that is considered “hot work.” It is the responsibility of the contractor to adequately staff the project to ensure that an appropriate number of fire watches are available. Nationwide will not provide a fire watch for a contractor.

Nationwide requires that the fire watch must be aware of the following conditions:

- The facility in which the work is occurring and the procedures for sounding an alarm in the event of a fire;
- Inherent hazards of the work site and of the hot work effects which could adversely impact maintaining safe conditions (direction of sparks, high heat producing tasks, etc.);
- Other work which may be occurring in the general area;
- Location of common travel paths of other contractors, technicians, vendors, visitors, or associates;
- Location of combustible materials in building construction which are within 35 ft of the hot work area;
- Wall or floor openings within a 35 ft radius which may allow for sparks, slag, or other effects of hot work to enter other areas and spaces;
- Combustible materials more than 35 ft away but are easily ignited by sparks; and
- Combustible materials adjacent to the opposite side of partitions, walls, ceilings, or roofs and are likely to be ignited.

In addition to the overall knowledge of the conditions stated above, the fire watch has the responsibility to:

- Perform an assessment of the area, with the hot work operator, prior to any hot work permit request and make any site or area preparations as needed;
- Install appropriate barricades and signage in areas where there is potential for foot or vehicle traffic to pass through the area;
- Stop work when conditions change;
- Use fire extinguisher to fight initial stage fire;
- Remain at the work area at all times, and only leave for lunch, breaks, or other reasons, if replaced by another trained fire watch;
- Continue to fire watch for one hour at the conclusion of hot work activity;
- Contact appropriate Nationwide personnel at the conclusion of one hour fire watch; and
- Return the hot work permit to the Nationwide PAI at the conclusion of their fire watch duties.

Nationwide requires contractors to be aware of the following:

- The fire watch must have no other duties other than serving as the fire watch. Contractors must be aware of this requirement when staffing the project.
- Scenarios may exist where the contractor's work requires them to have multiple fire watches for their work. This may occur in scenarios where there are two work areas, but a single fire watch would be unable to effectively monitor in both areas simultaneously; or, when a second work area is visible, but is too far away for a fire watch to manage his/her duties as fire watch. Other scenarios including work performed on multiple floors, or sparks or slag dropping to a lower level, may require additional fire watches. It is up to the Nationwide PAI to make the determination that additional fire watches are necessary prior to issuing the hot work permit. If additional fire watches are not available, Nationwide will not issue the hot work permit.
- In addition to additional fire watches for specific work scenarios, the PAI may require that contractor supply additional fire extinguishers based on the location of where work is occurring. As a general requirement, the number of fire extinguishers must match the number of fire watches.
- The contractor must ensure that the individuals serving in the role of the fire watch have been informed of the facility emergency procedures and the use of fire extinguishing equipment.

Fire Monitors

- As part of Nationwide's hot work program, a "fire monitor" is required for two additional hours after the completion of the fire watch's duties. Nationwide will internally provide a fire monitor with the assistance of Nationwide security unless otherwise noted.
- The three-hour fire monitor is coordinated through Nationwide Corporate Security. The fire monitor will

provide two spot-checks of the area while performing rounds throughout the building. This inspection will confirm that there is no evidence of fire or burning at the hot work location. The first spot-check will occur approximately 60-minutes after the conclusion of the fire watch's duties. The second spot-check will occur approximately 60-minutes later.

- Scenarios where the contractor will be responsible for the fire monitor include situations where the hot work was performed on a roof, elevated platform, or in a general construction environment that is not safe for untrained personnel to enter. Nationwide security personnel are not trained to work at heights, on roofs, climb ladders, or work in or around construction environments. Additional scenarios may be determined during the project.

Hot Work Permits

Prior to commencing hot work operations, the Contractor must notify the Nationwide contact and obtain a Hot Work Permit as well as follow all applicable OSHA regulations. In most cases, the PAI will be a member of Nationwide's Building Operations team.

The following steps list the process for requesting and obtaining a hot work permit, as well as the completion of the permit and hot work activities.

1. The hot work operator and fire watch are to inspect the hot work area. Any pre-task steps such as moving or covering flammables and combustibles within 35 feet, cleaning the area, etc., must occur prior to requesting permit.
2. The hot work operator is to determine the fire watch for the task and arrange for a fire monitor with Nationwide CRE.
3. The hot work operator requests a hot work permit from the Permit Authorizing Individual (PAI).
4. The PAI performs a secondary evaluation of the hot work area and verifies that the hot work operator has performed all pre-task steps.
5. The PAI confirms that a fire watch is assigned to the hot work area and remains for 1 hour after the hot work is completed. The PAI will make the determination if additional fire watch is required.
6. The PAI will notify Corporate Security of the location and nature of the hot work being performed. The PAI will also notify Corporate Security if fire systems are taken offline or are otherwise impaired.
7. The PAI either approves or denies the hot work request. If denied, the PAI will provide the hot work operator with the necessary information to get approval. If approved, the PAI will complete and authorize the hot work permit with the hot work operator. Hot work operations can then begin.
8. The permit is posted in the area.
9. If there is a shift change that will occur prior to the permit closeout process, it is the responsibility of the PAI to communicate the appropriate contact for the hot work operator and fire watch.
10. Hot work operator returns the permit to the PAI, or other designated individual, at the completion of hot

work and one hour fire watch.

11. The time hot work and fire watch finished will be noted on the hot work permit and signed by the PAI. The PAI, or other designated individual, will communicate the time of fire watch completion to corporate security.
12. Corporate security will serve as the fire monitor each hour, for the first two hours, following completion of the fire watch's duties.
13. Corporate security will contact the appropriate personnel (PAI or other designee) that the fire monitoring has been completed.
14. Hot work permit is closed.

Trash, Waste, and Scrap Disposal

All trash, waste, and scrap generated from a job-site must be disposed of each day in proper containers supplied by the contractor in accordance with federal, state, local, OSHA and/or EPA requirements, and all Nationwide requirements. Contractors are not permitted to dispose of any type of waste (non-hazardous, hazardous or job-related construction materials of any kind) in the general trash, sewers, sinks, waterways (including retention ponds), or compactors located at any Nationwide facility.

Regarding specific types of waste, Nationwide requires the following:

- Fluorescent lamps are to be removed from fixtures with care and placed in special cartons and disposed of properly. Do not dispose of lamps in regular trash containers.
- Asbestos-containing materials removed under abatement contracts may be considered hazardous waste. It is the responsibility of the general and abatement contractors to dispose of them properly and coordinate through the Nationwide contact.
- Lead-based paint removed from structures is considered hazardous waste and must be disposed of properly and coordinated through the Nationwide contact.
- It is the responsibility of the Contractors to dispose of any oil known or suspected to be contaminated with polychlorinated biphenyls (PCB's). Do not dispose of oil in regular trash containers.
- Contractors are required to furnish Nationwide with documentation of proper disposal whenever the contract calls for disposal of hazardous waste, including spills.

Hazardous Waste

Nationwide requires contractors to meet the following requirements:

- The Contractor must provide Nationwide with a list of actual and potential hazardous wastes to be generated during the project.
- Disposal of any generated hazardous waste by the Contractor as part of its work is the responsibility of

the contactor.

- Temporary on-site storage of hazardous waste is permitted only when coordinated and approved through the Nationwide contact.
- When temporary on-site storage occurs, the contractor must ensure the following:
 - Proper labeling of containers,
 - Adequate secondary containment,
 - Segregation of incompatible material, and
 - Regular inspection of the storage areas.
- Develop and maintain an emergency plan in the event that a spill occurs on the property.
- Have necessary spill equipment available to contain and clean up any spill from a hazardous waste container on the property.
- Contractors must ensure that their hazardous waste is properly identified, stored, transported and disposed of in accordance with all applicable local, state, and federal laws.

Appendix A: Tenant Improvement Project Safety Requirements and Expectations

Tenant Improvement Project Safety Requirements and Expectations

To minimize Nationwide business interruption and prevent Nationwide associates from being exposed to hazardous work conditions due to any construction, renovation, or demolition work, Nationwide asks that the safety conditions outlined in this document are met by any property manager's contractor working in areas occupied by Nationwide associates.

It is **not** the responsibility of Nationwide to direct contractors working for a building owner on their day-to-day activities, including safety requirements. However, it is expected that a contractor's work does not create safety risk for Nationwide associates.

General Conditions

1. It is expected that all contractors follow the property manager's safety requirements, in addition to all applicable federal, state, and local safety and health regulations (OSHA, EPA, etc.), to mitigate safety risks to Nationwide associates, or visitors, during the construction project.
2. Any construction tasks which will require work activity to take place outside of a barricaded construction area and inside of a Nationwide occupied workspace must be coordinated and approved by Nationwide.
3. No material storage, trash, tools, or equipment is to be stored in areas accessible to Nationwide associates.
4. It is the responsibility of the contractor to provide an adequate supply of trash receptacles, emptied regularly, for all employees working on the project.
5. Storage of materials, equipment, etc., is not permitted to block access to fire extinguishing equipment or impact any building egress routes.
6. No work is to occur on any electrical system or equipment in Nationwide workspace while energized.

Barriers and Signage

1. Temporary wall barriers in the form of Edge Guard walls are to be installed in all work and material storage areas in a way that prevents access for Nationwide associates. Caution or danger tape **are not** suitable or acceptable forms of barriers.
2. A plan for barricading work areas in open office areas will be developed with Nationwide prior to the start of work.
3. Appropriate construction signage must be installed on all barriers to communicate an active work zone and construction area. Specific verbiage and signage must be coordinated with, and agreed to, by Nationwide.
4. When work is performed that has potential to fall through a floor to a lower level, all protective measures to prevent material from falling through must be taken. Specifically, if the work is performed over an occupied floor with Nationwide associates, this work must be conducted off-hours or must be coordinated with Nationwide and occupants on the floor below.

Hazardous Chemicals and Environmental Exposures

1. Nationwide is to be made aware of any work which will disturb asbestos containing material, or materials containing lead. All remediation must occur following OSHA and EPA requirements, at a minimum. Nationwide must be provided adequate notice to vacate a space for this work to occur, if necessary.
2. The contractor must notify Nationwide for coordination if work involving a hazardous chemical will be brought to the site which could disrupt Nationwide associates (ex: product or chemical with a strong odor).
3. Nationwide will select all paint to be used on construction projects. Unless specific needs arise for a different product, Nationwide typically chooses to use water-based paint with low levels of volatile organic compounds (VOCs).
4. Contractors are to notify Nationwide of, and clean up, any chemical spills that occur in a Nationwide space during construction.
5. The Contractor will work with Nationwide and the property manager to furnish and maintain means to properly ventilate areas, if needed. When there are concerns related to air quality or respirable exposures for associates to chemicals during contracted work, Nationwide has the right to request that a contractor perform industrial hygiene air monitoring from a third-party to obtain a negative exposure assessment.

Appendix B: Contractor Safe Work Practices for Data, Technology, and Low-Voltage Projects

Contractor Safe Work Practices for Data, Technology, and Low-Voltage Projects

It is Nationwide’s goal to ensure successful project completion without injury. For this to occur, Nationwide asks that contractors performing work related to data, technology, and low-voltage electrical equipment follow the outlined workflow process, understand their contracted scope of work, recognize training limitations, and understand the general conditions and risks associated with their work.

Work Scope and Work Limitations

Contractors hired to perform data, technology, and low-voltage work are expected to only perform the following, or similar tasks, based on level of training and contracted scope of work:

- Electrical work on systems or equipment <50 volts;
- Low voltage wiring (<50 volts);
- AV cabling work;
- Digital signage installations;
- Conference room technology installations;
- Installations of wireless access points; and
- Installations and maintenance of cameras.

Based on risk level, level of employee training, and contracted scope of work, Nationwide requires data, technology, and low-voltage contractors to refrain from performing any of the following:

- Installing equipment or wiring >50 volts;
- Locating and isolating main power feeds, disconnects, and circuit breakers (>50 volts) in panels, electrical rooms, mechanical floors, or other areas;
- Performing any electrical demolition work; and
- Installing, replacing, and relocating outlets or panels.

Training Requirements

1. Due to the potential to encounter exposed wiring and energized parts during the contracted scope of work, all employees performing data, technology, and low-voltage work are required to have electrical safety training if they have potential to work in proximity to voltages, energized or de-energized, >50.
2. In some cases, employees may be required to perform lockout/tagout (LOTO) to safely perform work on or near electrical systems. For this reason, Nationwide requires these employees to also have LOTO training.

Work Considerations and Resources

1. Nationwide has an electrical shop within Corporate Real Estate’s (CRE) facilities maintenance team that is available to assist with identifying disconnects, isolating electrical energy, and locking out power. The electrical shop is also available to assist with any potential questions related to the project.
2. Nationwide has on-site electrical contractors to assist with high voltage (>50 volts) electrical work and larger scope or higher risk electrical activities (ex: demo work, relocating outlets, etc.).
3. Nationwide staff are available to assist in communicating and coordinating with on-site electrical contractors or the Nationwide CRE electrical shop for project assistance as needed.
4. Even if electricity can be properly isolated and de-energized from a single switch-circuit, lockout tagout is still required by OSHA regulations and Nationwide policy.
5. Verifying zero-energy may require the use of appropriate electrical personal protective equipment (PPE).
6. In some scenarios, de-energizing equipment may cause business interruption that requires work to be performed after hours or on a weekend. Avoiding business interruption **is not** a suitable reason to perform work on any energized electrical systems.

7. While the scope of projects and tasks may be considered low-voltage work, it is critical to recognize that work in ceilings, walls, floors, and other areas may expose employees to electricity in excess of 50 volts. When unusual conditions are identified, **stop work immediately**.

Project Workflow and Completion

All contractors are to follow the steps listed below for safe completion of data, technology, and low-voltage work projects:

1. Verify that all employees involved in the project are trained in electrical safety and LOTO prior to proceeding with work.
2. Prior to starting work, the contractor's project team are to evaluate the work area and scope of work, and ask the following questions:
 - a. Will work occur in ceilings, walls, or other areas where unknown electrical hazards may be present (exposed wiring, uncovered electrical junction boxes, etc.)?
 - b. Is the location of the main disconnect or electrical feed unknown?
 - c. Will de-energizing an electrical disconnect require access to a panel, electrical room, mechanical floor, or another area under access control?
 - d. Will de-energizing an electrical disconnect create business interruptions?
 - e. Does the project require electrical work or installations on any equipment or systems >50 volts?
 - f. Are other tasks necessary for work completion (demolition, outlet installation, etc.)?
3. If the answer to any of the above questions is "yes," do not proceed with work and communicate with your Nationwide contact for further instruction. If the answer to all of the above questions is "no," proceed with planned work.
 - a. When necessary, Nationwide will coordinate with the CRE electrical shop or an on-site electrical contractor to provide assistance.
4. Unless confirmation is provided by Nationwide that a switch circuit will de-energize applicable equipment, call your Nationwide contact to seek assistance with finding the correct electrical disconnect in an upstream electrical panel.
 - a. **NOTE:** It is expected that in most cases, the contractor will require support from Nationwide to locate and isolate the proper electrical disconnect.
5. Once equipment is de-energized, install appropriate LOTO devices to prevent unexpected energization during the scope of work.
6. After completing LOTO, verify zero-energy using appropriate electrical tools and PPE in accordance with NFPA 70E.
 - a. **NOTE:** If you do not have the appropriate electrical PPE or tools to verify zero-voltage, contact your Nationwide project representative and he/she will coordinate with the CRE electrical shop or an on-site electrical contractor.
7. Once zero-energy is confirmed, work can proceed without the use of electrical PPE (if no other known electrical hazards are present).
8. Stop work immediately when changes occur that create a safety concern. Additionally, if unplanned electrical hazards are identified in the scope of the project, the contractor is to stop work and report them to their Nationwide project representative.
9. If testing and troubleshooting on live equipment is required during the project, contractors are still expected to follow safe electrical work practices, including the use of PPE when necessary. After completing testing and troubleshooting, proper LOTO must be re-applied to the equipment to prevent unexpected energization.