

**Piazza, Inc.**  
FKA  
**Piazza Brothers, Inc.**  
**Corporate Safety &  
Health Program**

**CONSTRUCTION OF COMMUNITY SCHOOL 35**

**121 McLean Avenue  
Yonkers, NY 10705**

## SITE SPECIFIC INFORMATION

### CONTRACT 1 - GENERAL CONSTRUCTION

JOB LOCATION  
121 McLean Ave  
YONKERS, NY 10705

NEAREST MEDICAL FACILITY:  
ST. JOHNS RIVERSIDE HOSPITAL  
2 PARK AVE  
YONKERS NY

**"911"**

YONKERS 2ND PRECINCT POLICE  
441 CENTRAL PARK AVE  
YONKERS, NY

**"911"**

YONKERS FIRE DEPT.  
2187 CENTRAL PARK AVE  
YONKERS, NY

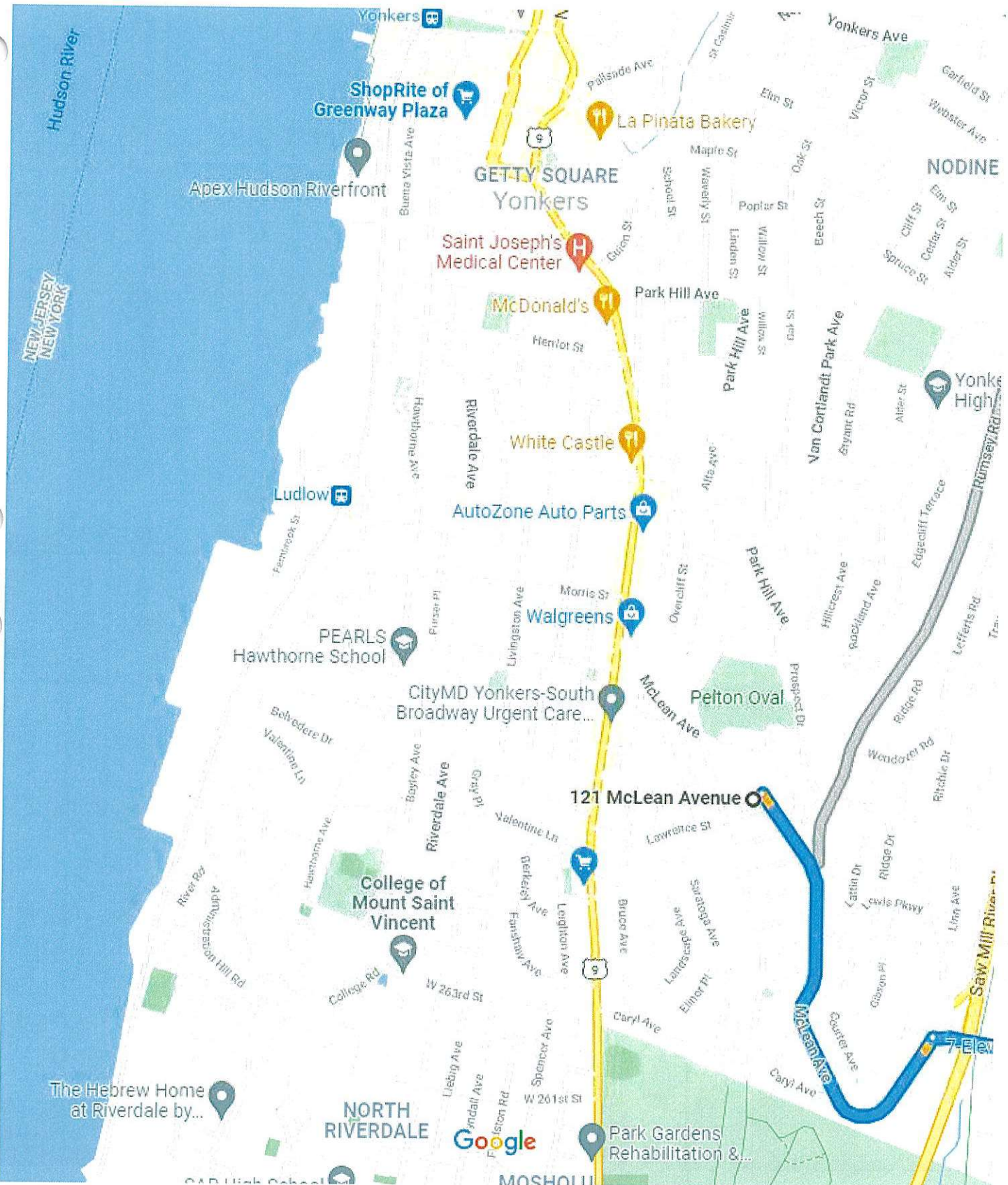
**"911"**




121 McLean Avenue, Yonkers, NY to nearest police to 121 mclean ave yonkers ny

Drive 2.4 miles, 8 min

2nd Precinct



121 McLean Ave  
Yonkers, NY 10705

- ↑ 1. Head southeast on McLean Ave toward Lawrence St 0.8 mi
  - ↪ 2. Turn right to stay on McLean Ave 0.4 mi
  - ↶ 3. Turn left onto Midland Ave 0.2 mi
  - ↪ 4. Turn right onto Wendover Rd 0.3 mi
  - ↶ 5. Turn left onto St Johns Ave 0.5 mi
  - ↪ 6. Turn right onto Borchers Ave 0.2 mi
  - ↪ 7. Turn right onto Central Park Ave 102 ft
-  Destination will be on the right

Yonkers Police Department - 2nd Precinct  
441 Central Park Ave, Yonkers, NY 10704

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.



121 McLean Avenue, Yonkers, NY to St. Johns Riverside Hospital ParkCare Pavilion


Drive 2.4 miles, 9 min

HOSPITAL





121 McLean Ave  
Yonkers, NY 10705

- ↑ 1. Head northwest on McLean Ave toward Radford St  
0.1 mi
- ↪ 2. Turn right onto Van Cortlandt Park Ave  
0.3 mi
- ↶ 3. Turn left onto Park Hill Ave  
0.6 mi
- ↪ 4. Turn right onto Waverly St  
0.3 mi
- ↪ 5. Turn right onto Nepperhan Ave  
0.6 mi
- ↶ 6. Turn left onto Ashburton Ave  
0.3 mi
- ↪ 7. Turn right onto Park Ave  
 Destination will be on the right  
322 ft



St. Johns Riverside Hospital ParkCare Pavilion  
2 Park Ave, Yonkers, NY 10703

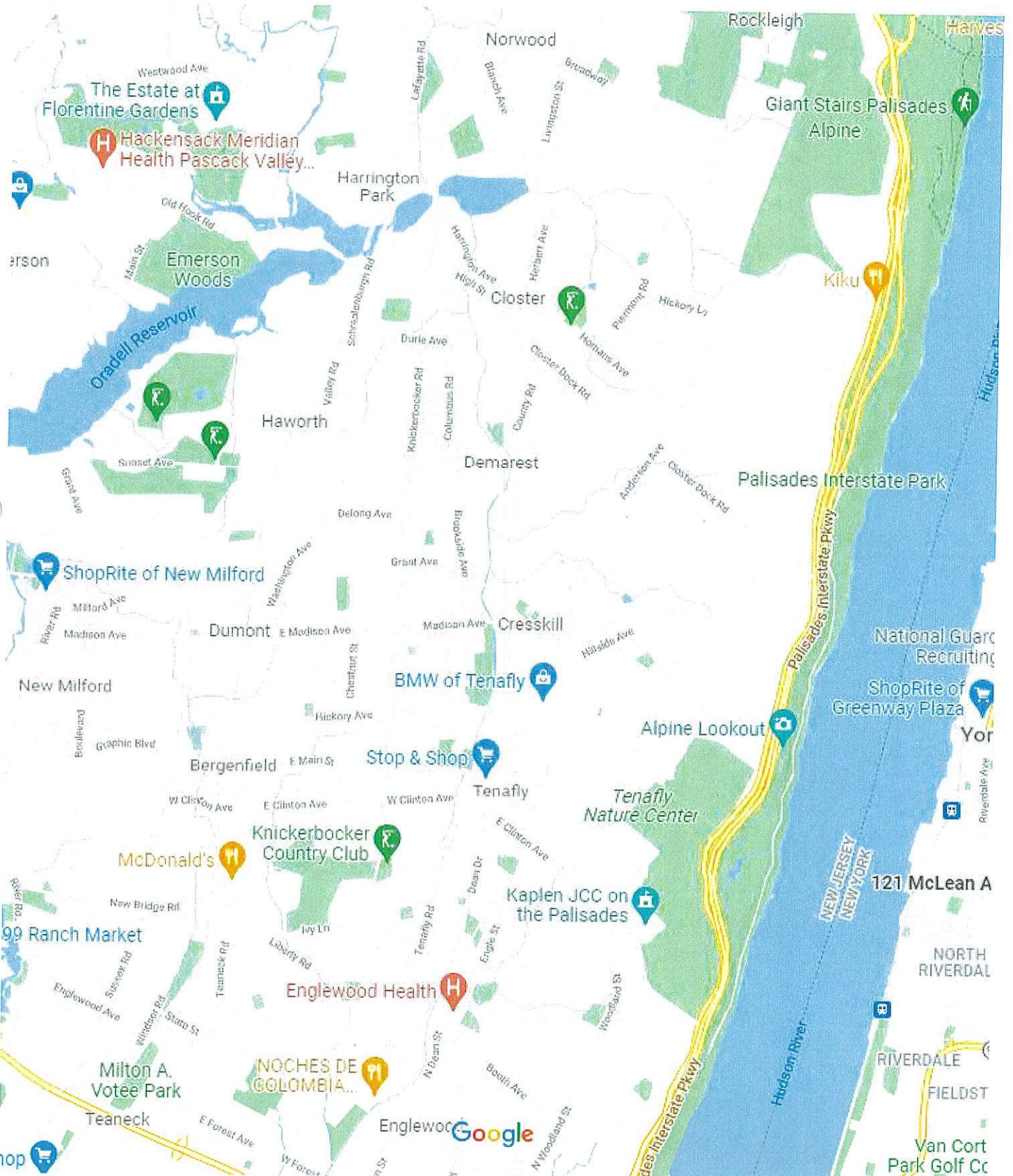
These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.



121 McLean Avenue, Yonkers, NY to Yonkers Fire Department - Station # 14 E314/L70

Drive 6.8 miles, 15 min

FIRE DEPT.



121 McLean Ave  
Yonkers, NY 10705

**Get on Saw Mill Pkwy S/Saw Mill River Pkwy S from Rumsey Rd**

- 5 min (1.6 mi)
- ↑ 1. Head southeast on McLean Ave toward Lawrence St
- 0.1 mi
- ↶ 2. Turn left onto Park Hill Ave
- 0.2 mi
- ↗ 3. Slight right onto Rumsey Rd
- 1.1 mi
- ⤵ 4. Keep left at the fork, follow signs for Cross County Pkwy/Saw Mill Pkwy and merge onto Saw Mill Pkwy S/Saw Mill River Pkwy S
- 0.1 mi

**Take Cross County Pkwy and Central Park Ave to Roxbury Dr**

- 11 min (5.1 mi)
- ⤴ 5. Merge onto Saw Mill Pkwy S/Saw Mill River Pkwy S
- 479 ft
- ↘ 6. Take exit 4 for Cross County Pkwy toward Hutchinson Pkwy/Whitestone Br
- 0.5 mi
- ↑ 7. Continue onto Cross County Pkwy
- 1.1 mi
- ↘ 8. Take exit 4N toward Central Park Ave/I-87 N/Albany
- 0.2 mi
- ⤴ 9. Merge onto Central Park Ave
- 1.5 mi
- ↶ 10. Keep left to stay on Central Park Ave
- 1.8 mi

**Drive to your destination**

- 54 s (374 ft)
- ↶ 11. Turn left onto Roxbury Dr
- 161 ft
- ↶ 12. Turn left
- 📍 Destination will be on the right
- 213 ft



**Yonkers Fire Department - Station # 14 E314/L70**  
2187 Central Park Ave, Yonkers, NY 10710

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

## **Foreword**

This document, Piazza's Corporate Safety Program, was prepared with the assistance of Lovell Safety Management Company LLC and The GBC Safety and Construction Services Inc., a wholly-owned subsidiary of the General Building Contractors of New York State (GBC), the New York State Building Chapter of the Associated General Contractors of America (AGC). Many AGC and GBC safety documents were used as references in the production of this document.

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## **1. Policy & Commitment to Safety**

To our Employees, Clients, and Vendors:

Our company, Piazza, Inc. fka Piazza Brothers Inc., is guided by our safety and health policy. This policy is based upon the necessity to eliminate injuries, occupational illnesses and property damage, as well as to protect the public whenever and wherever the public comes into contact with the company's work.

All management and supervisory personnel are charged with the responsibility for planning safety into each work task and for preventing the occurrence of incidents and/or controlling conditions/actions that could lead to occupational injuries or illnesses. The ultimate success of a safety and health program depends upon the full cooperation of each individual employee. Management at PIAZZA is prepared to take the necessary actions to see that safety and health rules and practices are enforced, and to ensure that effective training programs are employed to the best advantage.

Safety will never be sacrificed for production. Safety is an integral part of quality control, cost reduction and job efficiency. All supervisors will be held accountable for the safety performance of the employees under their supervision.

Our goal is the total elimination of accidents from our operations, allowing each employee to return home safely to his or her family.

Sincerely,

John Piazza  
Vice President

1 A. COVID 19- Pandemic Safety and Health Policy

# COVID19 – Pandemic Safety and Health Policy & Reopening Safety Plan

Version 2

Name of Business: Piazza Inc fka Piazza Brothers Inc

## **Background**

This document was developed based on available information at the time of its development from OSHA, CDC, and NYS Guidelines for reopening. Information regarding the Covid-19 pandemic continues to evolve as medical research and government bodies get a better understanding of the disease. We will continue to check for updates from local, state, and federal government agencies like NYSDOH, OSHA, and the CDC for updated information.

**For guidance Piazza Inc fka Piazza Brothers Inc reviewed the following:**

**“Interim Guidance For Manufacturing Activities During The Covid-19 Public Health Emergency”**

<https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/ManufacturingMasterGuidance.pdf>

## **POLICY STATEMENT**

The personal safety and health of each employee of our organization is of primary importance. We believe that our employees are our most important assets and that their safety at the worksite is our greatest responsibility. The prevention of occupationally induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity whenever necessary.

Our goals are to reduce employee injury, prevent potential hazards through consistent safety management, and ensure compliance with relevant safety and health standards. Through the attainment of these goals, our company will remain competitive and viable in our industry.

Management will procure the necessary resources to execute the objectives of our company's safety and health program. We will hold managers, supervisors and employees accountable for meeting their safety responsibilities. Everyone in our organization will need to ensure that this health and safety plan is implemented consistently for the good of our company and the public at large. A copy of this safety and health plan will be available at all our work location for employees to review. It will be made available to OSHA, the New York State Department of Health (DOH) or local health or safety authorities as required.

## **BACKGROUND INFORMATION**

In January 2020 the World Health Organization (WHO) declared the outbreak of a new coronavirus disease in Hubei Province, China to be a Public Health Emergency of international Concern. WHO stated there is a high risk of the 2019 coronavirus disease (COVID-19) spreading to other countries around the world. WHO and public health authorities around the world are taking action to contain the COVID-19 outbreak. However, long term success cannot be taken for granted. All sections of our society – including businesses and employers – must play a role if we are to stop the spread of this disease.

## HOW COVID-19 SPREADS

When someone who has COVID-19 coughs or exhales they release droplets of infected fluid. Most of these droplets fall on nearby surfaces and objects - such as desks, tables or telephones. People could catch COVID-19 by touching contaminated surfaces or objects – and then touching their eyes, nose or mouth. If they are standing within one meter (3 feet) of a person with COVID-19 they can catch it by breathing in droplets coughed out or exhaled. Most persons infected with COVID-19 experience mild symptoms and recover. However, some go on to experience more serious illness and may require hospital care. Risk of serious illness rises with age: people over 40 seem to be more vulnerable than those under 40. People with weakened immune systems and people with conditions such as diabetes, heart and lung disease are also more vulnerable to serious illness.

Piazza Inc fka Piazza Brothers Inc will focus on how best to decrease the spread of COVID-19 and lower the impact on our workplace. This will include activities to reduce transmission among employees and maintain a healthy business operation and work environment. We will provide personal protective equipment, health screening, employee training and appropriate cleaning and disinfecting.

## REDUCING TRANSMISSION AMONG EMPLOYEES

### Actively encourage sick employees to stay home:

- Employees who have symptoms (i.e., fever, cough, or shortness of breath) should notify their supervisor and stay home.
- Employees suffering from Covid-19 symptoms should follow CDC-recommended steps. Employees should not return to work until the criteria to discontinue home isolation are met, in consultation with healthcare providers and state and local health departments.
- Employees who are well but who have a sick family member at home with COVID-19 should notify their supervisor and follow CDC recommended precautions.
- Piazza Inc fka Piazza Brothers Inc will promote regular remote working across our company when feasible for all office and management staff. Daily coordination meetings, safety meeting, etc. of more than 2 people should adhere to the recommendations of the CDC. Where possible utilize video conferencing, phone conferences, or emails to communicate

### Identify where and how workers might be exposed to COVID-19 and work to prevent the spread:

- Surfaces (e.g. handrails, doorknobs, elevators, desks and tables) and objects (e.g. telephones, keyboards, hand tools, building products) need to be wiped with appropriate disinfectant regularly. Contamination on surfaces touched by employees and other personnel is one of the main ways that COVID-19 spreads. Regular disinfection schedules will be established for common surfaces and objects dictated by jobsite conditions.
- We will enforce regular and thorough handwashing by employees, contractors, subcontractors, visitors and customers. If hand washing is not feasible, hand sanitizer dispensers (with at least 60% alcohol) will be made available in prominent locations around the workplace. We will make sure these dispensers are regularly refilled.
- We will display posters promoting handwashing in workplace.
- We will require proper hygiene in the workplace by providing tissues and no-touch disposal receptacles. As well as direct employees to employ coughing and sneezing etiquette (e.g. cough or sneeze in your elbow and turn away) in the workplace.
- Where social distancing (6 feet or 2 meters) can not be achieved, the use of PPE, face masks will be strictly enforced.
- Avoid handshaking, or any other form of physical contact



## **Maintain Healthy Business Operations**

Piazza Inc fka Piazza Brothers Inc's top management will be responsible for COVID-19 issues and their impact at the workplace. We will employ the following items to address health business operation:

- Sick leave and other Human Resource policies that are flexible and consistent with public health guidance as well as the most recent federal guidelines. We will ensure that all employees are aware of and understand these policies.

## **Piazza Inc fka Piazza Brothers Inc will practice established social distancing recommendations outlined by local, state and federal authorities/agencies.**

Social distancing means avoiding large gatherings and maintaining distance (**approximately 6 feet or 2 meters**) from others when possible. Piazza Inc fka Piazza Brothers Inc will employ the following as needed:

- Flexible worksites (e.g., remote work)
- Flexible work hours (e.g., staggered shifts, breaks and lunches)
- Increasing physical space between employees at the worksite
- Increasing physical space between employees and customers (e.g., drive through, partitions)
- Implementing flexible meeting and travel options (e.g., postpone non-essential meetings or events). Conduct meetings on-line, if possible.
- Implemented a "no handshake or hugs" policy
- No sharing of phones, computers, tools or other supplies, without proper disinfection.
- Downsizing operations
- Delivering services remotely (e.g. phone, video, or web)
- Delivering products through curbside pick-up or delivery.
- Establish a system for noncontact deliveries to our facility. If a visitor or delivery staff need to enter, they must go through a health screening and wear the appropriate PPE.

## **What PPE is Needed for Covid-19?**

The CDC recommends that everyone wear a surgical mask or a self-made facemask (bandana, scarf) in any public setting. Surgical masks and self-made masks from cloth offer less protection for the wearer than N95 masks. However, they are considered effective to stop the spread of airborne pathogens from the wearer to other people and that is the goal at this time.

- a. Anyone entering the facility/job site must wear a surgical mask, bandana or any cloth self-made mask. The masks should be worn over your nose and mouth to help prevent spreading the virus.
- b. It is recommended that health screeners, security guards and cleaning crews on site wear latex/nitrile gloves and N95 masks.
- c. Health screeners should also wear a face shield.

## **Health screening**

A person with Covid-19 symptoms could potentially infect more people on site. Therefore, health screening needs to be performed prior to anyone entering the facility or work site. This includes employees, visitors, vendors and delivery person.

Anyone who does not pass the health screening cannot enter the facility and should be advised to return home and be evaluated by a health care professional and get tested. Currently a 14-day self-quarantine is recommended.

The Health Screening consists of a simple health questionnaire and the taking of the individuals' temperature. This does not have to be performed by a health care professional; however, it is recommended that it be a member of management.

The individuals' temperature needs to be taken using a Non-Contact Infra-red thermometer with relatively high accuracy. The temperature must be no more than 100.4 degrees Fahrenheit.

The health screener should ask the individual the following questions. They should maintain a log of all individuals who are screened, and which are not permitted to enter the facility.

1. Do you have fever in excess of 100.4 degrees Fahrenheit?
2. Have you been in contact (with 6 feet) with a confirmed or suspected Covid-19 individual?
3. Do you currently have, or have you experienced within the past 14 days symptoms of a respiratory illness such a cough, shortness of breath or difficulty breathing?
4. Have you had chills, repeated shaking with chills, muscle pain, headache, sore throat and a loss of taste or smell?
5. Have you traveled outside the U.S. in the last 14 days?

Individuals with a **NO response** to all the above questions should be given a sticker, or wrist band, confirming screening for the day and allowed to proceed into the workplace. Stickers should be placed where the employee can take their own sticker without contacting any other employee.

Workers with a **Yes response** to any of the above questions will be asked to leave the site and return home. It is currently recommended that they self-quarantine for 14 days. They should also follow up with their health care provider and get tested prior to reentry.

### **Cleaning and Disinfecting**

Current evidence suggests that Covid-19 may remain viable for hours to days on surfaces based on the variety of materials. Cleaning of common and general surfaces followed by disinfection is the best practice to aid in the prevention of Covid-19, as well as other viral respiratory illnesses. A cleaning and disinfection log detailing the date, time and scope of cleaning performed will be maintained.

The first step in ensuring that your facility/work site is adequately sanitized is proper cleaning. Cleaning with soap and water reduces the number of germs, dirt and impurities on the surface. Disinfecting kills germs on surfaces. Be sure to always wear disposable gloves and face masks to clean and disinfect any surfaces.

- a. Clean surfaces using soap and water, then use disinfectant.
- b. Routinely cleaning of frequently touched surfaces. More frequent cleaning and disinfection may be required based on level of use.
- c. High touch surfaces include tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, sinks, etc.

Using an EPA-registered household disinfectant is recommended. Follow the instructions on the label to ensure safe and effective use of the product. Many products recommend keeping the surface wet for a period (see product label).

Diluted household bleach solutions may also be used if appropriate for the surface.

- a. Check the label to see if your bleach is intended for disinfection, and ensure the product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening may not be suitable for disinfection.
- b. Unexpired household bleach will be effective against coronaviruses when properly diluted. Follow manufacturer's instructions for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser. Leave the solution on the surface for at least 1 minute.
- c. To make a bleach solution, mix 5 tablespoons (1/3rd cup) bleach per gallon of water OR 4 teaspoons bleach per quart of water.
- d. Bleach solutions will be effective for disinfection up to 24 hours.
- e. Alcohol solutions with at least 70% alcohol may also be used.
- f. Precautions such as wearing gloves and making sure you have good ventilation during use of the product is essential.

## **Employee Training**

**All Company Name employees will have ongoing training that reinforces the following:**

- Understanding the symptoms of Covid-19 and how it spreads.
- What to do when you feel sick or have come into contact with a person that tested positive Covid-19.
- Current Piazza Inc fka Piazza Brothers Inc sick leave policies.
- Cleaning your hands.
- Practicing social distancing.
- Avoid touching your face.
- Practicing good hygiene.
- Coughing and sneezing etiquette.
- Proper care and use of personal protective equipment (respirators, gloves, eye, and face protection)

As situations continue to evolve, additional changes to this policy may be implemented. Any changes will be promptly communicated to our employees.

## **Tracing and Tracking (NYS Requirement)**

Piazza Inc fka Piazza Brothers Inc will notify the local health department and NYSDOH immediately upon being informed of any positive COVID-19 test result by a worker at the site.

- In the case of a worker or visitor testing positive, communication with the local health department will be established to trace all contacts in the workplace, and the local health department will subsequently be notified of all workers and visitors who entered the site dating back to 48 hours before the specific worker began experiencing COVID-19 symptoms or tested positive, whichever is earlier. Confidentiality will be maintained as required by federal and state law and regulations.
- The local health department may, under their legal authority, implement monitoring and movement
- restrictions of infected or exposed persons including home isolation or quarantine.
- Employees who are alerted that they have come into close or proximate contact with a person with COVID-19, and have been alerted via tracing, tracking or other mechanism, are required to self report to their employer at the time of alert and shall not be permitted to remain or return to the work site until cleared by a healthcare professional.

## **Attestation – NYS Requirement**

**NYS requires that you attest to the fact that you will comply with NYS guideline. Below is the link to do this.**

<https://forms.ny.gov/s3/ny-forward-affirmation>

## **Attachments**

1. Health Screening Log/Entry Log
2. Contractor Interactions – For the purpose of tracing
3. Employee Training Log
4. Cleaning and Disinfecting Log
5. Available Signage

**Attachment 1  
Employee Health Screening Log  
Piazza Inc fka Piazza Brothers Inc**

**Screener Name:**

**Date:**

	<b>Name</b>	<b>Contact Number</b>	<b>Answered all Questions No</b>	<b>Answered any Question Yes</b>	<b>Permitted to Enter (Y or N)</b>
<b>1</b>					
<b>2</b>					
<b>3</b>					
<b>4</b>					
<b>5</b>					
<b>6</b>					
<b>7</b>					
<b>8</b>					
<b>9</b>					
<b>10</b>					

**ANY INFORMATION OBTAINED DURING THE SCREENING PROCESS WILL BE HANDLED WITH ABSOLUTE CONFIDENTIALITY AND WILL ONLY BE USED TO ALLOW OR DISALLOW EMPLOYEES FROM ENTRY INTO THE WORKPLACE.**

**Attachment 1**  
**Health Screening Log for Visitors**  
**Piazza Inc fka Piazza Brothers Inc**

**Screener Name:**

**Date:**

	<b>Name</b>	<b>Contact Number</b>	<b>Answered all Questions No</b>	<b>Answered any Question Yes</b>	<b>Permitted to Enter (Y or N)</b>
<b>1</b>					
<b>2</b>					
<b>3</b>					
<b>4</b>					
<b>5</b>					
<b>6</b>					
<b>7</b>					
<b>8</b>					
<b>9</b>					
<b>10</b>					

**ANY INFORMATION OBTAINED DURING THE SCREENING PROCESS WILL BE HANDLED WITH ABSOLUTE CONFIDENTIALITY AND WILL ONLY BE USED TO ALLOW OR DISALLOW EMPLOYEES FROM ENTRY INTO THE WORKPLACE.**



**Attachment 3**  
**Employee Training Log for Covid-19**  
**Piazza Inc fka Piazza Brothers Inc**

Course Name: COVID 19 Training

Course Instructor: \_\_\_\_\_

Date of Course: \_\_\_\_\_

Location: \_\_\_\_\_

	<u>Name(print)</u>	<u>Sign</u>
1.		
2.		
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22.		
23.		
24.		

**Attachment 3 (2)**  
**Employee Training Log for Covid-19**  
**Piazza Inc fka Piazza Brothers Inc**

Course Instructor: \_\_\_\_\_

Date of Course: \_\_\_\_\_

Location: \_\_\_\_\_

	<u>Name(print)</u>	<u>Proof of Attendance</u>
1.		
2.		
3.		
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24.		





## Attachment 5 – Workplace Signs Available for Covid-19

Below you can find links to signs that can be placed throughout your facility/work site:

**Prevent the spread of COVID-19 if you are sick...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/sick-with-2019-nCoV-fact-sheet.pdf>

**Stop the Spread of Germs...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/stop-the-spread-of-germs-11x17-en.pdf>

**Please read before entering...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/Please-Read.pdf>

**Visitors**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/Vistor-Signage-Template.pdf>

**Wash your hands...**

<https://www.cdc.gov/handwashing/pdf/wash-your-hands-poster-english-508.pdf>

**Cleaning and Disinfecting Your Facility**

<https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf>

**Coronavirus (COVID-19): Ten Steps All Workplaces Can Take to Reduce Risk of Exposure to Coronavirus Poster** **NEW**

(OSHA 4014 - 2020) (**Arabic:** [PDF](#))

(OSHA 4009 - 2020) (**Brazilian**

**Portuguese:** [PDF](#))

(OSHA 4005 - 2020) (**Chinese Simplified:** [PDF](#))

(OSHA 4004 - 2020) (**Chinese**

**Traditional:** [PDF](#))

(OSHA 3994 - 2020) (**English:** [PDF](#))

(OSHA 4007 - 2020) (**French Creole:** [PDF](#))

(OSHA 4013 - 2020) (**Hmong:** [PDF](#))

(OSHA 4011 - 2020) (**Korean:** [PDF](#))

(OSHA 4010 - 2020) (**Polish:** [PDF](#))

(OSHA 4012 - 2020) (**Russian:** [PDF](#))

(OSHA 3995 - 2020) (**Spanish:** [PDF](#))

(OSHA 4006 - 2020) (**Tagalog:** [PDF](#))

(OSHA 4008 - 2020) (**Vietnamese:** [PDF](#))

**OSHA Poster - English**

<https://www.osha.gov/Publications/OSHA3994.pdf>

**We also recommend that a sign be placed in the cab of trucks reminding workers to:**

- a. Disinfect Cab and cargo door handles, seat belts, steering wheels, mirrors, gear shifts, control knobs and buttons, latches and handles.
- b. Limit the number of passengers in a vehicle.

## COVID-19 Guidance for the Construction Workforce

OSHA is committed to protecting the health and safety of America's workers and workplaces during these unprecedented times. The agency will be issuing a series of industry-specific alerts designed to keep workers safe.

When working in the construction industry, the following tips can help reduce the risk of exposure to the coronavirus:

- Encourage workers to stay home if they are sick.
- Allow workers to wear masks over their nose and mouth to prevent them from spreading the virus.
- Continue to use other normal control measures, including personal protective equipment (PPE), necessary to protect workers from other job hazards associated with construction activities.
- Advise workers to avoid physical contact with others and direct employees/contractors/visitors to increase personal space to at least six feet, where possible. Where work trailers are used, all workers should maintain social distancing while inside the trailers.
- Train workers how to properly put on, use/wear, and take off protective clothing and equipment.
- Encourage respiratory etiquette, including covering coughs and sneezes.
- Promote personal hygiene. If workers do not have immediate access to soap and water for handwashing, provide alcohol-based hand rubs containing at least 60 percent alcohol.
- Use Environmental Protection Agency-approved cleaning chemicals from [List N](#) or that have label claims against the coronavirus.
- To the extent tools or equipment must be shared, provide and instruct workers to use alcohol-based wipes to clean tools before and after use. When cleaning tools and equipment, workers should consult manufacturer recommendations for proper cleaning techniques and restrictions.
- Keep in-person meetings (including toolbox talks and safety meetings) as short as possible, limit the number of workers in attendance, and use social distancing practices.
- Clean and disinfect portable jobsite toilets regularly. Hand sanitizer dispensers should be filled regularly. Frequently-touched items (i.e., door pulls and toilet seats) should be disinfected.
- Encourage workers to report any safety and health concerns.

For more information, visit [www.osha.gov/coronavirus](http://www.osha.gov/coronavirus) or call 1-800-321-OSHA (6742).

*OSHA issues alerts to draw attention to worker safety and health issues and solutions.*



# COVID-19

## Reopening During a Pandemic

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“The information contained in this guidance document is provided as a guide only, exclusively for the promotion of illness and injury prevention. It is not a comprehensive review of all actions which may be taken to minimize damage or loss. As such, Lovell Safety Management, Co., LLC makes no representation or warranties express, implied or statutory, regarding the suitability of this material for your use in developing comprehensive illness injury prevention and safety programs. Consult with your legal advisor concerning matters involving legal issues. Lovell Safety Management Co., LLC assumes no responsibilities and expressly disclaims liability for any injuries including death or any loss damage or expense arising out of or in any way related to the use of this guide.”

The Lovell Safety Management safety department believes that the personal safety and health of Group member employees is of primary importance. We believe that your employees are your most important assets and that their safety at the worksite is both of our greatest responsibility. The prevention of occupationally induced injuries and illnesses is of such consequence that it should be given precedence over operating productivity whenever necessary. During this unprecedented crisis employee safety and health must be handled with the same commitment.

According to the US Center for Disease Control and Prevention (CDC), the Covid-19 virus is highly contagious. It is spread mainly from person-to-person contact including between people who are in close contact with one another (within about six feet) and through respiratory droplets produced when an infected person coughs or sneezes.

There is currently no vaccine to prevent COVID-19. The best way to prevent illness is to avoid being exposed to the virus.

### **Plan of Action for Re Opening**

The Lovell Safety Department has prepared a series of Safety Alerts that can help guide you in the eventual reopening of your business. These Safety Alerts are based on information from federal, state and municipal organizations, as well as OSHA. They are accurate at the time of publication; however, things change daily, therefore, we recommend continuously checking with public resources. We also know that each organization is unique, and these guidelines should be adjusted to meet your specific needs.

### **Management Responsibilities**

Each organization should establish a “Pandemic Response Team” to evaluate, setup and coordinate plans, protocols, resources and communications. The team should, at a minimum, include executive staff, operations, project management and labor. This team should develop different plans for office employees, shop employees and field/worksite workers. It needs to be stressed that front line supervision **MUST** enforce these policies and that they will be held responsible for their enforcement.

At least 1 week prior to reopening, your Team should start preparing and training other members of management/supervision. Start on-line meetings and discuss new protocols, responsibilities and daily checklists, PPE and preventative actions, available resources and contact details of Covid-19 responders. When your employees do return and work is begun again, continuous communication with managers, supervisors and staff is essential.

## Levels of Risk – According to OSHA

**Very High Exposure Risk** - Direct health care professionals

**High Exposure:** Ancillary/support staff in health care

**Medium Exposure:** Routine, close (less than 6 feet) exposure to general public and/or co-workers.

**Lower Exposure:** Limited exposure to the public.

### OSHA Recordkeeping

Employers other than those in the healthcare industry, emergency response organizations (e.g., emergency medical, firefighting, and law enforcement services), and correctional institutions may have difficulty making determinations about whether workers who contracted COVID-19 did so due to exposures at work. In light of those difficulties, OSHA is exercising its enforcement discretion. Therefore, OSHA will not enforce the recording of Covid-19 cases on the OSHA 300 log for workers other than those listed in the above occupations. However, OSHA will enforce the recording of those cases where there is objective evidence that a COVID-19 case may be work-related. This could include, for example, a number of cases developing among workers who work closely together without an alternative explanation.

### Resources

**OSHA** <https://www.osha.gov/SLTC/covid-19/>

**Center for Disease Control (CDC)** <https://www.cdc.gov/coronavirus/2019-nCoV/index.html>

**World Health Organization (WHO)** <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>

## THE CDC RECOMMENDS

- Avoid touching your eyes, nose, and mouth.
- Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Clean and disinfect frequently touched objects and surfaces using a regular household cleaning spray or wipe.
- Wash your hands often with soap and water for at least 20 seconds, especially after going to the bathroom; before eating; and after blowing your nose, coughing, or sneezing. If soap and water are not readily available, use an alcohol-based hand sanitizer with at least 60% alcohol.

## Reopening During a Pandemic

### Step 1-Organizational Needs Prior to Reopening

#### **Policies**

An effective written infection prevention plan should be in place prior to reopening and supervisory staff should be familiar with its requirements. The policy should address health screening, social distancing, hand washing, disinfecting and personal protective equipment. It should also address:

- a. Specific management responsibilities
- b. Visitor(s) and vendor(s)
- c. Deliveries

#### **Identify the Management Pandemic Response Team**

Identify members of management/supervision that will be responsible for developing and implementing all phases of reopening and working during this crisis. They need to be trained on what needs to be done, how it will be enforced, and how to train employees to comply.

#### **Signage**

Appropriate signage is needed at locations throughout the facility and/or job site. See the LSM safety alert: Step 7 – Signage, for examples of signs that can be used.

#### **Hand Washing**

Appropriate hand washing facilities should be identified and/or acquired. If hand washing facilities are not feasible, hand sanitizer with a minimum of 60% alcohol must be provided.

#### **Health Screening**

Determine the most appropriate method to provide health screenings prior to entry to facility/worksites.

#### **Supplies**

A system should be in place for the procurement and disbursement of supplies needed to protect against COVID-19. Employees need to know where and how to obtain them. These supplies include:

- a. Personal Protective Equipment
- b. Disinfectants
- c. Hand Sanitizers
- d. Personal Protective Equipment
- e. Thermometers

#### **Social Distancing**

Prepare your facility/work site to ensure employees can visually see how to maintain the needed social distancing.



Current evidence suggests that Covid-19 may remain viable for hours to days on surfaces based on the variety of materials. Cleaning of common and general surfaces followed by disinfection is the best practice to aid in the prevention of Covid-19, as well as other viral respiratory illnesses.

### **Cleaning**

The first step in ensuring that your facility/work site is adequately sanitized is proper cleaning. Cleaning with soap and water reduces the number of germs, dirt and impurities on the surface. Disinfecting kills germs on surfaces. Be sure to always wear disposable gloves and face masks to clean and disinfect any surfaces.

- a. Clean surfaces using soap and water, then use disinfectant.
- b. Routinely cleaning of frequently touched surfaces. More frequent cleaning and disinfection may be required based on level of use.
- c. High touch surfaces include tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, sinks, etc.

### **Disinfecting**

Using an EPA-registered household disinfectant is recommended. Follow the instructions on the label to ensure safe and effective use of the product. Many products recommend keeping the surface wet for a period (see product label). Diluted household bleach solutions may also be used if appropriate for the surface.

- a. Check the label to see if your bleach is intended for disinfection, and ensure the product is not past its expiration date. Some bleaches, such as those designed for safe use on colored clothing or for whitening may not be suitable for disinfection.
- b. Unexpired household bleach will be effective against coronaviruses when properly diluted. Follow manufacturer's instructions for application and proper ventilation. Never mix household bleach with ammonia or any other cleanser. Leave the solution on the surface for at least 1 minute.
- c. To make a bleach solution, mix 5 tablespoons (1/3rd cup) bleach per gallon of water  
OR 4 teaspoons bleach per quart of water.
- d. Bleach solutions will be effective for disinfection up to 24 hours.
- e. Alcohol solutions with at least 70% alcohol may also be used.
- f. Precautions such as wearing gloves and making sure you have good ventilation during use of the product is essential.

### **Soft Surfaces**

- a. For soft surfaces such as carpeted floor, rugs, and drapes
- b. Clean the surface using soap and water or with cleaners appropriate for use on these surfaces.
- c. Launder items (if possible) according to the manufacturer's instructions. Use the warmest appropriate water setting and dry items completely.
- d. You can also disinfect with an EPA-registered household disinfectant.

## Electronics

For electronics, such as tablets, touch screens, keyboards, and remote controls consider putting a wipeable cover on electronics. Follow the manufacturer's instruction for cleaning and disinfecting. If there is no guidance, use alcohol-based wipes or sprays containing at least 70% alcohol. Dry all surfaces thoroughly.

## Cleaning and Disinfecting Your Building Or Facility If Someone Is Sick

Close off areas used by the person who is sick. Companies do not necessarily need to close operations if they can close off affected areas.

- a. Open outside doors and windows to increase air circulation in the area.
- b. Wait 24 hours before you clean or disinfect. If 24 hours is not feasible, wait as long as possible.
- c. Clean and disinfect all areas used by the person who is sick, such as offices, bathrooms, common areas, shared electronic equipment like tablets, touch screens, keyboards, and remote controls.
- d. Once the area has been appropriately disinfected, it can be opened for use.
- e. Workers without close contact with the person who is sick can return to work immediately after disinfection.
- f. If it is more than 7 days since the person who is sick visited or used the facility, additional cleaning and disinfection is not necessary.
- g. Continue routine cleaning and disinfection. This includes everyday practices that businesses and communities normally use to maintain a healthy environment.

## What Should be Cleaned

- a. Common spaces: office areas, break rooms, security desk, desk space, tables, chairs, and bathrooms.
- b. Common surfaces: tools, monitors, special equipment, leavers/buttons, trays and containers.
- c. General surfaces: door handles, window handles, faucet handles, hand wash stations, light switches, counter tops, gas pump handles and elevator controls.
- d. Equipment: Forklifts controls, crane controls, ladders, hand tools, power tools, electrical cords, GFCI's.
- e. Company vehicles.
- f. Encourage employees to clean their personal tools and vehicles daily and not to share their tools with other employees.

## Signage

### Cleaning and Disinfecting Your Facility

<https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf>



### **Schedules**

- a. Establish a flexible work schedule policy. This can include:
  - a. Telecommuting
  - b. Flexible work hours – stagger start times
  - c. Increasing shifts so less employees are on site at one time.
- b. Implement a flexible sick leave policy

### **Getting to Work/Job Site**

- a. Limit the number of employees sitting in the cab of a truck.
- b. Allow employees to drive their personal cars directly to work site.
- c. Ensure that employees who use public transportation have the appropriate face masks.
- d. Ensure that there are adequate hand washing stations, or hand sanitizers (60% alcohol) available in shops, trucks and at work sites.

### **Deliveries**

- a. Isolate an area for non-employees such as UPS/Fed-ex/Food deliveries etc. Do not permit them to enter the facility.
- b. Establish a delivery drop off area in yard, parking lot, etc. if possible. Designate the area with floor markings.
- c. If visitors need to pass the isolation area, they must be health screened and be wearing the appropriate PPE.
- d. Visitors must maintain social distancing of 6 feet.

### **Signage**

Appropriate signage should be installed. These include:

#### **Prevent the spread of COVID-19 if you are sick...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/sick-with-2019-nCoV-fact-sheet.pdf>

#### **Stop the Spread of Germs...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/stop-the-spread-of-germs-11x17-en.pdf>

#### **Please read before entering...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/Please-Read.pdf>

### **Visitors**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/Visitor-Signage-Template.pdf>

A person with Covid-19 symptoms could potentially infect more people on site. Therefore, a health screening needs to be performed prior to anyone **entering** the facility or work site. This includes employees, visitors, vendors and delivery person.

Anyone who does not pass the health screening cannot enter the facility and should be advised to return home and be evaluated by a health care professional. Currently a 14-day self-quarantine is recommended.

**Identify where the screening will be done:**

An area near the entrance to the facility should be identified. The area should be marked off and, if possible, barriers should be set up. If not, a 6 foot distance must be maintained. Given the size of your workforce, several screeners may be needed to allow for lines that avoid crowding and allow for 6-foot social distancing.

- a. Do not allow pens to be shared without proper cleaning.
- b. Have hand sanitizer available (60% Alcohol base).
- c. Have adequate trash receptacles for hand wipes, gum etc.
- d. Have a clear posting to any who feels sick not to enter. Keep track of anyone who reports for work but is not permitted to enter.

**The Health Screener:**

When selecting who will be doing the health screening, consider the potential screeners age and underlying chronic medical conditions to avoid further risk to the screener's personal health.

Screeners must have all the appropriate PPE. They need to wear a face shield, an N-95 face mask and latex/nitrile gloves. They need to use hand sanitizer or wash their hands, after removing or changing their PPE.

Screeners must be trained on the safety protocols that need to be maintained during the screening process and there should be NO physical contact with the individual being screened. Pens, or any other tools used during the screening, should not be shared without cleaning.

**The Health Screening:**

The Health Screening consists of a simple health questionnaire and the taking of the individuals' temperature. This does not have to be performed by a health care professional; however, it is recommended that it be a member of management.

The individuals' temperature needs to be taken using a Non-Contact Infra-red thermometer with relatively high accuracy. The temperature must be no more than 100.4 degrees Fahrenheit.

## The Health Questionnaire:

The health screener should ask the individual the following questions. They should maintain a log of all individuals who are screened and which are not permitted to enter the facility.

1. Do you have fever in excess of 100.4 degrees Fahrenheit?
2. Have you been in contact (with 6 feet) with a confirmed or suspected Covid-19 individual?
3. Do you currently have, or have you experienced within the past 14 days symptoms of a respiratory illness such a cough, shortness of breath or difficulty breathing?
4. Have you had chills, repeated shaking with chills, muscle pain, headache, sore throat and a loss of taste or smell?
5. Have you traveled outside the U.S. in the last 14 days?

## After the Health Screening:

Individuals with a **NO response** to all the above questions should be given a sticker, or wrist band, confirming screening for the day and allowed to proceed into the workplace. Stickers should be placed where the employee can take their own ticker without contacting any other employee.

Workers with a **Yes response** to any of the above questions will be asked to leave the site and return home. It is currently recommended that they self-quarantine for 14 days. They should also follow up with their health care provider.

## Signage at Health Screening Location:

The health screening area should have signage instructing the employee to wait to be screened. In addition, CDC recommends that this sign be placed at all entrances.

[https://www.cdc.gov/coronavirus/2019-ncov/downloads/316129-B-StayHomeFromWork\\_Poster.pdf](https://www.cdc.gov/coronavirus/2019-ncov/downloads/316129-B-StayHomeFromWork_Poster.pdf)



All organizations should be following strict personal protective equipment (PPE) rules as required by OSHA. During this crisis, however, there is extra precautions necessary.

### **What PPE is Needed for Covid-19?**

The CDC recommends that everyone wear a surgical mask or a self-made facemask (bandana, scarf) in any public setting. Surgical masks and self-made masks from cloth offer less protection for the wearer than N95 masks. However, they are considered effective to stop the spread of airborne pathogens from the wearer to other people and that is the goal at this time.

- a. Anyone entering the facility/job site must wear a surgical mask, bandana or any cloth self-made mask. The masks should be worn over your nose and mouth to help prevent spreading the virus.
- b. It is recommended that health screeners, security guards and cleaning crews on your site wear latex/nitrile gloves and N95 masks.
- c. Health screeners should also wear a face shield.

### **Maintaining Supplies**

Determine who at your company will be responsible to maintain an adequate inventory of the PPE required. Prior to reopening establish the amount of PPE inventory that will be required for your project. Consider:

- a. What PPE will be required?
- b. How many workers will need PPE?
- c. How long does your inventory needs to last? 30 days is recommended
- d. How long is the lead time to get new inventory?
- e. How will you distribute PPE to worksites? Assign this responsibility to an individual.

### **Training**

- a. All employees should know from who, where and how they can get their PPE
- b. Employees need to be trained in the use and care of PPE.
  - Do not share Personal Protective Equipment.
  - PPE should be discarded in an appropriate waste container after use according to local guidance, and hand hygiene should be performed before putting on and after taking off PPE.
  - If supplies are not readily available, an expired respirator can still be effective at protecting workers if the straps are intact, there are no visible signs of damage, and they can be fit-tested. Face masks do not need to be fit tested.
  - Continuing to use other normal safety measures, including personal protective equipment (necessary to protect yourself from other job hazards).

### **Signage**

#### **Stop the Spread of Germs...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/stop-the-spread-of-germs-11x17-en.pdf>

Limiting face-to-face contact with others is the best way to reduce the spread of coronavirus disease (Covid-19). Where a minimum distance cannot be maintained due to workplace design, one or more mitigation strategies need to be implemented including engineering and PPE controls as appropriate.

### **Entry & Exit**

Wherever feasible, utilize multiple signs in locations/health screening points and identify all entry and exit points of the facility or site. Stagger reporting times and add multiple shifts to reduce the number of employees present at the same time.

- a. Schedule various reporting times of vendors, delivery companies. Establish a location outside the work area for contactless deliveries.
- b. Forbid non-essential gatherings (have floors marked in 6-foot increments).
- c. Implement a “no handshake or hugs” policy.
- d. Install a physical barrier to separate security personnel from site workers. Have hand sanitizer available (60% Alcohol base).
- e. Have adequate trash receptacles available for hand wipes, gum etc.

### **Meetings & Training**

- a. Conduct meetings on-line if possible. If not, have them outside or in large clear areas
- b. Have multiple project meetings if groups are too large.
- c. Break up large groups into no more the 10 employees at any gathering
- d. Maintain 6-foot clearance between attendees.
- e. No passing of papers, pens, clip boards etc...
- f. Ensure proper ventilation in meeting rooms or trailers.

### **Breaks & Meals**

- a. Stagger break and lunch times.
- b. Allow employees to take breaks in their vehicles.
- c. No sharing of food or beverages. Do not provide group lunches (pizza, etc.). Hand out individual sandwiches or personal pizzas.
- d. The best option for employees to get water is for them to use their own refillable container. Most jobsite have a watercooler with 5-gallon jugs with pushdown taps. Non-contact coolers that work on sensors is another option.
- e. No bunching up, maintain 6-foot distances.
- f. Limit the number of employees in the kitchen or break room at one time. Post notice of this.
- g. Hand washing required prior to and after consuming food or beverages.
- h. Clean all countertops and tabletops with appropriate disinfectant, before and after consuming food.
- i. Dispose of trash & waste immediately.

## Offices & Trailers

- a. No congregating
- b. 3 to 6 feet between desks and workstations
- c. No sharing of phones, keyboards, coffee supplies, etc.
- d. No Face to Face layout of desks and workspaces
- e. Maintain good housekeeping.
- f. Close or limit the number of individuals in the lunchroom.
- g. It is recommended that office staff eat lunch at their desks.

## Work Sites

- a. Maintain 6-foot distance between workers\*
- b. Use all required PPE.
- c. Install barriers to keep work areas separate.
- d. Label/mark traffic directions on floors, walls, stairs.
- e. No sharing of tools and equipment. If sharing is required, ensure that all tools and touchpoints are disinfected properly.
- f. Maintain social distancing in Elevators, Hoists, Stair halls, tunnels.

\*In the event where work requirements dictate that social distancing cannot be possible, supervision should be notified and strict adherence to PPE rules must be maintained. Management must strictly enforce this policy.

## Signage

### Stop the Spread of Germs...

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/stop-the-spread-of-germs-11x17-en.pdf>





**Below you can find links to signs that can be placed throughout your facility/work site:**

**Prevent the spread of COVID-19 if you are sick...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/sick-with-2019-nCoV-fact-sheet.pdf>

**Stop the Spread of Germs...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/stop-the-spread-of-germs-11x17-en.pdf>

**Please read before entering...**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/Please-Read.pdf>

**Visitors**

<https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/Vistor-Signage-Template.pdf>

**Wash your hands...**

<https://www.cdc.gov/handwashing/pdf/wash-your-hands-poster-english-508.pdf>

**Cleaning and Disinfecting Your Facility**

<https://www.cdc.gov/coronavirus/2019-ncov/community/disinfecting-building-facility-H.pdf>

**Coronavirus (COVID-19): Ten Steps All Workplaces Can Take to Reduce Risk of Exposure to Coronavirus Poster** **NEW**

(OSHA 4014 - 2020) (Arabic: [PDF](#))

(OSHA 4009 - 2020) (Brazilian Portuguese: [PDF](#))

(OSHA 4005 - 2020) (Chinese Simplified: [PDF](#))

(OSHA 4004 - 2020) (Chinese Traditional: [PDF](#))

(OSHA 3994 - 2020) (English: [PDF](#))

(OSHA 4007 - 2020) (French Creole: [PDF](#))

(OSHA 4013 - 2020) (Hmong: [PDF](#))

(OSHA 4011 - 2020) (Korean: [PDF](#))

(OSHA 4010 - 2020) (Polish: [PDF](#))

(OSHA 4012 - 2020) (Russian: [PDF](#))

(OSHA 3995 - 2020) (Spanish: [PDF](#))

(OSHA 4006 - 2020) (Tagalog: [PDF](#))

(OSHA 4008 - 2020) (Vietnamese: [PDF](#))

**OSHA Poster - English**

<https://www.osha.gov/Publications/OSHA3994.pdf>

**We also recommend that a sign be placed in the cab of trucks reminding workers to:**

- a. Disinfect Cab and cargo door handles, seat belts, steering wheels, mirrors, gear shifts, control knobs and buttons, latches and handles.
- b. Limit the number of passengers to ensure safe distancing and to wear face masks.

WE ARE YOUR DOL

Department  
of Labor

# NY HERO ACT

## Model Airborne Infectious Disease Exposure Prevention Plan for Construction Industry

The purpose of this plan is to protect employees against exposure and disease during an airborne infectious disease outbreak. This plan goes into effect when an airborne infectious disease is designated by the New York State Commissioner of Health as a highly contagious communicable disease that presents a serious risk of harm to the public health. This plan is subject to any additional or greater requirements arising from a declaration of a state of emergency due to an airborne infectious disease, as well as any applicable federal standards.

*Employees should report any questions or concerns with the implementation this plan to the designated contact.*

This plan applies to all “employees” as defined by the New York State HERO Act, which means any person providing labor or services for remuneration for a private entity or business within the state, without regard to an individual’s immigration status, and shall include part-time workers, independent contractors, domestic workers, home care and personal care workers, day laborers, farmworkers and other temporary and seasonal workers. The term also includes individuals working for digital applications or platforms, staffing agencies, contractors or subcontractors on behalf of the employer at any individual work site, as well as any individual delivering goods or transporting people at, to or from the work site on behalf of the employer, regardless of whether delivery or transport is conducted by an individual or entity that would otherwise be deemed an employer under this chapter. The term does not include employees or independent contractors of the state, any political subdivision of the state, a public authority, or any other governmental agency or instrumentality.

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## I. RESPONSIBILITIES

This plan applies to all employees of \_\_\_\_\_, and [all]/[the following work sites]:


This plan requires commitment to ensure compliance with all plan elements aimed at preventing the spread of infectious disease. The following supervisory employee(s) are designated to enforce compliance with the plan. Additionally, these supervisory employees will act as the designated contacts unless otherwise noted in this plan:

Name	Title	Location	Phone

## II. EXPOSURE CONTROLS DURING A DESIGNATED OUTBREAK

### A. MINIMUM CONTROLS DURING AN OUTBREAK

During an airborne infectious disease outbreak, the following minimum controls will be used in all areas of the worksite:

- General Awareness:** Individuals may not be aware that they have the infectious disease and can spread it to others. Employees should remember to:
  - Maintain physical distancing;
  - Exercise coughing/sneezing etiquette;
  - Wear face coverings, gloves, and personal protective equipment (PPE), as appropriate;
  - Individuals limit what they touch;
  - Stop social etiquette behaviors such as hugging and hand shaking, and
  - Wash hands properly and often.
- “Stay at Home Policy”:** If an employee develops symptoms of the infectious disease, the employee should not be in the workplace. The employee should inform the designated contact and follow New York State Department of Health (NYSDOH) and Centers for Disease Control and Prevention (CDC) guidance regarding obtaining medical care and isolating.
- Health Screening:** Employees will be screened for symptoms of the infectious disease at the beginning of their shift. Employees are to self-monitor throughout their shift and report any new or emerging signs or symptoms of the infectious disease to the designated contact. An employee showing signs or symptoms of the infectious disease should be removed from the workplace and should contact a healthcare professional for instructions. The health screening elements will follow guidance from NYSDOH and CDC guidance, if available.

4. **Face Coverings:** When in use, face coverings must cover the nose and mouth, and fit snugly, but comfortably, against the face. The face covering itself must not create a hazard (e.g., have features could get caught in machinery or cause severe fogging of eyewear). The face coverings must be kept clean and sanitary and changed when soiled, contaminated, or damaged.
  - **Effective February 10, 2022:** Employees will wear appropriate face coverings in accordance with guidance from State Department of Health or the Centers for Disease Control and Prevention, as applicable. Consistent with the guidance from the State Department of Health, if indoor areas do not have a mask or vaccine requirement as a condition of entry, appropriate face coverings are recommended, but not required. It is also recommended that face coverings be worn by unvaccinated individuals, including those with medical exemptions, in accordance with federal CDC guidance. Further, the State’s masking requirements continue to be in effect for pre-K to grade 12 schools, public transit, homeless shelters, domestic violence shelters, correctional facilities, nursing homes, health care, child care, group homes, and other sensitive settings in accordance with CDC guidelines. New York State and the State Department of Health continue to strongly recommend face coverings in all public indoor settings as an added layer of protection, even when not required.
5. **Physical Distancing:** Physical distancing will be used, to the extent feasible, as advised by guidance from State Department of Health or the Centers for Disease Control and Prevention, as applicable.

*In situations where prolonged close contact with other individuals is likely, use the following control methods: (Note to employer: Check off the controls you intend to use and add any additional controls not listed here.)*

- restricting or limiting customer or visitor entry;
- limiting occupancy;
- allowing only one person at a time inside small enclosed spaces with poor ventilation;
- reconfiguring workspaces;
- physical barriers;
- signage;
- floor markings;
- telecommuting;
- remote meetings;
- preventing gatherings;
- restricting travel;
- creating new work shifts and/or staggering work hours;
- adjusting break times and lunch periods;
- delivering services remotely or through curbside pickup;
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

6. **Hand Hygiene:** To prevent the spread of infection, employees should wash hands with soap and water for at least 20 seconds or use a hand sanitizer with at least 60% alcohol to clean hands BEFORE and AFTER:
  - Touching your eyes, nose, or mouth;
  - Touching your mask;
  - Entering and leaving a public place; and
  - Touching an item or surface that may be frequently touched by other people, such as door handles, tables, gas pumps, shopping carts, or electronic cashier registers/screens.

Because hand sanitizers are less effective on soiled hands, wash hands rather than using hand sanitizer when your hands are soiled.

7. **Cleaning and Disinfection:** See Section V of this plan.

8. **“Respiratory Etiquette”**: Because infectious diseases can be spread by droplets expelled from the mouth and nose, employees should exercise appropriate respiratory etiquette by covering nose and mouth when sneezing, coughing or yawning.
9. **Special Accommodations for Individuals with Added Risk Factors**: Some employees, due to age, underlying health condition, or other factors, may be at increased risk of severe illness if infected. Please inform your supervisor or the HR department if you fall within this group and need an accommodation.

**B. ADVANCED CONTROLS DURING AN OUTBREAK**

For activities where the Minimum Controls alone will not provide sufficient protection for employees, additional controls from the following hierarchy may be necessary. Employers should determine if the following are necessary:

1. Elimination: Employers should consider the temporary suspension or elimination of risky activities where adequate controls could not provide sufficient protection for employees.
2. Engineering Controls: Employers should consider appropriate controls to contain and/or remove the infectious agent, prevent the agent from being spread, or isolate the worker from the infectious agent. Examples of engineering controls include:
  - Opening outside windows and doors;
  - Opening windows on one side of the room to let fresh air in and installing window exhaust fans on the opposite side of the room so that they exhaust air outdoors;
  - Automatic disinfection systems such as ultraviolet light disinfection systems;
  - Install additional timeclocks to avoid overcrowding. Consider touch free options;
  - Air purifiers;
  - Install hand washing or sanitizing stations throughout the worksite; and
  - Utilize doors, walls, or plastic sheeting as physical barriers to separate workers;

Subject to changes based on operations and circumstances surrounding the infectious disease, engineering controls that are anticipated to be used are listed in the following table:

Engineering Controls Utilized/Location:

*Note to Employer: One of the best ways to reduce exposure to infectious agents is to improve ventilation. The aim is to deliver more “clean air” into an occupied area and exhaust the contaminated air to a safe location. In some cases, the air may have to be filtered before it enters the work area and/or before it is exhausted. Direct the contaminated air away from other individuals and from the building’s fresh air intake ports. Consult your ventilation system’s manufacturer or service company to determine if improvements are possible for your system.*

3. “Administrative Controls” are policies and work rules used to prevent exposure. Examples include:

- Increasing the space between workers;
- Prohibit eating and drinking in the work area;
- Do not allow sharing of tools;
- Cancelling any recreational activity on site;
- Disinfecting procedures for specific operations;
- Employee training;
- Identify and prioritize job functions that are essential for continuous operations;
- Cross-train employees to ensure critical operations can continue during worker absence;
- Post signs reminding employees of respiratory etiquette, masks, hand hygiene;
- Rearrange traffic flow to allow for one way walking paths;
- Provide clearly designated entrance and exits;
- Provide additional short breaks for handwashing and cleaning;
- Prohibit using compressed air or dry sweeping for cleaning;
- Clean equipment and tools prior to handoff;
- Limit attendance to in-person meetings (including toolbox talks, pre-shift meeting, safety meetings). Host the meetings outdoors;
- Ensure portable toilets are kept clean.

Subject to changes based on operations and circumstances surrounding the infectious disease, the following specific administrative controls are anticipated to be used:

<b>Administrative Controls Utilized/Location:</b>

4. Personal Protective Equipment (PPE): Devices like eye protection, face shields, respirators, and gloves that protect the wearer from infection. PPE will be provided, used and maintained in a sanitary and reliable condition at no cost to the employee. The PPE provided to an employee will be based on a hazard assessment for the workplace. The following PPE that are anticipated to be used are in the following table:

PPE Required - Activity Involved/Location:

*1 The use of respiratory protection, e.g. an N95 filtering facepiece respirator, requires compliance with the OSHA Respiratory Protection Standard 29 CFR 1910.134 or temporary respiratory protection requirements OSHA allows for during the infectious disease outbreak.*

*2 Respirators with exhalation valves will release exhaled droplets from the respirators. Respirators are designed to protect the wearer. Surgical masks and face coverings, which are not respirators, are designed to protect others, not the wearer.*

**C. EXPOSURE CONTROL READINESS, MAINTENANCE AND STORAGE:**

The controls we have selected will be obtained, properly stored, and maintained so that they are ready for immediate use in the event of an infectious disease outbreak and any applicable expiration dates will be properly considered.

**III. HOUSEKEEPING DURING A DESIGNATED OUTBREAK**

**A. Disinfection Methods and Schedules**

Objects that are touched repeatedly by multiple individuals, such as door handles, light switches, control buttons/levers, dials, levers, water faucet handles, computers, phones, or handrails must be cleaned frequently with an appropriate disinfectant. Surfaces that are handled less often, or by fewer individuals, may require less frequent disinfection.

The disinfection methods and schedules selected are based on specific workplace conditions.

The New York State Department of Environmental Conservation (NYSDEC) and the Environmental Protection Agency (EPA) have compiled lists of approved disinfectants that are effective against many infectious agents (see [dec.ny.gov](http://dec.ny.gov) and [epa.gov/pesticide-registration/selected-epa-registered-disinfectants](http://epa.gov/pesticide-registration/selected-epa-registered-disinfectants)). Select disinfectants based on NYSDOH and CDC guidance and follow manufacturer guidance for methods, dilution, use, and contact time.

**B. Adjustments to Normal Housekeeping Procedures**

Normal housekeeping duties and schedules should continue to be followed during an infectious disease outbreak, to the extent practicable and appropriate consistent with NYSDOH and/or CDC guidance in effect at the time. However, routine procedures may need to be adjusted and additional cleaning and disinfecting may be required.

Housekeeping staff may be at increased risk because they may be cleaning many potentially contaminated surfaces. Some housekeeping activities, like dry sweeping, vacuuming, and dusting, can resuspend into the air particles that are contaminated with the infectious agent. For that reason, alternative methods and/or increased levels of protection may be needed.

Rather than dusting, for example, the CDC recommends cleaning surfaces with soap and water before disinfecting them. Conducting housekeeping during “off” hours may also reduce other workers’ exposures to the infectious agent. Best practice dictates that housekeepers should wear respiratory protection. See [cdc.gov](http://cdc.gov) for more guidance.

- C. If an employee develops symptoms of the infectious disease at work, it is ideal to isolate the area in accordance with guidance issued by NYSDOH or the CDC, before cleaning and disinfecting the sick employee's work area. This delay will allow contaminated droplets to settle out of the air and the space to be ventilated.
- D. As feasible, liners should be used in trash containers. Empty the containers often enough to prevent overfilling. Do not forcefully squeeze the air out of the trash bags before tying them closed. Trash containers may contain soiled tissue or face coverings.

#### **IV. INFECTION RESPONSE DURING A DESIGNATED OUTBREAK**

If an actual, or suspected, infectious disease case occurs at work, take the following actions:

- Instruct the sick individual to wear a face covering and leave the worksite and follow NYSDOH/CDC guidance.
- Follow local and state authority guidance to inform impacted individuals.

#### **V. TRAINING AND INFORMATION DURING A DESIGNATED OUTBREAK**

A. \_\_\_\_\_ will verbally inform all employees of the existence and location of this Plan, the circumstances it can be activated, the infectious disease standard, employer policies, and employee rights under the HERO Act. (Note: training need not be provided to the following individuals: any individuals working for staffing agencies, contractors or subcontractors on behalf of the employer at any individual work site, as well as any individual delivering goods or transporting people at, to or from the work site on behalf of the employer, where delivery or transport is conducted by an individual or entity that would otherwise be deemed an employer under this chapter)

B. When this plan is activated, all personnel will receive training which will cover all elements of this plan and the following topics:

1. The infectious agent and the disease(s) it can cause;
2. The signs and symptoms of the disease;
3. How the disease can be spread;
4. An explanation of this Exposure Prevention Plan;
5. The activities and locations at our worksite that may involve exposure to the infectious agent;
6. The use and limitations of exposure controls
7. A review of the standard, including employee rights provided under Labor Law, Section 218-B.

C. The training will be

1. Provided at no cost to employees and take place during working hours. If training during normal work hours is not possible, employees will be compensated for the training time (with pay or time off);
2. Appropriate in content and vocabulary to your educational level, literacy, and preferred language; and
3. Verbally provided in person or through telephonic, electronic, or other means.



## VI. PLAN EVALUATIONS DURING A DESIGNATED OUTBREAK

The employer will review and revise the plan periodically, upon activation of the plan, and as often as needed to keep up-to-date with current requirements. Document the plan revisions below:

Plan Revision History			
Date	Participants	Major Changes	Approved By

## **VII. RETALIATION PROTECTIONS AND REPORTING OF ANY VIOLATIONS**

No employer, or his or her agent, or person, , acting as or on behalf of a hiring entity, or the officer or agent of any entity, business, corporation, partnership, or limited liability company, shall discriminate, threaten, retaliate against, or take adverse action against any employee for exercising their rights under this plan, including reporting conduct the employee reasonably believes in good faith violates the plan or airborne infectious disease concerns to their employer, government agencies or officials or for refusing to work where an employee reasonably believes in good faith that such work exposes him or her, other workers, or the public to an unreasonable risk of exposure, provided the employee, another employee, or representative has notified the employer verbally or in writing, including electronic communication, of the inconsistent working conditions and the employer's failure to cure or if the employer knew or should have known of the consistent working conditions.

Notification of a violation by an employee may be made verbally or in writing, and without limitation to format including electronic communications. To the extent that communications between the employer and employee regarding a potential risk of exposure are in writing, they shall be maintained by the employer for two years after the conclusion of the designation of a high risk disease from the Commissioner of Health, or two years after the conclusion of the Governor's emergency declaration of a high risk disease. Employer should include contact information to report violations of this plan and retaliation during regular business hours and for weekends/other non-regular business hours when employees may be working.

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# LEY DE HÉROES DE NY

## Modelo de plan de prevención de exposiciones a enfermedades infecciosas transmitidas por el aire

El propósito de este plan es proteger a los empleados contra las exposiciones y enfermedades durante un brote de enfermedad infecciosa transmitida por el aire. Este plan entra en vigor cuando el comisionado de salud del estado de Nueva York designe a una enfermedad infecciosa transmitida por el aire como una enfermedad altamente contagiosa que representa un riesgo grave de daños para la salud pública. Este plan está sujeto a todos los requisitos adicionales o mayores que se deriven de una declaración de estado de emergencia debido a una enfermedad contagiosa transmitida por el aire, así como a todos los estándares federales aplicables.

*Los empleados deben expresar todas sus preguntas e inquietudes respecto a la implementación de este plan a la persona de contacto designada.*

Este plan se aplica a todos los "empleados" de acuerdo con la definición de la Ley de Héroes del Estado de Nueva York, que incluye a todas las personas que desempeñen trabajos o presten servicios a cambio de una remuneración para una entidad o empresa privada dentro del estado, sin importar la situación migratoria de la persona, e incluirá a los trabajadores a tiempo parcial, contratistas independientes, trabajadores domésticos, trabajadores de cuidado en el hogar y cuidado personal, jornaleros, trabajadores agrícolas y otros trabajadores temporales y por temporada. El término también incluye a las personas que trabajan para aplicaciones o plataformas digitales, agencias de personal, contratistas o subcontratistas que trabajen para el empleador en cualquier lugar de trabajo individual, así como a toda persona que entregue bienes o transporte personas hacia o desde un lugar de trabajo para el empleador, sin importar si la persona que hace la entrega o transporte habitualmente se consideraría un empleador en los términos de este capítulo. El término no incluye a los empleados o contratistas independientes del estado, de cualquier subdivisión política del estado, de una autoridad pública, o de cualquier otra agencia o dependencia gubernamental.

Hasta la fecha de publicación de este documento, si bien el estado sigue lidiando con la COVID-19 y sigue existiendo un riesgo, no hay una designación vigente por ahora. Consulte los sitios de internet de los departamentos de Salud y Trabajo para ver información actualizada respecto a si una designación ha entrado en vigor, ya que dichas designaciones se exhibirán de forma prominente. Ningún empleador está obligado a poner en vigor un plan mientras no exista dicha designación por parte del comisionado de salud.

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## I. RESPONSABILIDADES

Este plan se aplica a todos los empleados de \_\_\_\_\_, y a [todos los]/[los siguientes] lugares de trabajo:


Este plan exige el compromiso de todos para garantizar el cumplimiento de todos sus elementos, con el fin de prevenir la propagación de la enfermedad infecciosa. Los siguientes empleados con nivel de supervisores se han designado como encargados de que se cumpla el plan. Además, estos empleados con nivel de supervisores fungirán como personas de contacto designadas, excepto cuando se indique lo contrario en este plan:

Nombre	Puesto	Ubicación	Teléfono

## II. CONTROLES DE EXPOSICIÓN DURANTE UN BROTE DESIGNADO

### A. CONTROLES MÍNIMOS DURANTE UN BROTE

Durante un brote de una enfermedad infecciosa transmitida por el aire, se aplicarán los siguientes controles mínimos en todas las áreas del lugar de trabajo:

- 1. Concientización general:** Las personas pueden no estar conscientes de que tienen la enfermedad infecciosa y pueden propagarla a otras personas. Los empleados deben recordar:
  - Mantener el distanciamiento físico
  - Cumplir con la etiqueta para toser y estornudar
  - Usar cubrebocas, guantes y equipo de protección personal (PPE, por sus siglas en inglés) cuando sea apropiado
  - Las personas deben limitar su contacto con objetos
  - Suspender conductas de etiqueta social, como abrazarse y saludar de mano, y
  - Lavarse las manos correctamente y con frecuencia.
- 2. "Política de permanecer en casa":** Si un empleado presenta síntomas de la enfermedad infecciosa, no debe estar en el lugar de trabajo. El empleado debe informar a la persona de contacto designada y seguir la orientación del Departamento de Salud del Estado de Nueva York (New York State Department of Health, NYSDOH) y de los Centros para la Prevención y el Control de Enfermedades (Centers for Disease Control and Prevention, CDC) sobre la obtención de atención médica y el aislamiento.
- 3. Evaluaciones de salud:** Se evaluará si los empleados presentan síntomas de la enfermedad infecciosa al principio de su turno. Los empleados deben monitorearse a sí mismos durante su turno y deben informar de todos sus nuevos signos o síntomas de la enfermedad infecciosa a la persona de contacto designada. Un empleado que presente síntomas de la enfermedad infecciosa debe ser retirado del lugar de trabajo y comunicarse con un profesional médico para recibir instrucciones. Los elementos de la evaluación de salud se ceñirán a la orientación del NYSDOH y los CDC, de haberla.

4. **Cubre bocas:** Para proteger a sus compañeros de trabajo, los empleados usarán cubrebocas durante toda la jornada laboral, en la medida de lo posible. Siempre que sea posible, deben usarse cubrebocas y distanciamiento social juntos. El cubrebocas debe cubrir la nariz y la boca, y quedar bien unido a la cara, pero sin causar incomodidad. El cubrebocas mismo no debe crear un peligro, por ejemplo, tener componentes que podrían quedar atrapados en una máquina o provocar el empañamiento excesivo de los anteojos. Los cubrebocas deben mantenerse limpios y desinfectados, y deben cambiarse cuando se ensucien, contaminen o dañen.
5. **Distanciamiento físico:** Se aplicará el distanciamiento físico en la mayor medida posible. Evite las reuniones innecesarias y mantenga una distancia mínima de seis pies (o la recomendada por el NYSDOH o los CDC para el agente infeccioso) entre las personas. Use un cubrebocas cuando no pueda mantener la distancia física.

*En las situaciones en las que sea probable que exista contacto cercano prolongado con otras personas, use los siguientes métodos de control: (Nota para el empleador: marque los controles que planea usar, y añada los controles adicionales que no se incluyan en esta lista).*

- restringir o limitar la entrada de clientes o visitantes
  - limitar el aforo
  - permitir solamente una persona a la vez dentro de pequeños espacios cerrados con poca ventilación
  - reconfiguración de los espacios de trabajo
  - barreras físicas
  - letreros
  - marcas en el piso
  - teletrabajo
  - reuniones remotas
  - prevenir reuniones
  - restringir los viajes
  - crear nuevos turnos de trabajo o escalonar los horarios de trabajo
  - ajustar las horas de descanso y los períodos de comida
  - prestar servicios de manera remota u ofrecer entrega en la acera
  - \_\_\_\_\_
  - \_\_\_\_\_
  - \_\_\_\_\_
6. **Higiene de las manos:** Para prevenir la propagación de infecciones, los empleados deben lavarse las manos con agua y jabón por lo menos durante 20 segundos, o usar un desinfectante de manos con 60% de alcohol para limpiarse las manos ANTES y DESPUÉS de:
    - Tocarse los ojos, la nariz o la boca
    - Tocar su cubrebocas
    - Entrar y salir de un espacio público
    - Tocar un objeto o una superficie que puedan ser tocados con frecuencia por otras personas, como perillas de puertas, mesas, bombas de gasolina, carritos de compras o teclados/pantallas de cajas registradoras electrónicas.Dado que los desinfectantes de manos son menos efectivos en las manos sucias, es mejor lavarse las manos que usar desinfectante cuando sus manos estén sucias.
  7. **Limpieza y desinfección:** Consulte la sección V de este plan.
  8. **"Etiqueta respiratoria":** Dado que las enfermedades infecciosas pueden propagarse con gotitas expulsadas por la nariz y la boca, los empleados deben seguir la etiqueta respiratoria apropiada y cubrirse la boca y la nariz al estornudar, toser o bostezar.
  9. **Adaptaciones especiales para personas con factores de riesgo adicionales:** Algunos empleados, debido a su edad, enfermedades subyacentes u otros factores, pueden estar en mayor riesgo de sufrir una enfermedad grave en caso de infectarse. Informe a su supervisor o al departamento de Recursos Humanos si usted forma parte de ese grupo y necesita una adaptación.

## B. CONTROLES AVANZADOS DURANTE UN BROTE

En el caso de actividades en las que los controles mínimos no bastan para ofrecer protección suficiente a los empleados, puede ser necesario implementar controles adicionales de la siguiente jerarquía. Los empleadores deben determinar si es necesario hacer lo siguiente:

1. Eliminación: Los empleadores deben considerar la opción de suspender temporalmente o eliminar las actividades de riesgo en las que los controles adecuados no bastan para ofrecer suficiente protección a los empleados.
2. Controles de ingeniería: Los empleadores deben considerar controles apropiados para contener o eliminar el agente infeccioso, evitar que el agente infeccioso se propague, o aislar al trabajador del agente infeccioso. Algunos ejemplos de controles de ingeniería son:
  - i. Ventilación mecánica:
    - a. Ventilación con un extractor de aire local, por ejemplo:
      - Cabinas ventiladas (campanas de gases)
      - Extractores de cocina
      - Gabinetes de seguridad biológica ventilados.
    - b. Ventilación general, por ejemplo:
      - Sistemas dedicados de ventilación para áreas de cocina, centros comerciales, vestíbulos, salas quirúrgicas, manufactura, soldadura, pintura en interiores, laboratorios, salas de aislamiento con presión negativa
      - Aumentar el porcentaje de aire fresco que se introduce a los sistemas de manejo de aire
      - Evitar la recirculación de aire
      - Usar filtros de mayor eficiencia en el sistema de manejo de aire
      - Si se usan ventiladores en las instalaciones, colocarlos de forma que no envíen el aire directamente de un trabajador a otro
  - ii. Ventilación natural, por ejemplo:
    - Abrir puertas y ventanas al exterior para crear ventilación natural
    - Abrir las ventanas de un lado de la habitación para permitir la entrada de aire fresco e instalar extractores de aire en las ventanas del lado opuesto de la habitación para que extraigan aire al exterior. *(Nota: este método solamente es apropiado si no envía el aire de una persona a otra).*
  - iii. Instalar sistemas automáticos de desinfección (por ejemplo, sistemas de desinfección con luz ultravioleta).
  - iv. Instalar barreras que puedan limpiarse, como separadores o protectores de plástico transparente contra estornudos y tos.
  - v. Cambiar la disposición de las instalaciones para evitar puntos o áreas en donde los empleados puedan congregarse (por ejemplo, instalar relojes marcadores adicionales).

Sujeto a los cambios exigidos por las operaciones y circunstancias de la enfermedad infecciosa, los controles de ingeniería que se prevé usar se incluyen en la siguiente tabla:

Controles de ingeniería utilizados/Ubicación:

*Nota para el empleador: Una de las mejores formas de reducir la exposición a agentes infecciosos es mejorar la ventilación. El objetivo es llevar más "aire limpio" a un espacio ocupado y extraer el aire contaminado a un lugar seguro. En algunos casos, puede ser necesario filtrar el aire antes de que entre al espacio de trabajo o antes de extraerlo. Dirija el aire contaminado a un lugar alejado de otras personas y de los puntos de entrada de aire fresco al edificio. Consulte al fabricante de su sistema de ventilación o a su compañía de servicios para determinar si es posible hacer mejoras a su sistema.*

3. Los "controles administrativos" son las políticas y reglas de trabajo utilizadas para prevenir las exposiciones. Algunos ejemplos son:
- Aumentar el espacio entre los trabajadores
  - Reducir la velocidad de producción para tener menos trabajadores a la vez
  - Procedimientos de desinfección para operaciones específicas
  - Abstenerse de sacudir la ropa sucia
  - Capacitación para los empleados
  - Identificar y priorizar las funciones laborales que son esenciales para la continuidad de las operaciones
  - Impartir capacitación cruzada a los empleados para asegurarse de que las operaciones críticas puedan continuar en ausencia de algunos trabajadores
  - Limitar el uso de estaciones de trabajo compartidas
  - Colocar letreros para recordarles a los empleados la etiqueta respiratoria, el uso de cubrebocas y el lavado de manos
  - Organizar el flujo del tráfico para que los corredores sean de un solo sentido
  - Designar claramente las entradas y las salidas
  - Ofrecer descansos breves adicionales para lavarse las manos y limpiar
  - Establecer grupos o cohortes de empleados que trabajen el mismo turno



Sujeto a los cambios exigidos por las operaciones y circunstancias de la enfermedad infecciosa, se prevé el uso de los siguientes controles administrativos:

Controles administrativos utilizados/Ubicación:

4. 10. El equipo de protección personal (PPE, por sus siglas en inglés) son dispositivos tales como protectores oculares, caretas, respiradores y guantes, que protegen al usuario contra infecciones. El PPE será provisto, usado y mantenido en condiciones sanitarias y confiables, sin costo para el empleado. El PPE provisto a los empleados se fundamentará en una evaluación de riesgos del lugar de trabajo.

PPE obligatorio - Actividad/ubicación:

*1 El uso de protección respiratoria, como un respirador con máscara de filtrado N95, debe cumplir con la Norma de Protección Respiratoria 29 CFR 1910.134 de OSHA o con los requisitos temporales de protección respiratoria permitidos por OSHA durante el brote de enfermedad infecciosa.*

*2 Los respiradores con válvulas de exhalación liberan gotitas exhaladas de los respiradores. Los respiradores están diseñados para proteger al usuario. Las máscaras quirúrgicas y los cubrebocas, que no son respiradores, están diseñados para proteger a los demás, no al usuario.*

### C. PREPARACIÓN, MANTENIMIENTO Y ALMACENAMIENTO DE LOS CONTROLES DE EXPOSICIONES:

Los controles que hemos seleccionados se adquirirán, se almacenarán correctamente y se mantendrán de forma que estén preparados para su uso inmediato en caso de un brote de enfermedad infecciosa, y se tomarán en cuenta adecuadamente todas las fechas de caducidad aplicables.

### III. ORDEN Y LIMPIEZA DURANTE UN BROTE DESIGNADO

#### A. Métodos y calendarios de desinfección

Los objetos que sean tocados reiteradamente por varias personas, como las perillas de puertas, interruptores de luz, botones y palancas de control, controles, manijas de grifos, computadoras, teléfonos o pasamanos deben limpiarse frecuentemente con un desinfectante apropiado. Las superficies que se manipulen con menos frecuencia, o por menos personas, pueden requerir desinfección menos frecuente.

Los métodos y calendarios de desinfección seleccionados se fundamentan en las condiciones específicas del lugar de trabajo.

El Departamento de Conservación Ambiental del Estado de Nueva York (New York State Department of Environmental Conservation, NYSDEC) y la Agencia de Protección Ambiental (Environmental Protection Agency, EPA) han compilado listas de desinfectantes aprobados que son eficaces contra muchos agentes infecciosos (ver [dec.ny.gov](https://www.dec.ny.gov/pesticide-registration/selected-epa-registered-disinfectants) y [epa.gov/pesticide-registration/selected-epa-registered-disinfectants](https://www.epa.gov/pesticide-registration/selected-epa-registered-disinfectants)). Seleccione los desinfectantes con base en la orientación del NYSDOH y los CDC y siga las indicaciones del fabricante en cuanto a métodos, dilución, uso y tiempo de contacto.

#### B. Ajustes a los procedimientos normales de orden y limpieza

Los trabajos y calendarios normales de orden y limpieza deben seguirse durante un brote de enfermedad infecciosa, en la medida en que resulte práctico y apropiado, y de forma congruente con las orientaciones del NYSDOH y los CDC vigentes en ese momento. Sin embargo, podría ser necesario ajustar los procedimientos de rutina, y podrían necesitarse actividades adicionales de limpieza y desinfección.

El personal de limpieza puede encontrarse en riesgo adicional debido a que puede tener que limpiar muchas superficies potencialmente contaminadas. Algunas actividades de limpieza, como barrer en seco, aspirar y sacudir polvo, pueden volver a suspender en el aire partículas contaminadas con el agente infeccioso. Por ese motivo, podría ser necesario utilizar métodos alternativos o aumentar los niveles de protección.

Por ejemplo, en vez de sacudir el polvo, los CDC recomiendan limpiar las superficies con agua y jabón antes de desinfectarlas. Realizar las tareas de orden y limpieza fuera del horario normal de actividad también puede reducir la exposición de los demás trabajadores al agente infeccioso. Las mejores prácticas indican que el personal de limpieza debe usar protección respiratoria. Consulte [cdc.gov](https://www.cdc.gov) para ver más indicaciones.

- C. Si un empleado presenta síntomas de la enfermedad infecciosa en el trabajo, lo ideal es aislar el área de acuerdo con la orientación emitida por el NYSDOH o los CDC antes de limpiar y desinfectar el espacio de trabajo del empleado enfermo. El retraso permitirá que las gotitas contaminadas se asienten y dejen de estar suspendidas en el aire, y que el espacio se ventile.
- D. Cuando sea factible, deben colocarse bolsas en el interior de los recipientes de basura. Vacíe los recipientes con la frecuencia necesaria para evitar que se desborden. No saque el aire de las bolsas de basura antes de cerrarlas con un nudo. Los recipientes de basura pueden contener pañuelos o cubrebocas contaminados.

### IV. RESPUESTA A INFECCIONES DURANTE UN BROTE DESIGNADO

En caso de que se presente en el trabajo un caso de enfermedad infecciosa, confirmado o sospechado, tome las siguientes medidas:

- Indique a la persona enferma que se ponga un cubrebocas, abandone el lugar de trabajo y siga las indicaciones del NYSDOH y los CDC.
- Siga la orientación de las autoridades locales y estatales para informar a las personas afectadas.

### V. CAPACITACIÓN E INFORMACIÓN DURANTE UN BROTE DESIGNADO

- A. \_\_\_\_\_ informará verbalmente a todos los empleados sobre la existencia y ubicación del presente Plan, las circunstancias en las que puede activarse, el estándar de enfermedades infecciosas, las políticas del empleador y los derechos del empleado de acuerdo con la Ley Héroe. (Nota: no es necesario impartir capacitación a las siguientes personas: personas que trabajan para agencias de personal, contratistas o subcontratistas que trabajen para el empleador en cualquier lugar de trabajo individual, así como a toda persona que entregue bienes o transporte personas hacia o desde un lugar de trabajo para el empleador, cuando la persona que hace la entrega o transporte habitualmente se consideraría un empleador en los términos de este capítulo).

- B. Cuando se active este plan, todo el personal recibirá capacitación que cubrirá todos los elementos de este plan y los siguientes temas:
1. El agente infeccioso y las enfermedades que puede provocar
  2. Los signos y síntomas de la enfermedad
  3. Cómo puede propagarse la enfermedad
  4. Una explicación de este plan de prevención de exposiciones
  5. Las actividades y espacios de nuestro lugar de trabajo que pueden representar exposiciones al agente infeccioso
  6. El uso y las limitaciones de los controles de exposición
  7. Un repaso del estándar, incluyendo los derechos de los empleados descritos en la Sección 218-B de la Ley de Trabajo.

- C. La capacitación será
1. Impartida sin costo a los empleados durante su horario de trabajo. Si no es posible impartir la capacitación durante el horario de trabajo normal, los empleados recibirán remuneración por el tiempo de capacitación (con sueldo o tiempo libre).
  2. Apropriada, en su contenido y vocabulario, para su nivel educativo, alfabetización e idioma preferido.
  3. Impartida verbalmente en persona o por teléfono, por medios electrónicos o por otros medios.

## VI. EVALUACIONES DEL PLAN DURANTE UN BROTE DESIGNADO

El empleador revisará y modificará el plan periódicamente, cuando se active el plan, y con la frecuencia necesaria para mantenerlo actualizado con los requisitos más recientes. Documente las modificaciones al plan a continuación:

Historial de modificaciones al plan			
Fecha	Participantes	Cambios importantes	Aprobado por

## **VII. PROTECCIÓN CONTRA REPRESALIAS Y DENUNCIA DE CUALQUIER INFRACCIÓN**

Ningún empleador, ni sus agentes, ni personas que actúen como entidades contratantes o en nombre de las mismas, ni los directivos o agentes de cualquier entidad, empresa, corporación, sociedad o compañía de responsabilidad limitada, deberá discriminar, amenazar, tomar represalias o tomar medidas adversas en contra de cualquier empleado porque este haya ejercido sus derechos de acuerdo con este plan, incluyendo el de denunciar conductas que el empleado cree razonablemente y de buena fe que infringen el plan o de informar de sus inquietudes sobre enfermedades infecciosas transmitidas por el aire a su empleador o a funcionarios o agencias gubernamentales, ni por negarse a trabajar cuando un empleado crea razonablemente y de buena fe que dicho trabajo lo expone a él, a otros trabajadores o al público en general a un nivel inaceptable de riesgo de exposición, asumiendo que el empleado, otro empleado o un representante haya notificado al empleador, verbalmente o por escrito, incluyendo comunicaciones electrónicas, de las condiciones de trabajo incongruentes y el empleador no las haya arreglado, o si el empleador sabía o debería haber sabido de las condiciones de trabajo incongruentes.

Un empleado puede notificar de una infracción verbalmente o por escrito, y sin limitaciones en el formato, incluyendo las comunicaciones electrónicas. En la medida en que las comunicaciones entre el empleador y el empleado acerca de un potencial riesgo de exposición sean por escrito, el empleador debe conservarlas durante dos años después de que concluya la designación de una enfermedad de alto riesgo por parte del comisionado de salud, o durante dos años después de que concluya la declaración de emergencia del gobernador sobre una enfermedad de alto riesgo. El empleador debe incluir información de contacto para denunciar infracciones a este plan y represalias durante el horario regular de atención y durante los fines de semana y otros horarios de trabajo irregulares en los que los empleados pueden estar trabajando.

**WE ARE YOUR DOL**



## **2. Responsibilities**

All employees are expected to do their part to ensure a safe workplace. To accomplish this all employees must:

1. Abide by all federal, state, and local regulations.
2. Adhere to the safety policies and procedures of PIAZZA and where appropriate those of the owners and contractors for whom PIAZZA has contracted to perform work. In cases where jobsite safety requirements exceed all Federal, State and local regulations, employees are required to follow the jobsite safety requirements.
3. Exercise good judgment in the application of Piazza Inc.'s Corporate Safety Program.
4. Protect the public from potential hazards created by our activities.

### **Responsibilities of Management**

1. Establish work rules and programs to enhance safety awareness and inform all employees of these established rules and programs.
2. Distribute the appropriate rules and regulations to all supervisors.
3. Provide job safety training for the employees.
4. Impress on all employees that their individual participation, responsibility and accountability is necessary to maintain an accident-free work environment.
5. Where required, provide appropriate protective equipment for employees.
6. Document all violations that are observed and discipline any employee disregarding this policy.
7. Investigate all accidents and provide training to prevent reoccurrence.
8. Require all subcontractors as a matter of contract and all material suppliers through purchase order terms to follow safety rules.
9. Provide for regular safety inspections of jobsites to ensure PIAZZA's safety rules are being followed by company employees and subcontractors.

## **Responsibilities of Jobsite Superintendents**

1. Ensure that all work performed is done in accordance with established safety regulations through methods such as pre-planning, training and use of the company disciplinary policy.
2. Superintendents will follow-up on inspections performed to ensure proper corrective and disciplinary actions are taken.
3. Make safety devices and equipment available to all employees and ensure the equipment is used in the way and for the purpose for which it was designed.
4. Inform foremen of Piazza's commitment to safety and of the need for them to manage their crews in a safe manner. Nothing less will be tolerated.
5. Review accidents, oversee the correction of unsafe conditions, and complete accident reports.
6. Conduct jobsite safety meetings and provide employees with proper instruction on the safety requirements of their activities.
7. Require PIAZZA's subcontractors to perform all work in accordance with established safety regulations. In cases where jobsite safety requirements exceed all Federal, State and local regulations, employees are required to follow the jobsite safety requirements.
8. Notify PIAZZA's corporate office of any safety violations and complete all associated documentation for safety infractions.
9. Protect the public from potential hazards related to company operations.
10. Work with other contractors on site to ensure PIAZZA's employees are not endangered by the operations of others.
11. Perform weekly jobsite inspection checklists and keep on file.
12. Maintain daily log books for completeness and accuracy; include all safety concerns and hazards within this log.

## **Responsibilities of Jobsite Foreman**

1. Execute the safety program at the work level.
2. Be knowledgeable of all safety requirements and safe work practices.
3. Conduct pre-task planning sessions to coordinate activities for the day and to anticipate unsafe conditions which may occur in the performance of those activities.
4. Ensure new employees receive new hire orientation training covering the hazards associated with their duties.
5. Provide safety training to existing employees performing new tasks.
6. Make sure an adequate supply of protective equipment is available and used by employees when required.
7. Make sure work is performed in a safe manner and no unsafe conditions or equipment are present.
8. Correct all hazards, including unsafe acts or conditions. Ensure no unsafe equipment is present on the jobsite that could be used by an employee.
9. Report all near accidents so an investigation can be conducted to prevent a reoccurrence.
10. Secure prompt medical attention for any injured employees.
11. Report all injuries and safety violations.



## **Workers' Responsibilities**

1. Follow company safety rules and work in a safe manner to ensure the safety of yourself, co-workers, and others.
2. When uncertain about how to perform any task, request assistance.
3. Correct any unsafe act or condition within the scope of your immediate work. Any hazard which cannot be readily corrected should be immediately reported to your supervisor.
4. Any unsafe condition corrected by an employee should be reported to the appropriate supervisor by the employee(s) who corrected the hazard.
5. Report for work in good mental and physical condition so that assigned duties can be carried out in a safe manner.
6. Avail yourself of company and industry-sponsored programs.
7. Inspect, maintain, and use safety devices provided for your protection.
8. Properly use and maintain all tools under your control.
9. Look out for other employees and assist them with safety requirements if an unsafe practice or condition is observed.

## **Responsibilities of All Personnel**

1. Strive to make all operations safe to achieve an accident-free workplace.
2. Maintain mental and physical health conducive to working safely.
3. Keep all work areas clean and free of debris.
4. Do not perform work in a manner which may be harmful to others. Assess the results of your actions on the entire workplace.
5. Do not let unsafe conditions imperil others. Prior to leaving work, replace or repair safety precaution signs removed or altered during the course of your work.
6. Abide by the safety rules and regulations of every construction site.
7. Work in strict conformance with federal, state and local regulations. In cases where jobsite safety requirements exceed all Federal, State and local regulations, employees are required to follow the jobsite safety requirements.

## **Subcontractors and Suppliers**

1. Abide by all Federal, State, and local regulations. In cases where jobsite safety requirements exceed all Federal, State and local regulations, all personnel are required to follow the jobsite safety requirements.
2. If the activities of another contractor affect the health or safety of your employees, notify the appropriate foreman or superintendent of the hazardous condition.
3. Before entering the jobsite, inform a foreman or superintendent of your arrival.
4. Immediately inform the controlling contractor of all injuries to workers.
5. Any unsafe condition or action observed shall be reported to the controlling contractor so the hazard can be addressed.
6. Participate fully in the project Disciplinary Program.

## **Architects, Engineers, Owners and Visitors**

1. Follow all safety rules of the jobsite.
2. Inform site superintendent before entering the construction site. Personal protective equipment such as a hard hat, safety glasses, and safety boots are required at all times.

### **3. Emergency Procedures**

1. In the event an emergency occurs on or at a company work site, the employee responsible for that site or the most senior employee on the site is responsible to follow the emergency procedures described in this section.
2. Emergencies are classified as life threatening, medical, or serious property damage.
3. In the event of a life-threatening emergency, accident, or medical emergency, the following actions are to be taken.
  - a) Ascertain the nature of the emergency and the number of people affected.
  - b) Immediately call emergency teams or designate one or two people to contact local police, fire, ambulance, haz-mat, utility, or other emergency response team(s) as quickly as possible.
  - c) Designate one or more employee to contact people adjacent to the work site if they are affected by the emergency. Have another employee contact the main office.
  - d) Take control of the site and assign tasks as necessary. Survey the area to insure scene is free of hazards that could cause further injury (traffic, electrical hazards, etc.).
  - e) Take measures to eliminate hazards that may exist and restrict access to the emergency area. Secure the scene and do not disturb anything unless needed.
  - f) Provide whatever immediate and temporary relief possible until emergency personnel arrive at the scene (bring first aid equipment, blankets, etc.).
  - g) Accompany the injured party to the hospital or send a fellow employee.
  - h) Perform an accident investigation before emergency area is disturbed. Take pictures as soon as possible and conduct an accident investigation following the procedures outlined in Piazza's health and safety program
4. In the event of a property damage emergency, the following actions are to be taken:
  - a) Determine if there is a danger to workers or persons adjacent to the site. If so, follow procedures outlined for a life-threatening emergency, accident, or medical emergency.
  - b) If no danger exists to workers or persons adjacent to the site, immediately call the appropriate emergency response team(s) and report the property damage emergency. (911, police, fire, haz-mat, utility, etc.).
  - c) Restrict access to the property damage emergency area. Secure the scene and do not disturb anything unless needed.
  - d) Notify the corporate office.
  - e) Document the emergency.

**NOTE:** In the event of any emergency, documentation of the incident is necessary. An accident investigation must be conducted following the guidelines provided in Piazza's health and safety program.

## **4. First Aid**

### **Purpose**

To establish the minimum emergency first aid requirements necessary at a work site.

### **Superintendent Responsibilities**

1. Determining the appropriate emergency medical facility (hospital or clinic).
2. Determining the appropriate ambulance service.
3. Complete an "Emergency Numbers" form and posting this information with telephone numbers at all telephones and other selected locations.
4. Assuring that one person per 25 workers, trained in first aid and CPR, is at the worksite at all times.
5. Establishing a system to notify the trained employees if an injury occurs.
6. Providing, inventorying, and maintaining a complete first aid kit.

### **Procedure**

In all cases immediately call the emergency number provided on-site.

1. Notify a designated first aider who is certified in first aid and CPR.
2. Do not move a victim.
3. Provide the appropriate emergency first aid (by trained employees only).

**Superintendents are responsible for informing all employees about emergency telephone numbers as well as emergency procedures. In addition, superintendents must be sure all employees are aware of the following precautions for special situations:**

### **Clothing Fire**

- a. Prevent the victim from running.
- b. Roll the victim on the floor and wrap in a blanket or coat.
- c. Douse the victim with water or use an emergency shower provided the clothing is not burning due to a flammable or combustible material.
- d. Do NOT remove wet or burned clothing from the victim's burned areas.

## **Burns from acid, caustics, or other chemicals**

- a. Immediately move the victim under an emergency shower or running water.
- b. Keep the victim under the shower for a minimum of 20 minutes and remove clothing.
- c. In case of eye burns, hold victim's eyelid open and flush with water for 15 minutes, from an eye bath, water fountain, or with a gentle stream from a water hose.
- d. Know the location of and how to operate emergency showers, eye baths and water hoses in your work area.

## **Exposure to vapors, fumes or gases**

- a. Notify trained personnel to close valves and perform similar precautionary procedures.
- b. Move exposed people to fresh air as quickly as possible.
- c. If fumes or gases have penetrated clothing and/or are causing skin irritation, immediately get victim under a shower and have clothing removed.
- d. Have all victims report to a physician for examination.
- e. Tell the physician the specific gas vapor or fumes involved and provide a Material Safety Data Sheet.
- f. Call a physician AT ONCE if any symptoms occur after working hours. (Some fumes or gases have delayed action symptoms).

## **Electric Shock**

- a. De-energize the circuit if possible. If unable to do so, use a nonconductor to remove the electrical source from the victim.
- b. If the victim is not breathing or has no pulse, first aider shall administer CPR.
- c. If the victim is in water, ensure that no exposed wires are in or near the water.
- d. Move the victim ONLY if there is no other way to stop the current flow.

Basic items needed in the on-site first aid kit:

***Unit pack 36-unit first aid kit (special order):***

<i>ITEM</i>	<i>NUMBER OF UNITS</i>
Adhesive Bandage 1" x 2-3/8"	1
Butterfly 1	1
Bandage Compress 2"	2
Bandage Compress 4"	3
Triangular Bandage	4
Zephiran Chloride	1
Ammonia Inhalant	1
Gauze Bandage 2" x 6 yards	2
Adhesive Tape	1
Eye Dressing Kit	2
Tourniquet, Forceps, Scissors	1
Wound Wipes	1
Cold Packs	3
Rescue Blanket	1
Gauze Compress 3" x 3"	4
Gauze Compress 24" x 72"	1
Latex Exam Gloves	1 dozen 36 Unit Case

**Additional Basic Materials:**

Pocket Mask w/O <sub>2</sub> Port, or "Blob mask"	1 per first aider
Blanket and Pillow	1

**NOTE:** In absence of an infirmary, clinic, or hospital in near proximity to the workplace, the following additional first aid equipment must be provided.

Folding Stretcher, Ferno Washington Model 12	1
FRAC - Kit #8398, Edco/PASCO Company	1
Division of Tempco Products, Inc. or equivalent	

## **5. Multi-Employer Work Sites**

### **General**

Piazza's subcontractor documents clearly state the requirements of working safely while performing work at a PIAZZA's construction project. It also outlines disciplinary action to be taken for non-compliance. This is done because we value our human resources.

This section establishes a line of responsibility for controlling hazards created by each subcontractor on site. In order to complete a construction project, the efforts of many contractors is necessary. Working together during the course of a project can create situations where different trades are exposed to safety hazards created by others. OSHA has developed a Multi-Employer Work Site requirement to help define abatement responsibilities of those contractors involved in the construction process.

OSHA's Multi-Employer doctrine allows OSHA to issue citations to the following if a safety violation exists:

- The employer whose employees are exposed to the hazard,
- The employer who created the hazard,
- The controlling employer or owner on site who would have responsibility for correcting the hazard, and/or
- The employer responsible for correcting the hazard

### **Responsibilities**

The jobsite superintendent will be responsible for making sure the appropriate safety measures are provided for PIAZZA and subcontractor employees. In the event a hazard exists that is not created, controlled, or the responsibility of PIAZZA or one of its subcontractors, PIAZZA and subcontractor employees will be prohibited from working in that area. The responsible and controlling party will then be notified about the condition.

Subcontractors who create a hazard are responsible for correcting the condition and maintain the protection as long as they are working in the area. Any subcontractor removing a safety device is responsible to replace that device immediately. In circumstances where maintaining protection (i.e. guardrails at a loading area) is part of a subcontractor's scope of work, that subcontractor will be required to maintain the proper protection. As a controlling contractor, PIAZZA will address any safety hazard that is identified by PIAZZA or a subcontractor and make sure that measures are taken to abate the hazard.

### **Example:**

A panel box is not provided with a cover to prevent employees from contacting live parts. The electrical contractor is then responsible to provide and maintain the panel box cover until they complete their work.

## **6. Demolition Program**

### **Purpose**

To provide safe working procedures for personnel involved in demolition operations.

### **Preparatory Operations**

#### **Engineering Survey**

OSHA Standard 1926.850(a) requires that an engineering survey must be conducted by a competent person to determine the condition of the framing, floors, and walls so that measures can be taken, if necessary, to prevent the premature collapse of any portion of the structure. Any adjacent structure(s) should also be similarly checked. For the purpose of this program, the competent person conducting the **structural survey** must be a registered professional engineer. The contractor performing the demolition work must maintain a written copy of this survey on site.

The engineering survey provides the demolition contractor with the opportunity to evaluate the job and plan for the wrecking and supporting of the structure, proper equipment necessary, manpower requirements, as well as reviewing protection of the public issues. The survey needs to take into account hazards that may be present during the demolition process and identify measures to be taken to address those hazards.

If the structure to be demolished has been damaged by fire, flood, explosion, or some other cause, appropriate measures such as bracing and shoring of walls, floors and other building components must be taken and identified as part of the engineering survey. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable material, or similar dangerous substances have been used or stored on the site. Undeterminable substances shall be tested and analyzed by a qualified person prior to demolition.

Where a hazard exists from fragmentation of glass, that hazard shall be removed. Wall openings that present worker hazard shall be protected to a height of 42 inches. All floor openings not designed for use with chutes shall be covered. Debris landing areas shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above.

#### **Environmental Survey**

An Environmental survey must be conducted prior to the start of demolition to determine the presence of asbestos and lead. All areas containing asbestos must be abated as per New York State Code Rule 56.

Components containing lead paint must be handled according to OSHA or EPA regulations depending on which agency has jurisdiction on the project. Typically, private projects will follow OSHA standards while public work requires EPA regulations to be followed. A determination must be made as to what regulation must be followed for the demolition project being performed.



No demolition work may be performed until environmental surveys are complete and appropriate abatement/removal is facilitated and the documentation to support the abatement/removal is obtained.

All asbestos containing material will be disposed of in as appropriate manner by the abatement contractor. Material that contains lead paint must have a Toxicity Classification Leaching Potential (TCLP) test to determine the proper means of disposal

### **Utility Location**

- Properly locate utility services during the planning stage. All electric, gas, water, steam, sewer, and other service lines should be shut off, capped, or otherwise controlled before demolition work is started.
- All utility companies involved should be notified in advance and approval or services obtained.
- Relocation of utilities may be required to maintain power or other service during the demolition.
- Survey overhead power sources to determine if they present an electrical hazard to employees or equipment used during the demolition process.

### **Stairs and Passageways**

- Close off all means of access to the structure except for those specially designated as such.
- Inspect and maintain all stairs, passageways and ladders.
- Properly illuminate stairwells.

### **Disposal Chute**

- No material shall be dropped near the exterior walls of the structure unless the area is effectively protected.
- If materials are dropped more than 20 feet to any point lying outside the exterior walls of the building, a disposal chute must be used.
- Disposal chutes shall be entirely enclosed if at an angle of more than 45°.
- Gates shall be installed at the discharge end, and a competent employee shall control the gate, and backing and loading of trucks.
- Disposal chutes not in use shall be securely closed off.
- Disposal chute openings shall be protected by guardrails at least 42 inches from the floor. Space between the chute and openings in the floors shall be solidly covered.
- Disposal Chute openings shall have a bumper, not less than 4 inches thick and 6 inches high, when material is to be dumped from wheelbarrows or mechanical equipment.
- Chutes shall be designed of such strength to handle the debris loaded in them.

### **Medical Services & First Aid**

- Make provisions prior to start of work for prompt medical attention in case of serious injury.
- Locate and display prominently all contact information for nearby hospitals, infirmaries, clinics and physicians.
- Determine the instructions for the best route to these facilities.
- Proper equipment for transportation of an injured worker should be ready as well as a communication system.
- If a hospital, clinic, infirmary, or physician is not available, a person with a valid certificate in first aid and CPR training from an accredited body should be available at the site.

- A properly stocked first aid kit must be available at the site. See First Aid section of this safety manual for proper quantities and contents of a jobsite safety kit.

## **Fire Prevention & Protection**

- A “fire plan” should be put in place prior to starting work. The plan should outline the assignments of key personnel in the event of a fire. A suitable location at the site should be designated and provided with the fire plan.
- Identify potential sources of ignition and take corrective measures.
- Electrical wiring for light, heat, or other power should be installed by a competent person and inspected regularly.
- Exhaust discharge from engines should be directed away from workers.
- Fire extinguishers should be present and their location clearly identified.
- Heating devices should be installed properly and regularly maintained.
- Smoking is prohibited near hazardous operations or materials.
- Keep access to street fire hydrants clear.
- Large multi-story buildings should be provided with standpipes with outlets. A pump may be necessary if pressure is insufficient.

## **Personal Protective Equipment**

During demolition operations, appropriate personal protective equipment must be used and maintained. Safe work clothing, hand protection, foot protection, head protection, eye & face protection, hearing protection, respiratory protection, fall protection, as well as other personal protective equipment must be used when needed. Employees required to wear respirators must be part of a respiratory protection program, which includes medical evaluations and fit testing.

## **Special Structure Demolition**

### Confined Spaces

- Refer to your confined space program in your corporate safety manual for hazards associated with confined spaces.
- Examples of confined spaces on demolition work can include storage tanks, vessels, degreasers, pit vaults, casing, and silos.
- Failure to recognize a confined space as a hazard can lead to injury, illness or death.
- The danger of explosion, poisoning, and asphyxiation are present at the onset of entry into a confined space.

### Demolishing a Chimney or Stack

- Consult architect/engineer drawings and perform a careful, detailed inspection of the structure by an experienced person. Pay close attention to the condition of the chimney stack. Lookout for structural defects such as weak or acid-laden mortar joints, and any cracks or openings. The interior brickwork in some sections of industrial chimney shafts can be extremely weak. Remove any steel straps as work progresses from the top down.
- Hand demolition should be performed from a working platform.
  - Install scaffolding around the chimney. Pay close attention to the tie-in braces.
  - Adequate spacing between chimney and work platform is essential.
  - The area around the chimney should be roped off or barricaded and appropriate warning signs posted.
  - A safety monitor on the ground is suggested.

- Do not work on the chimney in poor weather conditions.
- Keep the chimney wet to reduce dust.

### Demolition of Pre-Stressed Concrete Structures

- *Pretensioned members* do not have any end anchors. Simple pretensioned beams and slabs of spans up to about 7 meters (23 feet) can be demolished in a manner similar to reinforced concrete. Members should be turned on their sides once lowered to the ground for breaking up.
- *Precast units* stressed separately from the main frames of the structure, with end anchors and grouted and ungrouted ducts should be lowered to the ground if possible.
- *Monolithic structures* – Experience in prestressed work is suggested when dealing with members that have been stressed together. Temporary supports are usually required so the anchorage can be cautiously exposed.
- *Progressively prestressed structures* - The stored energy in this type of structure is large. Sudden and complete collapse can occur without warning.

### **Safe Blasting Procedures**

- A complete written survey must be made by a qualified person of all adjacent improvements and underground utilities. Excessive vibration is a possibility when performing blasting operations. Seismic or vibration tests should be conducted to determine the proper safety limits and to prevent damage to nearby buildings, utilities, or other property.
- A structural engineer should direct the work if structural columns, beams, or other components are to be removed. Extreme caution must be taken to avoid weakening and premature collapse of the structure.
- Use of explosives to demolish smokestacks, silos, cooling towers, or similar structures should be permitted only if there is a minimum of 90 degrees of open space extended for at least 150% of the height of the structure.

### **Fire Precautions**

Fire near explosives represents severe danger. Every effort must be made to ensure that fires or sparks do not occur near explosive materials. Smoking, matches, firearms, open flame lamps, and other sources must be prohibited in or near explosive magazines, or in areas where explosives are being handled, transported or used.

Electrical detonators can be inadvertently triggered by stray radio frequency signals from two-way radios.

### **Personnel**

A blaster is a competent person who uses explosives. A blaster must be qualified by reason of training, knowledge, or experience in the field of transporting, storing, handling, and using explosives. Knowledge of state and local regulations is required.

### **Vehicle Safety**

- Vehicles carrying explosives must be in good mechanical condition.
- Explosives, blasting agents, and blasting supplies shall not be transported with other materials.
- Blasting caps shall not be transported in the same vehicle with other explosives.

### **Proper Use of Explosives**

- Blasting operations should be conducted between sunup and sundown.
- Adequate signs should be posted. Alerts should be sounded to warn of hazards.
- Blasting mats and other containment should be used where there is a danger of debris being thrown into the air.
- Take caution to prevent accidental detonation by radio, television, or radar transmitters.

### **Procedures After Blasting**

#### **Inspection**

- Immediately disconnect the firing line from the blasting machine.
- Power switches should be locked open or in the off position.
- Allow sufficient time for clearing of dust, smoke, and fumes.
- Make sure all charges have been exploded.

#### **Disposal of Explosives**

- Explosive distributors will usually take back unused stock.
- Local fire marshals or representatives of the US Bureau of Mines may arrange for disposal.
- Never abandon explosives.
- Dispose of wood, paper, fiber that may have contained explosives by burning.

## Job Site Demolition Survey

Category	Areas	Satisfactory	Unsatisfactory	Corrective Action Required/Performed
Safe Access & Movement				
	Work Areas			
	Walkways, runways, passageways			
	Ladders, stairways, elevators			
	Protection for floor and roof openings			
	Illumination			
Vehicles				
	Roads: turn space, parking area, mud			
	Materials storage areas / dump areas			
	Signs and signals for vehicle routing			
	Maintenance and repair			
Utilities & Service				
	Location of temporary buildings			
	Location / identification of high voltage lines			
	Location of sanitary facilities / drinking water			
Scheduling Work				
	Provide safety equipment; hard hats, life belts, goggles, work vests			
	Establish liaison between contractors to prevent congestion among trades			
	Provide temporary flooring, safety nets and scaffolding where required			
Work Procedures				
	Adequate space			
	Equipment: cranes, hoists, elevators, trucks			
	Rigging procedures			
Tools & Equipment				
	Repair, maintenance, care			
	Inspection			
	Supplies for tools			
Workers / Foremen				
	Job assignments			
	Training and supervision			
	Number of workers			
	Safety plans			
	Safety bulletins, charts, posters			
	Recognition for groups, individuals			
	Investigation, reporting of accidents			
	Safety meetings			
	New employee training/orientation			
	Immediate corrective action plan			
	First aid; medical treatment plan			
Hazard Recognition				
	Health; asbestos, chemicals, materials			
	Noise levels			
	Confined spaces			
	Dust			

## **7. Disciplinary Program**

### **Purpose**

Safety on a jobsite requires constant attention and awareness from everyone involved. The success of a safety program is related to the efforts put forth by all employees involved in the project. It is for this reason that employees of PIAZZA and its subcontractors are required to adhere to the safety rules and regulations of state, federal and local agencies, and the owner for whom work is being performed. Jobsite safety requirements may exceed applicable OSHA Standards. In these circumstances, employees are required to follow the jobsite safety requirements. In order to ensure active participation from each employee, we have developed a Disciplinary Policy to enforce these safety rules and regulations.

### **Responsibilities**

The project superintendents and foremen are responsible for implementation of the Disciplinary Policy. This does not exclude these parties from following safety policies/practices or from disciplinary action resulting from safety violations.

### **Procedure**

1. Employees are subject to one of the following disciplinary actions resulting from safety violations. Each violation (excluding the first verbal which will be documented in the supervisor's daily log) will be documented on the attached Safety Violation Form. This form will include the date of the violation and disciplinary action taken.
  - a) **First Violation: Verbal warning, to be documented in supervisor's daily log.**
  - b) **Second Violation: Verbal warning, documented on Safety Violation Form.**
  - c) **Third Violation: Mandatory two-day work suspension without pay, documented on Safety Violation Form.**
  - d) **Fourth Violation: Termination, documented on Safety Violation Form.**
2. Violations are to be documented and up to date. A copy of the safety violation will be issued to the employee to whom it applies and a second copy will be filed in the employee's personal file.
3. When a safety violation is issued, the supervisor of the employee who is in violation will meet with that employee to discuss the safety infraction. The employee will be informed of the rule or procedure that was violated and the corrective measures that shall be taken to eliminate the hazard. The employee in violation shall fully understand the reason for and the associated risks pertaining to their violation prior to returning to work.
4. Nothing in this policy prohibits the immediate dismissal or removal from the jobsite of any employee whose conduct constitutes a serious violation of the safety requirements, which could cause serious danger to himself/ herself, other employees, property or equipment.

## Safety Violation Form

A safety violation form is to be completed each time an employee violates a corporate safety rule. This form must be forwarded to the main office and added to the employee's personnel file.

<b>EMPLOYEE NAME:</b>	<b>POSITION WITH COMPANY:</b>	<b>DATE OF VIOLATION:</b>
<b>DESCRIPTION OF VIOLATION:</b>		
<b>CORRECTIVE ACTION TO BE TAKEN TO PREVENT A REOCCURENCE:</b>		
<b>DISCIPLINARY ACTION TAKEN:</b>		
<b>NOTHING IN THIS POLICY PROHIBITS THE IMMEDIATE DISMISSAL OR REMOVAL FROM THE JOBSITE OF ANY EMPLOYEE WHOSE CONDUCT CONSTITUTES A SERIOUS VIOLATION OF PROJECT SAFETY RULES, WHICH COULD CAUSE SERIOUS DANGER TO HIMSELF/HERSELF, OTHER EMPLOYEES, PROPERTY, OR EQUIPMENT. AS AN EMPLOYEE WORKING AT THIS CONSTRUCTION SITE, I UNDERSTAND THE NATURE OF MY SAFETY VIOLATION AND THE PROPER CORRECTIVE ACTIONS NECESSARY TO ELIMINATE THE HAZARD.</b>		
<b>EMPLOYEE SIGNATURE:</b> _____ <b>DATE:</b> _____		

**PIAZZA, INC.**  
**Disciplinary Program regarding Subcontractors**

PIAZZA is committed to maintaining an accident-free workplace. Piazza's commitment is not enough, however. Obtaining this goal requires the same commitment by our subcontractors and their employees.

The Prevention of occupationally induced injuries and illnesses is of such consequences that it should be given precedence over operating productivity whenever possible. To the greatest degree possible, Company Management should provide all mechanical and physical facilities required for personal safety and health.

Therefore, if your Company does not comply with our Field Management concerning safety, the following will occur:

- First Violation:           Written Notice
  
- Second Violation:       We will withhold your monthly payments until infraction is corrected.
  
- Third Violation:         Your Company will jeopardize possible future Subcontracts With our Company.

**PIAZZA reserves the right to remove any contractor from the jobsite for repeat safety violations or for serious safety infractions. All contractors must continue to abide by all Federal, State, and local laws that apply to this project regardless of their inclusion in this program. In cases where specific jobsite safety requirements exceed OSHA Standards, employees are required to follow the jobsite safety requirements.**



**Site Superintendent Safety Violation Form**

**Project:** Construction of Community School 35

**Date:** \_\_\_\_\_

**Name of Subcontractor:** \_\_\_\_\_

**Violation:** \_\_\_\_\_

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\_\_\_\_\_

**Fine:**\$ \_\_\_\_\_

**Charity:** \_\_\_\_\_

**Comments:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
**Superintendent**

\_\_\_\_\_  
**Subcontractor**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Date**

## **8. New Employee Orientation**

All new employees shall be required to go through a safety orientation covering safety prevention, procedures and response measures, and an emphasis on Fall Protection. Safety orientation sets the tone for safety awareness and is an important element of Piazza's Safety Program.

New Hire Safety Orientations will be held at the project site or Piazza's corporate offices as needed.

During and at the conclusion of orientation, new employees will be encouraged to ask questions to make sure that the safety procedures are fully understood. The new employee will be asked some questions pertaining to job safety to confirm that he/she understands the safety goals of the company. A Safety Orientation Checklist shall be completed and signed by the individual(s) who conducted the orientation and the new employee.

NOTE: The new employee(s) will be encouraged throughout the orientation to ask any safety questions that may arise relating to his/her work. Other employees who are not considered "new employees" will receive safety orientation where necessary.

## Safety Orientation Checklist

The Safety Orientation Checklist is used to document safety training provided to all new and reassigned employees. Safety Orientation is intended to familiarize you with Piazza's Safety Program and to provide you with the information to help you recognize and avoid unsafe conditions in your workplace. This checklist includes all safety items to be covered during safety orientation. Employees are to check off each topic as it is covered.

Employee Name: \_\_\_\_\_ Date of Training: \_\_\_\_\_

Position: \_\_\_\_\_ Date of Hire: \_\_\_\_\_

General	Check	Welding and Cutting	Check
Housekeeping requirements.		Handling and using compressed gas cylinders.	
Where to locate mandatory posting requirements including emergency phone numbers.		Compressed gas cylinder storage requirements.	
Where to locate company safety program, hazard communication program, and SDS's.		Welding safety.	
Company hazard communication program content, including material safety data sheets.		<b>Electric</b>	
Employee responsibility for reporting accidents, near misses, and injuries.		Extension cord types acceptable to use at construction sites.	
Procedures to be taken in the event of a property damage site emergency.		Inspecting extension cords.	
Procedures to be taken in the event a person is injured at the jobsite.		Ground fault circuit interrupters.	
Company drug and alcohol policy.		Construction electrical safety requirements.	
<b>Personal Protective Equipment</b>		<b>Scaffolding</b>	
Company hard hat policy.		Erecting and dismantling scaffolds.	YES NO NA
Company policy regarding the use of safety glasses.		Using and maintaining scaffolds.	YES NO NA
Company hearing conservation program.		Competent person requirements.	
Company respiratory protection program.		Providing safe access to scaffolds.	
How to determine what personal protective equipment is needed for the job being performed.		Platform construction and fall protection requirements.	
<b>Fire Protection</b>		Electrical hazards associated with scaffold use.	
Storage of gasoline in safety cans.		Properly anchoring scaffolds.	
Types of fire extinguishers and their proper use.		Construction scaffold safety requirements.	
Fire protection requirements for protected building areas.		<b>Tools</b>	
Fire protection requirements for fuel storage areas and propane storage.		Using guards on power tools.	
Propane storage requirements.		Inspecting tools to insure they are free of damage or defects.	
Hot works permit requirements.	YES NO NA	Training requirements for using powder-actuated tools.	

## Safety Orientation Checklist

Fall Protection	Check	Excavations	Check
Pre-planning for fall hazards.		Underground electrical hazards. "Call be for you Dig" - UFPO at 1-800-962-7962.	
Construction safety requirements for fall protection.		Protection of the public from excavated areas.	
Guardrail erection and maintenance.		Competent person requirements for excavations.	
Installing covers on floor holes.		Working in excavations and the hazards associated with it.	
Use of fall arrest equipment.	YES NO NA	Safe access requirements.	
Fall protection plans.	YES NO NA	Construction safety requirements for excavations.	
STD 3-0.1A - Guidelines for Residential Fall Protection.	YES NO NA	Confined space hazards.	
Motor Vehicles and Heavy Equipment		Ladders	
The use of seat belts while operating company equipment or vehicles.		Electrical hazards associated with the use of ladders.	
Safety requirements while fueling company equipment or vehicles.		Determining the right ladder for the job.	
Recharging batteries and the use of jumper cables.		Using portable extension ladders to access upper levels.	
Inspecting equipment daily to insure horn, back-up alarm, and brakes are in good working condition.		Using step ladders properly.	
Certification requirements for operating lulls, JLG's, and similar equipment.	YES NO NA	Improper uses of portable and extension ladders.	

When training is finished, employees are to complete the statement at the end of the checklist confirming attendance at a safety orientation training session. They are also encouraged to make any comments pertaining to the safety training orientation or if they have any safety concerns they wish to discuss with the corporate safety director. Safety orientation checklists will be maintained at the main office. In some cases, copies of safety orientation checklists may be provided at the jobsite.

I, \_\_\_\_\_, understand fully all items discussed during my safety orientation.

Signature of Employee: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_

Signature of Trainer: \_\_\_\_\_ Date: \_\_\_\_\_  
\_\_\_\_\_

Employee Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Safety Meetings

## Purpose

Regular safety meetings provide information to employees which is necessary in order for them to continue to work safely. Safety meetings are a valuable tool to heighten safety awareness on the jobsite.

## Responsibilities

The job superintendent is responsible for conducting safety meetings with the supervisors. This can be accomplished as a part of established production meetings. Supervisors are responsible for weekly safety meetings with all of their employees. It is the responsibility of the job superintendent to see that weekly safety meetings are conducted in an orderly and productive manner. (Superintendent must make sure subcontractors are also performing safety meetings at least on a weekly basis.)

## Procedure

1. During the job superintendent's weekly meeting with supervisors, the subject of the next meeting with employees must be decided and any information or materials shall be provided to the supervisors.
2. All supervisors must schedule weekly meetings with all employees.
  - a) All of the employees must attend each safety meeting and sign in on a Tool Box Talk Attendance sheet.
  - b) Attendance sheets must be kept on file at the jobsite and a copy must be forwarded to the main office.
3. Guidelines for safety meetings are as follows:
  - a) Safety is the sole purpose of the meeting and other matters shall not be covered.
  - b) Safety meetings should be held at least once a week and cover a topic pertinent to the work being performed. The suggested duration of the meeting is ten to fifteen minutes but can exceed that time frame if safety issues need to be addressed.
  - c) Supervisors shall pass on the information discussed with the job superintendent to their employees. The supervisor shall discuss these issues and ask for comments and suggestions from the employees.
  - d) Comments and suggestions should be recorded for discussion at the next meeting with the job superintendent.
  - e) Administrative matters not contributing to safety are not appropriate topics to be discussed at safety meetings.
  - f) A record should be maintained containing the subjects presented or discussed.

4. Subjects for the safety meetings may come from:
- a) The insurance carrier
  - b) Local safety council
  - c) General Building Contractors of New York State
  - d) OSHA regulations
  - e) Fire department
  - f) Supervisors / Employees
  - g) Recent incidents
  - h) The customer
  - i) Consultant

Safety meetings shall consist of at least one mandatory toolbox talk and it is suggested to do an SDS as well.

## **9. Posting Requirements**

The following documents shall be posted in a location readily visible to all employees (i.e., inside job trailer, inside lid of a gang box, etc.):

1. OSHA
  - a) A poster illustrating industry standard crane hand signals must be posted if any crane or hoisting activities are being performed.
  - b) OSHA requires the OSHA 300A form to be posted from February 1 through April 30 each calendar year.
  - c) The OSHA Workplace Poster. OSHA Document 3165 (new version) or 2203 (old version), both are acceptable.
2. State
  - a) Employment of Minors, including Schedule of Permitted Hours.
  - b) Fair Employment and Discrimination laws.
  - c) Minimum Wage information.
  - d) Notice of Compliance of Workers' Compensation Benefits.
  - e) Notice of Unemployment Insurance
3. Federal
  - a) Occupational Safety & Health Act.
  - b) Federal Minimum Wage Notice.
  - c) Employee Polygraph Protection Notice.
  - d) Equal Employment Opportunity Commission Discrimination.
  - e) Family and Medical Leave Act.

## **JOB SAFETY & HEALTH PROTECTION**

The Occupational Safety & Health Act of 1970 provides job safety and health protection for workers by promoting safe and healthful working conditions throughout the Nation. Provisions of the Act include the following:



## You Have a Right to a Safe and Healthful Workplace.

# IT'S THE LAW!

- You have the right to notify your employer or OSHA about workplace hazards. You may ask OSHA to keep your name confidential.
- You have the right to request an OSHA inspection if you believe that there are unsafe and unhealthful conditions in your workplace. You or your representative may participate in the inspection.
- You can file a complaint with OSHA within 30 days of discrimination by your employer for making safety and health complaints or for exercising your rights under the *OSH Act*.
- You have a right to see OSHA citations issued to your employer. Your employer must post the citations at or near the place of the alleged violation.
- Your employer must correct workplace hazards by the date indicated on the citation and must certify that these hazards have been reduced or eliminated.
- You have the right to copies of your medical records or records of your exposure to toxic and harmful substances or conditions.
- Your employer must post this notice in your workplace.

The *Occupational Safety and Health Act of 1970 (OSH Act)*, P.L. 91-596, assures safe and healthful working conditions for working men and women throughout the Nation. The Occupational Safety and Health Administration, in the U.S. Department of Labor, has the primary responsibility for administering the *OSH Act*. The rights listed here may vary depending on the particular circumstances. To file a complaint, report an emergency, or seek OSHA advice, assistance, or products, call 1-800-321-OSHA or your nearest OSHA office: • Atlanta (404) 562-2300 • Boston (617) 565-9860 • Chicago (312) 353-2220 • Dallas (214) 767-4731 • Denver (303) 844-1600 • Kansas City (816) 426-5861 • New York (212) 337-2378 • Philadelphia (215) 861-4900 • San Francisco (415) 975-4310 • Seattle (206) 553-5930. Teletypewriter (TTY) number is 1-877-889-5627. To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website at [www.osha.gov](http://www.osha.gov). If your workplace is in a state operating under an OSHA-approved plan, your employer must post the required state equivalent of this poster.

**1-800-321-OSHA**  
**[www.osha.gov](http://www.osha.gov)**

## **10. Employee Exposure Assessment Program**

### **PURPOSE**

To provide guidelines for determining employee exposure when performing operations that produce fumes, mists, gases, vapors, airborne dust, etc.

### **Responsibilities of Management:**

1. Identify operations and tasks that produce airborne contaminants by utilizing instrumentation and/or by reviewing Material Safety Data Sheets for those products and materials. Contact suppliers, associations, consultants, and other resources that may provide additional information. Ensure all safety procedures are implemented according to applicable standards.
2. Develop a list that identifies all operations and tasks that produce airborne contaminants, the type of contaminant and the expected level of the contaminant in air.
3. Incorporate engineering improvements and/or personal protective equipment to reduce exposures to airborne dusts, fumes, mists, gases, vapors, etc., as identified in the list making sure all engineering controls are utilized prior to the use of respiratory protection.
4. Provide training programs and instructions for all contaminants, engineering improvements, and/or personal protective equipment identified in the list.

### **SUPERVISORY:**

1. Superintendents, supervisors, or group leaders are responsible for training personnel about the list of airborne contaminants, engineering improvements, and/or personal protective equipment.
2. They are also responsible for requesting measurement and evaluation of any new job or material for inclusion on the list of airborne contaminants, including engineering improvements and/or personal protective equipment.

## **11. OSHA Recordkeeping Requirements**

### **What work-related injuries and illnesses should you record?**

Record those work-related injuries and illnesses that result in:

- death;
- loss of consciousness;
- restricted work activity or job transfer, or aid
- days away from work;
- medical treatment beyond first aid

\* You must also record any significant work-related injury or illness that is diagnosed by a physician or licensed health care professional. You must record any work-related case involving cancer, a chronic irreversible disease, a fracture or cracked bone, or a punctured eardrum.

### **Medical Treatment**

*Medical Treatment* includes managing and caring for a patient for the purpose of combating disease or disorders. The following are **NOT** considered medical treatments and are **NOT** recordable:

- visits to a doctor or health care professional solely for observation or counseling;
- diagnostic procedures, including administering prescription medications that are used solely for diagnostic purposes; and
- any procedure that can be labeled *First Aid* (see below).

### **First Aid**

If the incident required only the following types of treatment, consider it first aid and **DO NOT** record the case:

- using non-prescription medications at non-prescription strength;
- administering tetanus immunizations;
- cleaning, flushing, or soaking wounds on the skin surface;
- using wound coverings, such as bandages, BandAids™, gauze pads, etc., or using SteriStrips™ or butterfly bandages;
- using hot or cold therapy;
- using any totally non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc.;
- using temporary immobilization devices while transporting an accident victim (splints, slings, neck collars, or back boards).
- drilling a fingernail or toenail to relieve pressure, or draining fluids from blisters;
- using eye patches;
- using simple irrigation or a cotton swab to remove foreign bodies not embedded in or adhered to the eye;
- using irrigation, tweezers, cotton swab or other simple means to remove splinters or foreign material from areas other than the eye;
- using finger guards;
- using massages;
- drinking fluids to relieve heat stress.

## **Recording the number of days away from work or restricted work activity**

You count the number of days an employee was on restricted work activity or was away from work as a result of a recordable injury. Do not count the day the injury/illness occurred, begin counting the day after. Count all days including weekends up to 180 days, then stop counting.

### **Forms**

- 300**      *Log of Work-Related Injuries and Illnesses*
- 300A**    *Summary of Work-Related Injuries and Illnesses* (for posting only)
- 301**      *Injury and Illness Incident Report*

## **Injury and Illness Report**

An OSHA 301 *Injury and Illness Report* is required to be filled out for each recordable case within 7 days after you receive information that a recordable injury or illness has occurred. However, a workers comp accident report or other form may be substituted provided it contains all the information requested on the OSHA 301.

## **Posting Requirements**

### **2002**

Post Your *OSHA 200 Log* with recordable injuries from 2001, February 1-28, 2002

### **2003 and after**

Post your *OSHA 300A Summary* February 1 through April 30 of the year following the year covered by the form (3 month posting requirement)

NOTE: OSHA 300 forms are required to be kept for each establishment occupied by a company. By OSHA's definition, a construction project expected to operate for a year or more is considered an establishment and must maintain its own OSHA 300 log and post its own OSHA 300A Summary.

## **12. Accident Investigation**

### **Purpose**

An accident investigation is necessary in order to determine the cause or causes of an accident. The investigation will enable PIAZZA to take the appropriate measures to prevent similar situations from reoccurring and to protect our interests in case of litigation. All accidents will be investigated including “near miss” incidents. The difference between an accident and a near miss is often a matter of chance.

### **When Is An Accident Investigation Conducted?**

An accident investigation is conducted as soon as possible after the incident, while the details are still clear in the minds of the parties who observed or who were involved in the accident. As time passes by after the incident, it becomes more difficult to accurately obtain facts, and conditions that may have caused the accident may have changed. A prompt, thorough investigation is crucial so the possibility of another accident due to the same faulty procedures or conditions is minimized.

Accidents generally are not caused by a single factor, but rather are the result of several conditions or actions. The purpose of the accident investigation is to gather information which can improve the safety and health conditions in the work environment.

### **Accident Investigations**

An Accident Investigation Report should be used to document the investigation. Consideration must be given to the types of equipment that may be needed to conduct an accident investigation. It is important that this equipment is available so if an accident occurs the tools needed to do a thorough investigation are in place.

### **Investigation Procedures**

1. First aid or medical care: The first priority in an accident is to provide first aid or medical care for the individual(s) injured. The next of kin should then be notified that an accident has occurred.
2. Reporting accidents: Report serious accidents by telephone immediately to the main office.
3. Documenting the scene: It is important to record the scene of the accident as it exists after the accident. The area should be isolated and restricted to authorized persons. Photographs should be taken and sketches drawn. When photographing the accident scene, make sure the camera is equipped with a flash, if needed, and that proper film speed is being used. A description of the photograph should be put on the back of the picture taken as well as the name of the person who took the picture.
4. Evidence preservation: Conditions change rapidly due to factors such as weather conditions or the necessity to make the area suitable for work to resume. The area must be blocked off from unauthorized personnel until the accident investigation is completed.

5. Notes on physical conditions: Notes should be taken on physical conditions that may have contributed to the accident. Information such as poor housekeeping, surface conditions of roadways/walkways, poor visibility, traffic, weather, defective scaffolding, etc., should be recorded.
6. Vehicles: If the accident involved vehicles, measure distances and plot locations of the vehicles, skid marks, equipment, barricades, etc.
7. Injury type: Note the location and type of injury that occurred. The location of the injury would be left forearm, right thumb, lower back, etc.
8. Other notes: Notes should be taken as to where on the project the accident happened and at what time it occurred. Additional notes should be taken on any other related factors.
9. Notification of agencies: As required by regulation, local and federal agencies should be notified. In the event of a fatality or catastrophe (an incident resulting in the hospitalization of three or more employees) OSHA must be notified within eight hours.
10. Interviewing employees/public: Employees or public who witnessed or were involved in the accident should be interviewed. Interviews should be held in the presence of others for verification purposes. Get all sides and interview as many witnesses as possible. Questions such as what activities were being done, method used, position of equipment and personnel, and any other unsafe acts observed should be asked. Ask witnesses to provide a detailed written statement to document what he/she observed. Obtain the names, social security numbers, license numbers, addresses, phone numbers, and insurance carriers of all witnesses.
11. Investigate employee training: Investigate if hazards and the appropriate safe work practices related to the accident were covered with the employee(s) involved in the incident through orientation, tool box talks, or by other means. Be sure to document any training that was provided that was applicable to work being performed when the accident occurred.
12. Physical and mental condition: Consider physical and mental conditions that may have contributed to the accident. Conditions such as blacking out, drugs or alcohol, medication, and other conditions should be addressed.
13. Maintain contact: Maintain contact with the injured party and their family.
14. Request copies of reports: If the police, emergency rescue squad, or the fire department are on site as a result of the accident, request a copy of their reports. They usually conduct an investigation and information they obtained may be helpful.
15. Information pertaining to the accident: Information pertaining to the investigation should not be provided to anyone (except OSHA, with prior approval from main office). All other interested parties who request information concerning the accident should be informed that an investigation is being conducted and that no information

16. will be available until the findings have been made. **Note:** The main office must authorize the release of any information pertaining to an accident that occurred at a PIAZZA jobsite.
17. Litigation: If an accident occurs that is of a serious nature, the accident may end up in litigation. It is important that the investigation be done correctly and documented. If technical matters are involved in the accident in which you do not have sufficient expertise, you should seek the assistance of a specialist.

## **Interviewing**

The interviewer must be complete, correct, and ask pertinent questions. It is important to listen carefully to the person being interviewed and to record all information that is given. The purpose of the interview is to obtain a comprehensive and accurate account of all pertinent information that relates to the accident under investigation. The interview must be conducted in a professional manner and the person interviewed should be encouraged to describe the accident as they observed it. There are simple questions that should be asked when conducting an interview. These questions are who, what, when, where, how, and why the accident occurred.

Interviews may be the primary source of information in an accident investigation. The interview must be conducted in a thorough and efficient manner. Guidelines for accomplishing a high quality investigation are as follows:

1. Know where the interview is going to lead. If possible, prepare in advance.
2. Make sure you have an understanding of the equipment or process involved in the accident. This demonstrates knowledge and enables you to ask suitable questions.
3. Schedule interviews to allow for enough time at each interview to ask all questions.
4. Interviews should be held in private so there are no distractions. This allows you to focus your attention on what the interviewee has to say concerning the accident.
5. Be careful not to be overbearing in the tone of your voice or your mannerisms. When speaking to the interviewee use language that the employee can understand.
6. Remember that the purpose of the interview is to obtain information. If possible, avoid asking questions that suggest an expected answer or can only produce an answer of yes or no.
7. Keep control of the interview and let the person being interviewed talk. Keep the conversation from getting away from the subject at hand.
8. If you are interviewing witnesses, let the person describe what they observe your questions. After they have given their description, ask your questions and record both versions. Do not ask leading questions. Allow the individual(s) to tell their own story.
9. Avoid using generalizations. Be specific

10. Evaluate the evidence. Check what witnesses say with the conditions you observed at the accident scene. Investigate all clues and do not overlook any aspect of the accident.
11. Stress that you are not looking to place blame on someone but are seeking the cause to prevent a reoccurrence.
12. Close the interview in a courteous manner. Make sure what was said during the interview was recorded and have the statement signed by the person being interviewed. Encourage the person to contact you if any other information concerning the accident comes to mind.

## **Analyzing the Testimony**

When analyzing the testimony, remember that the individuals interviewed are human and are capable of being mistaken or misleading, exaggerating, or withholding information. The investigator should determine how much valid factual evidence exists and how much of the testimony is conflicting. Only substantial testimony should be relied upon when determining the cause of the accident.

## **Documentation**

1. If the owner of the property where the accident occurred is against the taking of photographs/video, conduct the investigation without their use and document the owner's request.
2. Prior to taking any pictures/video, determine if the accident scene has been altered for rescue purposes or for any other reason. If the area has been changed since the accident, note what alterations were done and the individual's name and social security number referencing the change.
3. When taking pictures, it is beneficial to incorporate a scale for the picture to indicate vertical or horizontal dimension. Obviously, this is not always an option, but should be done if possible. A ruler or tape measure will suffice.
4. After developing the photographs, the following information should be attached to or written on the back of each picture:
  - a) Employer's name and address.
  - b) Location on the jobsite in which the accident occurred.
  - c) Month, day, time, and year picture was taken.
  - d) A description of what the photograph is identifying.
  - e) Signature and social security number of the person who took the picture.



## **Correction Procedures**

Determining the cause or causes of an accident or incident is important to prevent similar occurrences from taking place in the future. Once root causes of an accident are identified, a training session will be held to implement new procedures and/or to provide awareness training to all appropriate field, yard, and management staff.

Completed accident reports, correspondence, and subsequent training attendance sheets which indicate what training was performed must be filed with the main office.

**Jobsite Accident Report**

**Project:** Construction of Community School 35

Job Name:		Job Phone:			
Street Address:					
City:		State:		Zip:	

**Incident Information**

Date and Time of Incident:		Location:	
Incident information provided by: (Name, company, date)		Superintendents Name:	
Description of Incident and Known Injuries:			

**Injured Person:**

Name of Injured:		SSN:		Birth date:	
Street Address:					
City:		State:		Zip:	
Taken to medical facility:	Yes	No	If Yes, by whom:		
Name and Address of Medical Facility:					
Job Title:		Years With Company:		Supervisor:	
Employer:		Phone Number:			
Was a written statement provided by injured:	YES	NO	Was written statement filed properly:	YES	NO
Was a verbal statement provided by injured:	YES	NO	Was statement documented:	YES	NO

**Witness**

Name:		Phone Number:			
Street Address:		SSN:			
City:		State:		Zip:	
				Employer:	
Was a written statement provided by witness:	YES	NO	Was written statement filed properly:	YES	NO
Was a verbal statement provided by the witness:	YES	NO	Was statement documented:	YES	NO

**Witness**

Name:		Phone Number:			
Street Address:		SSN:			
City:		State:		Zip:	
				Employer:	
Was a written statement provided by witness:	YES	NO	Was written statement filed properly:	YES	NO
Was a verbal statement provided by the witness:	YES	NO	Was statement documented:	YES	NO

**Witness**

Name:		Phone Number:			
Street Address:		SSN:			
City:		State:		Zip:	
				Employer:	
Was a written statement provided by witness:	YES	NO	Was written statement filed properly:	YES	NO
Was a verbal statement provided by the witness:	YES	NO	Was statement documented:	YES	NO

**Use additional accident report sheets provided for any additional information pertaining to the accident.**

## Accident Report Sheet

**Project:** Construction of Community School 35

Job Name:	Theatre Renovations	Job Phone:	
Street Address:			
City:		State:	Zip:

Incident information provided by: (Name, company, date)
Date and Time of Incident:
Description of incident:

Please hand the following packet to an injured employee



# You were injured at work. What now?

If you have suffered a workplace injury or illness, you may be eligible for workers' compensation benefits. You may have already received medical treatment. If you haven't, you should seek medical care as soon as possible.

For assistance with your claim, call the **Workers' Compensation Board** at **(877) 632-4996**.

## Your Responsibilities

- You must notify your employer, in writing, when, where and how you were injured. Do this as soon as possible within 30 days of injury.
- Advise your health care providers that you have a work-related injury, and give the name of your employer. Do not pay for your care or use other health insurance. Your health care provider will file medical reports with the Board and with your employer or its insurance carrier. If your case is disputed, the Board needs a medical report on your injury to begin resolving your claim.
- You should file an **Employee Claim** (Form C-3) reporting your injury to the Board as soon as possible (you must notify the Board of your injury or illness within two years). If you injured the same body part before, or had a similar illness, you must also file a **Limited Release of Health Information** (Form C-3.3).

## Two ways to file a Claim

Visit [wcb.ny.gov](http://wcb.ny.gov) and select **File a Claim**.

Complete the enclosed paper form(s) and mail to the Board.

If you have questions about filing an **Employee Claim (Form C-3)**, please call **(877) 632-4996** and a Board representative will assist you.

## Health Care and Travel Bills

**Do not** pay your health care provider or hospital for treatment received for this injury/illness. Those bills are paid by the insurer unless the Board issues a decision that finds your claim is not valid. If your case is disputed, the healthcare providers will be paid if the Board decides your case in your favor. *However, if the Board decides against you, or if you don't pursue a case, you will have to pay the health care provider or hospital (or submit to your health insurance carrier).*

Your employer's workers' compensation insurance covers medically necessary drugs and equipment your health care provider prescribes. You may also be reimbursed for mileage, public transportation or other necessary expenses incurred when traveling for treatment. Make sure that you obtain receipts for those expenses, and submit them to your workers' compensation insurer on a **Claimant's Record of Medical and Travel Expenses and Request for Reimbursement** (Form C-257).

## CLAIMANT INFORMATION PACKET

Generally, you can choose any health care provider as long as the provider is authorized by the Board. You can search for an authorized health care provider in your area using the “**Find a Doctor**” feature on the Board’s website at [wcb.ny.gov](http://wcb.ny.gov). You can also use occupational health clinics. However, if your employer’s workers’ compensation insurer has a Preferred Provider Organization (PPO) to provide care for workers’ compensation injuries, you must get your initial treatment from the PPO network. If that insurer also has a pharmacy or diagnostic network, you must receive services within these networks. The insurer must tell you about its required provider networks and how to use them.

### Benefits for Lost Wages

You are entitled to a portion of your lost wages, which must be paid promptly, if your injury affects you in one or more of the following ways:

1. It keeps you from work for more than seven days.
2. Part of your body is permanently disabled.
3. Your pay is reduced because you now work fewer hours or do other work.

You may hire an attorney or licensed representative for help with your claim, but it isn’t required. The Board sets their fees, which will be deducted from your lost wages award. You or your family should not pay anything directly to your attorney or licensed representative.

If your case is disputed, you may receive disability benefits while the case is heard. To get a **Notice and Proof of Claim for Disability Benefits** (Form DB-450), visit [wcb.ny.gov](http://wcb.ny.gov); call the Board for assistance; or visit a Board office. If the case is resolved in your favor, the disability benefits would be deducted from your lost wages award.

### Help is Available

Sometimes you need help getting back to work. Your employer may have alternative or light duty assignments that enable you to work while you heal. An injury can also cause family or financial problems. The Board has vocational rehabilitation counselors and social workers to help. Call the Board for more information on available services and for assistance.

If you are concerned about dependency on opioid pain medications, please call the NYS OASAS HOPELine at **877-8-HOPENY (877-846-7369)**.

### What’s Next?

Your employer or its workers’ compensation insurance carrier will contact you if your claim is accepted. When that happens, your health care providers will be paid and lost wage benefits begin. If your case is disputed, the Board will notify you about resolving the case and may request additional information if necessary.

## IMPORTANT CONTACT INFORMATION

Workers’ Compensation Board,  
including Disability Benefits

(877) 632-4996

[general\\_information@wcb.ny.gov](mailto:general_information@wcb.ny.gov)

[wcb.ny.gov](http://wcb.ny.gov)



The Board’s eCase application enables you to view the contents of your case folder online. For general information or to register for eCase, please visit the Board’s website at [wcb.ny.gov](http://wcb.ny.gov).



**Workers’  
Compensation  
Board**



# Employee Claim

## State of New York - Workers' Compensation Board

Fill out this form to apply for workers' compensation benefits because of a work injury or work-related illness. Type or print neatly. This form may also be filled out on-line at [www.wcb.ny.gov](http://www.wcb.ny.gov).

WCB Case Number (if you know it): \_\_\_\_\_

### A. YOUR INFORMATION (Employee)

- 1. Name: \_\_\_\_\_  
First MI Last
- 2. Date of Birth: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 3. Mailing address: \_\_\_\_\_  
Number and Street/PO Box/Apartment No. City State Zip Code
- 4. Social Security Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_
- 5. Phone Number: (\_\_\_\_) \_\_\_\_\_
- 6. Gender:  Male  Female
- 7. Will you need a translator if you have to attend a Board hearing?  Yes  No If yes, for what language? \_\_\_\_\_

### B. YOUR EMPLOYER(S)

- 1. Employer when injured: \_\_\_\_\_
- 2. Phone Number: (\_\_\_\_) \_\_\_\_\_
- 3. Your work address: \_\_\_\_\_  
Number and Street City State Zip Code
- 4. Date you were hired: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 5. Your supervisor's name: \_\_\_\_\_
- 6. List names/addresses of any other employer(s) at the time of your injury/illness: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 7. Did you lose time from work at the other employment(s) as a result of your injury/illness?  Yes  No

### C. YOUR JOB on the date of the injury or illness

- 1. What was your job title or description? \_\_\_\_\_
- 2. What types of activities did you normally perform at work? \_\_\_\_\_  
\_\_\_\_\_
- 3. Was your job? (check one)  Full Time  Part Time  Seasonal  Volunteer  Other: \_\_\_\_\_
- 4. What was your gross pay (before taxes) per pay period? \_\_\_\_\_
- 5. How often were you paid? \_\_\_\_\_
- 6. Did you receive lodging or tips in addition to your pay?  Yes  No If yes, describe: \_\_\_\_\_  
\_\_\_\_\_

### D. YOUR INJURY OR ILLNESS

- 1. Date of injury or date of onset of illness: \_\_\_\_/\_\_\_\_/\_\_\_\_
- 2. Time of injury: \_\_\_\_\_  AM  PM
- 3. Where did the injury/illness happen? (e.g., 1 Main Street, Pottersville, at the front door) \_\_\_\_\_  
\_\_\_\_\_
- 4. Was this your usual work location?  Yes  No If no, why were you at this location? \_\_\_\_\_  
\_\_\_\_\_
- 5. What were you doing when you were injured or became ill? (e.g., unloading a truck, typing a report) \_\_\_\_\_  
\_\_\_\_\_
- 6. How did the injury/illness happen? (e.g., I tripped over a pipe and fell on the floor) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 7. Explain fully the nature of your injury/illness; list body parts affected (e.g., twisted left ankle and cut to forehead): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



YOUR NAME: \_\_\_\_\_  
First MI Last

DATE OF INJURY/ILLNESS: \_\_\_\_/\_\_\_\_/\_\_\_\_

**D. YOUR INJURY OR ILLNESS *continued***

8. Was an object (e.g., forklift, hammer, acid) involved in the injury/illness?  Yes  No If yes, what? \_\_\_\_\_
9. Was the injury the result of the use or operation of a licensed motor vehicle?  Yes  No  
If yes,  your vehicle  employer's vehicle  other vehicle License plate number (if known): \_\_\_\_\_  
If your vehicle was involved, give name and address of your motor vehicle insurance carrier: \_\_\_\_\_
10. Have you given your employer (or supervisor) notice of injury/illness?  Yes  No  
If yes, notice was given to: \_\_\_\_\_  orally  in writing Date notice given: \_\_\_\_/\_\_\_\_/\_\_\_\_
11. Did anyone see your injury happen?  Yes  No  Unknown If yes, list names: \_\_\_\_\_

**E. RETURN TO WORK**

1. Did you stop work because of your injury/illness?  Yes, on what date? \_\_\_\_/\_\_\_\_/\_\_\_\_  No, skip to Section F.
2. Have you returned to work?  Yes  No If yes, on what date? \_\_\_\_/\_\_\_\_/\_\_\_\_  regular duty  limited duty
3. If you have returned to work, who are you working for now?  Same employer  New employer  Self employed
4. What is your gross pay (before taxes) per pay period? \_\_\_\_\_ How often are you paid? \_\_\_\_\_

**F. MEDICAL TREATMENT FOR THIS INJURY OR ILLNESS**

1. What was the date of your first treatment? \_\_\_\_/\_\_\_\_/\_\_\_\_  None received (skip to question F-5)
2. Were you treated on site?  Yes  No
3. Where did you receive your first off site medical treatment for your injury/illness?  none received  Emergency Room  
 Doctor's office  Clinic/Hospital/Urgent Care  Hospital Stay over 24 hours  
Name and address where you were first treated: \_\_\_\_\_  
\_\_\_\_\_ Phone Number: (\_\_\_\_) \_\_\_\_\_
4. Are you still being treated for this injury/illness?  Yes  No  
Give the name and address of the doctor(s) treating you for this injury/illness: \_\_\_\_\_  
\_\_\_\_\_ Phone Number: (\_\_\_\_) \_\_\_\_\_
5. Do you remember having another injury to the same body part or a similar illness?  Yes  No  
If yes, were you treated by a doctor?  Yes  No If yes, provide the names and addresses of the doctor(s) who treated you and **COMPLETE AND FILE FORM C-3.3 TOGETHER WITH THIS FORM:**  
\_\_\_\_\_  
\_\_\_\_\_
6. Was the previous injury/illness work related?  Yes  No  
If yes, were you working for the same employer that you work for now?  Yes  No

**I am hereby making a claim for benefits under the Workers' Compensation Law. My signature affirms that the information I am providing is true and accurate to the best of my knowledge and belief.**

**Any person who knowingly and with INTENT TO DEFRAUD presents, causes to be presented, or prepares with knowledge or belief that it will be presented to, or by an insurer, or self-insurer, any information containing any FALSE MATERIAL STATEMENT or conceals any material fact, SHALL BE GUILTY OF A CRIME and subject to substantial FINES AND IMPRISONMENT.**

Employee's Signature: \_\_\_\_\_ Print Name: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

On behalf of Employee: \_\_\_\_\_ Print Name: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

*An individual may sign on behalf of the employee only if he or she is legally authorized to do so and the employee is a minor, mentally incompetent or incapacitated.*

I certify to the best of my knowledge, information and belief, formed after an inquiry reasonable under the circumstances, that the allegations and other factual matters asserted above have evidentiary support, or are likely to have evidentiary support after a reasonable opportunity for further investigations or discovery.

Signature of Attorney/Representative (if any): \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Print Name: \_\_\_\_\_ Title: \_\_\_\_\_

ID No., if any: R \_\_\_\_\_ If Licensed Representative, License No.: \_\_\_\_\_ Expiration Date: \_\_\_\_/\_\_\_\_/\_\_\_\_



WCB Case No. (if you know it): \_\_\_\_\_

**To Claimant:** If you received treatment for a *previous* injury to the same body part or for an illness similar to the one described in your current Claim, fill out this form. This form allows the health care providers you list below to release health care information about your previous injury/illness to your employer's workers' compensation insurer. The federal HIPAA law (Health Insurance Portability and Accountability Act of 1996) says you have a right to get a copy of this form. If you do not understand this form, talk to your legal representative. If you do not have a legal representative, the Advocate for Injured Workers at the Workers' Compensation Board can help you. Call: 800-580-6665.

**To Health Care Provider:** A **copy** of this HIPAA-compliant release allows you to disclose health information. If you send records to the employer's workers' compensation insurer in response to this release, also mail copies to the Claimant's legal representative. (If no legal representative is listed below, send copies to the Claimant.) Health care providers who release records must follow New York state law and HIPAA.

This release is:

- **Voluntary.** Your health care provider(s) must give you the same care, payment terms, and benefits, whether you sign this form or not.
- **Limited.** It gives your health care provider(s) permission to release only those health records that are related to the previous illness/condition you describe below.
- **Temporary.** It ends when your current claim for compensation is established or disallowed and all appeals are exhausted.
- **Revocable.** You can cancel this release at any time. To cancel, send a letter to the health care provider(s) listed on this form. Also, send a copy of your letter to your employer's workers' compensation insurer and the Workers' Compensation Board. *Note: You may not cancel this release with respect to medical records already provided.*
- **For records only.** It gives your health care provider(s) listed on this form permission to send copies of your health care records to your employer's workers' compensation insurer.

This form does NOT allow your health care provider(s) to release the following types of information:

- **HIV-related information**
- **Psychotherapy notes**
- **Alcohol/Drug treatment**
- **Mental Health treatment** (unless you check below)
- **Verbal information** (your health care providers may not discuss your health care information with anyone)

Any medical records released will become part of your workers' compensation file and are confidential under the Workers' Compensation Law.

**A. YOUR INFORMATION (Claimant)**

1. Name: \_\_\_\_\_
2. Social Security Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_
3. Mailing Address: \_\_\_\_\_
4. Date of Birth: \_\_\_\_ / \_\_\_\_ / \_\_\_\_
5. Date of the current injury/illness: \_\_\_\_ / \_\_\_\_ / \_\_\_\_
6. Current injury/illness, including all body parts injured: \_\_\_\_\_
7. Your legal representative's name and address (if any): \_\_\_\_\_

Check here if you allow your health care provider(s) to release **mental health care** information.

**B. YOUR HEALTH CARE PROVIDER(S)** (List all health care providers who treated you for a *previous* injury to the same body part or similar illness. If more than 2 providers attach their contact information to this form.)

1. Provider: \_\_\_\_\_
2. Phone Number: (\_\_\_\_\_) \_\_\_\_\_
3. Mailing Address: \_\_\_\_\_
4. Other provider (if any): \_\_\_\_\_
5. Phone Number: (\_\_\_\_\_) \_\_\_\_\_
6. Mailing Address: \_\_\_\_\_

**C. READ AND SIGN BELOW.** I hereby request that the health care provider(s) listed above give my employer's workers' compensation insurer copies of all health records related to any previous injury/illness, to all body parts, described above.

\_\_\_\_\_  
Claimant's signature (ink only -- use blue ballpoint pen, if possible.)

\_\_\_\_\_  
Date

**If the claimant is unable to sign,** the person signing on his/her behalf must fill out and sign below:

\_\_\_\_\_  
Your name

\_\_\_\_\_  
Relationship to Claimant

\_\_\_\_\_  
Signature (ink only -- use blue ballpoint pen, if possible.)

\_\_\_\_\_  
Date



WCB Case No. (if you know it) (Número de caso WCB [si lo sabe])

Al reclamante: Si usted recibió tratamiento por una lesión anterior en la misma parte del cuerpo o por una enfermedad similar a la que motiva ahora su reclamación, complete este formulario. Este formulario les permite a los proveedores de salud que usted señala a continuación divulgar a la compañía de seguros de compensación obrera de su empleador la información sobre su salud relacionada con su lesión/enfermedad anterior. La Ley federal HIPAA (Ley de portabilidad y responsabilidad del seguro de salud de 1996) establece que usted tiene derecho a recibir una copia de este formulario. Si no comprende este formulario, hable con su representante legal. Si no tiene un representante legal, el Representante de los obreros lesionados de la Junta de Compensación Obrera puede ayudarlo. Llame al 800-580-6665.

Al proveedor de salud: Una copia de esta divulgación, redactada según lo que establece la ley HIPAA, le permite divulgar información sobre la salud. Si envía los registros al asegurador de compensación obrera del empleador en respuesta a la presente divulgación, también debe enviar por correo copias al representante legal del reclamante. (Si a continuación no se especifica un representante legal, envíe las copias al reclamante). Los proveedores de salud que divulgan los registros deben cumplir con las leyes del estado de Nueva York y la HIPAA.

Esta divulgación es:
• Voluntaria. Su(s) proveedor(es) de salud deben otorgarle la misma atención, condiciones de pago y beneficios, independientemente de que usted firme este formulario o no.
• Limitada. Le otorga a su(s) proveedor(es) de salud permiso para divulgar únicamente los registros médicos que se relacionen con la enfermedad/afección anterior que usted describe a continuación.
• Temporal. Termina cuando se otorgue o desestime su actual reclamación de compensación y se hayan agotado todas las apelaciones.
• Revocable. Usted puede cancelar esta divulgación en cualquier momento. Para hacerlo, envíe una carta al (a los) proveedor(es) de salud que se indican en este formulario. Además, envíe una copia de su carta a la compañía de seguros de compensación obrera de su empleador y a la Junta de Compensación Obrera. Nota: No podrá cancelar esta divulgación en lo que se refiere a registros médicos que ya se hayan provisto.
• Solamente para registros. Le otorga a su(s) proveedor(es) de salud que se indica(n) en este formulario permiso para enviar copias de sus registros de salud a la compañía de seguros de compensación obrera de su empleador.

Este formulario NO autoriza a su(s) proveedor(es) de salud a divulgar los siguientes tipos de información:
• Información relacionada con el VIH
• Notas de terapia psicológica
• Tratamientos por abuso de alcohol o drogas
• Tratamiento de salud mental (a menos que usted lo indique a continuación)
• Información verbal (sus doctores no pueden hablar con nadie sobre su información de salud)

Los registros médicos divulgados se incorporarán a su expediente de compensación obrera y son confidenciales conforme a la Ley de compensación obrera.

CONTESTA LAS SIGUIENTES PREGUNTAS, EN INGLÉS SI ES POSIBLE, EN LOS ESPACIOS PROVISTOS Y FIRMA AL FRENTE DE LA FORMA.

A. YOUR INFORMATION (Claimant) INFORMACIÓN PERSONAL (Reclamante)

- 1. Name (Nombre) 2. Social Security Number (Número de seguro social)
3. Mailing Address (Dirección postal)
4. Date of Birth (Fecha de nacimiento) 5. Date of the current injury/illness (Fecha de la lesión/enfermedad actual)
6. Current injury/illness, including all body parts injured (Descripción de la lesión/enfermedad actual, incluyendo todas las partes del cuerpo lesionadas)
7. Your legal representative's name and address (if any) (Nombre y dirección de su representante legal [si corresponde])
Check here if you allow your health provider(s) to release mental health care information. (Marque aquí si autoriza a su(s) proveedor(es) de salud a divulgar información sobre tratamientos de salud mental.)

B. YOUR HEALTH CARE PROVIDERS (List all health care providers who treated you for a previous injury to the same body part or similar illness. If more than 2 providers, attach their contact information to this form.)

SU(S) PROVEEDOR(ES) DE SALUD (Enumere todos los proveedores de salud que le han tratado por lesiones previas a las mismas áreas del cuerpo ó por enfermedades semejantes. Si son más de 2 proveedores, adjunte su información de contacto a este formulario.)

- 1. Provider (Proveedor de salud) 2. Phone Number (Nº de teléfono)
3. Mailing Address (Dirección postal)
4. Other provider (if any) (Otro proveedor [si corresponde]) 5. Phone Number (Nº de teléfono)
6. Mailing Address (Dirección postal)

C. READ AND SIGN BELOW I hereby request that the health care provider(s) listed above give my employer's workers' compensation insurer copies of all health records related to any previous injury/illness, to all body parts, described above. LEA Y FIRME A

CONTINUACIÓN. Por la presente solicito que los proveedores de salud aquí enumerados le provean al asegurador de compensación obrera de mi patrono copias de todos los records médicos relacionados a cualquier lesión/enfermedad aquí enumeradas.

If the claimant is unable to sign, the person signing on his/her behalf must fill out and sign below: (Si el reclamante no puede firmar, la persona que firme el formulario en su nombre y representación debe llenar y firmar a continuación)

Claimant's signature (Firma del reclamante) use solo tinta - preferiblemente azul Date (Fecha)

Your name (Su nombre) Relationship to Claimant (Relación con el reclamante) Signature(Firma) Date(Fecha)

## Instructions for Completing Employee Claim (Form C-3)

Please complete this form and send it to the Workers' Compensation Board centralized mailing address listed at the end of these instructions. If you need additional help completing this form, contact the Workers' Compensation Board at **1-877-632-4996**. You may also fill this form out online at **wcb.ny.gov**. If you do not have or know your Workers' Compensation Board Case Number, please leave this field blank. It is not required to process your claim. Remember to enter your name and the date of your injury/illness on the top of page two.

### Section A - Your Information (Employee):

In Section A, enter your name, address and other requested information.

**Note on Item 7:** Board hearings are conducted in English. If you need a translator, select **Yes** and indicate the language needed.

#### Notification Pursuant to the New York Personal Privacy Protection Law (Public Officers Law Article 6-A) and the Federal Privacy Act of 1974 (5 U.S.C. § 552a).

The Workers' Compensation Board's (Board's) authority to request that claimants provide personal information, including their social security number, is derived from the Board's investigatory authority under Workers' Compensation Law (WCL) § 20, and its administrative authority under WCL § 142. This information is collected to assist the Board in investigating and administering claims in the most expedient manner possible and to help it maintain accurate claim records. Providing your social security number to the Board is voluntary. There is no penalty for failure to provide your social security number on this form; it will not result in a denial of your claim or a reduction in benefits. The Board will protect the confidentiality of all personal information in its possession, disclosing it only in furtherance of its official duties and in accordance with applicable state and federal law.

### Section B - Your Employer(s):

In Section B, enter the name, address, phone number and other information of the employer you were working for at the time of the injury/illness.

**Note:** Your employer is the company or agency that issues your paycheck. If you are a contractor at a work site or office, the staffing agency or vendor who hired you is your employer, not the work site or office where you report to work.

### Section C - Your Job on the Date of the Injury or Illness:

In Section C, enter your job title, work activities and pay information.

### Section D - Your Injury or Illness:

In Section D, enter your injury or illness information.

**Item 1:** Enter the date you were injured or the first date you noticed you became ill.

If this is an illness or occupational disease, skip item 2. The date you were injured must be in month/day/year format. The year should be written as four digits, e.g., 2015.

**Item 2:** Enter the time when the injury occurred. Check whether it was AM or PM.

**Item 3:** Indicate the location where the injury/illness occurred, including the address of the building and the physical location in the building where the injury/illness happened.

**Item 4:** Check whether this was your normal work location. If it was not, explain why you were at this location.

**Item 5:** Describe in detail what you were doing at the time of the injury/illness (e.g., unloading boxes from a truck by hand). This explains the events leading up to the injury.

**Item 6:** Describe in detail how the injury/illness occurred (e.g., I was lifting a heavy box off a truck). This should include all people and events involved in the injury/illness.

**Item 7:** Indicate fully the nature and extent of your injury/illness, including all body parts injured. Be as specific as possible (e.g., I strained my back trying to lift a heavy box. It hurts to bend over or hold even lighter objects now).

**Item 8:** Indicate if some object was involved in the accident **other than** a licensed motor vehicle. Other objects may include a tool (e.g., hammer), a chemical (e.g., acid), machinery (e.g., forklift or drill press), etc.

**Item 9:** Indicate if a licensed motor vehicle was involved in the accident. If so, check if the motor vehicle involved was yours, your employer's, or a third party's. Include the license plate number (if known). If your vehicle was involved, fill out the name and address of your automobile liability insurance carrier.

**Item 10:** Check if you gave your employer or supervisor notice of your injury or illness. If so, indicate who you gave notice to as well as if it was orally or in writing. Include the date you gave notice.

**Item 11:** Check if anyone else saw the injury happen. If anyone did see it, include their name(s).

### Section E - Return to Work:

**Item 1:** If you stopped working as a result of your work-related injury/illness, check Yes and indicate the date you stopped working. If you have not stopped working, check No and skip to the next section.

**Item 2:** If you have since returned to work, check Yes. Also indicate on what date you started working again, as well as if you have returned to your Normal Duties or if you are on Limited or Restricted Duty. (If you have not returned to your full pre-injury or illness work duties, then you are on Limited Duty.)

**Item 3:** If you have returned to work, indicate who you are working for now.

**Item 4:** Enter your gross pay (before tax pay) per pay period for the job you are working at now. Indicate how often you are receiving a paycheck (weekly, bi-weekly, etc.).

## **Section F - Medical Treatment for This Injury or Illness:**

**Item 1:** If you did not receive medical treatment for this injury/illness, check None Received and skip to item 5. Otherwise, enter the date you first received treatment for this injury/illness and complete the rest of this section.

**Item 2:** Check if you were first treated on the job for this injury or illness.

**Item 3:** Check the location where you first received off site medical treatment for your injury or illness. Include the name and address of the facility as well as the phone number (including area code).

**Item 4:** If you are still receiving ongoing treatment for the same injury or illness, check Yes and indicate the name and address of the doctor(s) providing treatment as well as the phone number (including area code); otherwise, check No.

**Item 5:** If you believe you already had an injury to the same body part or a similar illness, check Yes and indicate if you were treated by a doctor for this injury or illness. If you were treated by a doctor, indicate the name(s) and address(es) of the doctor(s) whom provided care and **complete and file Form C-3.3 together with this form.**

**Item 6:** If you had a previous injury or illness, check if your previous injury or illness was work-related. If Yes, check if the injury or illness happened while working for your current employer.

Sign Form C-3 in the place provided for Employee's Signature on page 2, print your name, and enter the date you signed the form. If a third-party is signing on behalf of the employee, that person should sign on the second signature line. If you have legal representation, your representative **must** complete and sign the attorney/representative's certification section on the bottom of page 2.

## **What Every Worker Should Do in Case of On-The-Job Injury or Occupational Disease:**

1. Immediately tell your employer or supervisor when, where and how you were injured.
2. Secure medical care immediately.
3. Tell your doctor to file medical reports with the Board and with your employer or its insurance carrier.
4. Make out this claim for compensation and send it to the nearest Workers' Compensation Board Office. (See below.) Failure to file within two years after the date of injury may result in your claim being denied. If you need help in completing this form, telephone or visit the nearest Workers' Compensation Board Office listed below.
5. Go to all hearings when notified to appear.
6. Go back to work as soon as you are able; compensation is never as high as your wage.

## **Your Rights:**

1. Generally, you are entitled to be treated by a doctor of your choice, provided he/she is authorized by the Board. If your employer is involved in a preferred provider organization (PPO) arrangement, you must obtain initial treatment from the preferred provider organization which has been designated to provide health care services for workers' compensation injuries.
2. DO NOT pay your doctor or hospital. Their bills will be paid by the insurance carrier if your case is not disputed. If your case is disputed, the doctor or hospital must wait for payment until the Board decides your case. In the event you fail to prosecute your case or the Board decides against you, you will have to pay the doctor or hospital.
3. You are also entitled to be reimbursed for drugs, crutches, or any apparatus properly prescribed by your doctor and for carfares or other necessary expenses going to and from your doctor's office or the hospital. (Get receipts for such expenses.)
4. You are entitled to compensation if your injury keeps you from work for more than seven days, compels you to work at lower wages, or results in permanent disability to any part of your body.
5. Compensation is payable directly and without waiting for an award, except when the claim is disputed.
6. Injured workers or dependents of deceased workers may represent themselves in matters before the Board or may retain an attorney or licensed representative to represent them. If an attorney or licensed representative is retained, his/her fee for legal services will be reviewed by the Board and if approved will be paid by the employer or insurance company out of any compensation benefits due. Injured workers or dependents of deceased workers should not directly pay anything to the attorney or licensed representative representing them in a compensation case.
7. If you need help returning to work, or with family or financial problems because of your injury, contact the Workers' Compensation Board office nearest you and ask for a rehabilitation counselor or social worker.

**This form should be filed by sending directly to the address listed below:**

**New York State Workers' Compensation Board  
Centralized Mailing  
PO Box 5205  
Binghamton, NY 13902-5205**

**Customer Service Toll-Free Number: 877-632-4996**

## **13. Jobsite Safety Inspections**

Frequent and regular jobsite safety inspections are an important part of an effective safety program. In addition to the inspection responsibilities of jobsite superintendents outlined below, representatives of PIAZZA, insurance carriers, and professional safety consultants may also perform jobsite inspections.

### **Jobsite Superintendent Inspection Responsibilities**

The job superintendent shall perform routine inspections on his jobsite. If the job superintendent is unavailable, a competent person who is familiar with the inspection process may be designated to conduct the inspection.

During the inspection, pre-planning should be done with subcontractors to discuss what safety requirements must be met to perform upcoming construction activities. The pre-planning process is important to address safety hazards prior to employee exposure. In cases where there are questions as to what safety measures are needed, the superintendent should contact the main office. Available resources will be utilized to identify what safety measures will be taken to ensure employee safety.

### **Frequency**

All jobsites must be inspected by the superintendent at least once a week. The frequency of inspections may be increased as the job progresses, for specific areas of a job, or for special critical work.

### **Documentation**

Superintendent will complete the Jobsite Inspection Checklist at the conclusion of each weekly inspection. A copy of the form, which must include any disciplinary action taken against employees, should be forwarded to the main office. Letters sent to subcontractors due to violations observed during a jobsite inspection must include a copy of the safety inspection form describing the violation.

### **Corrective Actions**

If any concerns are observed during the inspection they must be immediately addressed and corrected. Safety violations must be corrected so the operation is performed in a safe manner. The employee(s) should be informed of what the violation is and made aware of acceptable methods. The consequences for repeat or serious safety violations also need to be addressed with the employee(s). If there is a person or party responsible for any observed concern(s), that information must be documented on the inspection report form.

# Jobsite Inspection Checklist

Site: School 35 - Yonkers	Superintendent:
Inspector:	Date:

This checklist is to be used during weekly jobsite safety inspections. Check off the items below where employees' activities and jobsite conditions are in compliance with OSHA's and jobsite safety standards. Items which are not in compliance should be explained on the bottom of this page along with a description of abatement measures taken to correct any problems. Also indicate if any disciplinary action was taken as a result of safety infractions.

General	Check	Welding and Cutting	Check
Work areas are free of debris. Good housekeeping exists at the jobsite.		Fuel gas tanks are labeled, gauges and hoses are free of defects.	
Mandatory posting requirements are provided at the jobsite trailer.		If arc welding activities are being performed, screening is provided to shield arc	
Company safety program, hazard communication program, and MSDS's are provided at trailer.		When being stored, oxygen cylinders are separated from combustible cylinders and material by 20 ft.	
Hazardous chemical list is complete and up to date. List is posted at the jobsite trailer.		<b>Electric</b>	
Safety program, hazard communication program and MSDS's of subs are provided at jobsite trailer.		3- wire construction grade cords are being used that are free of damage or defects.	
All XYZ employees have participated in a weekly tool box talk.		Ground fault circuit interrupters are provided.	
Emergency phone numbers are posted.		Panel boxes are provided with a cover. No knockouts or blanks are missing from panel.	
No suspect materials have been encountered.		If overhead power lines exist, have measures been taken to address the hazard.	
<b>Personal Protective Equipment</b>		<b>Scaffolding</b>	
Hard hats are being worn by all employees		Does a competent person exist.	YES NO NA
Safety glasses		Safe access is provided to all working levels.	
Ear protection provided		Guardrails are provided on working levels 10 ft. or more in height.	
If a respirator is used, was the employee medically evaluated and fit tested within the last year?	YES NO NA	Bases are provided on scaffold frame legs and mudsills (2x10 minimum) are provided.	
Protective clothing and equipment provided as per MSDS's or task being performed.		Working platforms are fully planked.	
<b>Fire Protection</b>		Scaffolds are anchored properly.	
Safety cans are used to store gasoline. Plastic can for gasoline storage is prohibited.		Guardrails are maintained at loading areas.	
A fire extinguisher is provided for every 3000 sq. ft of protected building.		<b>Fall Protection</b>	
Fuel storage areas are provided with an extinguisher rated 20-B:C or greater.		Guardrails provided and structurally sound.	
Burn permits up to date where necessary		Floor holes covered, secured, and labeled "hole" or "cover".	
Propane is not stored inside. Hose are not exposed to damage.		Fall arrest systems properly implemented.	
Propane storage areas have "no smoking" signs posted and are barricaded by highly visible fence.		Upcoming fall hazards addressed and planned for.	

## Jobsite Inspection Checklist

Site: School 35 - Yonkers	Superintendent:
Inspector:	Date:

Tools	Check
Guards are provided for tools. Guards are not being secured in the up position.	
Tools being used are free of damage or defects and the Proper tools is being used for the job.	
Operators of powder-actuated tools have a card indicating they have been trained in its use.	
<b>Motor Vehicles and Heavy Equipment</b>	
Operators are wearing seat belts unless no roll over protection is provided.	
Operators of lulls, JLG's, and similar equipment are certified by their employer as an operator.	YES NO NA
Backup alarms, horns, brakes are operational	
<b>Cranes</b>	YES NO NA
Crane operator is licensed with New York State	
Crane inspections are performed by the operator daily. Inspection information is on-site.	
Monthly state inspections are being performed and the annual federal inspection is complete.	
Accessible areas within the swing radius of the crane is barricaded to prevent employee access.	
An illustration of ANSI hand signals is posted at the jobsite.	

Excavations	Check
Underground installations accounted for by contacting UFPO at 1-800-962-7962.	YES NO NA
A competent person for excavations is on site.	
Daily inspections are being performed by a competent person.	
Excavation or trench is free of water, if not, are measures being taken to address and correct hazard.	YES NO NA
Safe egress is provided from the excavation and travel distance to a ladder does not exceed 25 ft.	
Trench is sloped or shored properly as per the soil type.	
Trench box is being used properly and employees are working inside protected areas.	
<b>Ladders</b>	
Ladders used to access an upper level extend 3 ft. past that level and are secured from movement.	
Portable extension ladders are used at an ratio of 4 : Vertical to 1:Horizontal.	
Step ladders are not being used in the closed position.	
The top step or top of step ladders are not being used to work from.	
Ladders used as designed. Planks are not supported at both ends by ladders to create a work platform.	

Comments: \_\_\_\_\_

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## **14. Handling OSHA Inspections**

### **Purpose**

To outline a procedure for the management of OSHA inspections on PIAZZA projects. Additionally, this program will provide the foreman with the information needed to handle an OSHA jobsite inspection in the event that a representative from Piazza 's main office is unable to accompany the Compliance Safety and Health Officer (CSHO) during the inspection process.

### **Reasons For an OSHA Inspection**

There are a number of reasons why a worksite may be selected for an OSHA inspection, including the following:

1. *Fatality or Catastrophe:* OSHA received a report of a fatality or catastrophe (an accident involving the hospitalization of three or more employees), both of which are required to be reported by the employer to OSHA, or an imminent danger situation is reported.
2. *Formal Complaint:* OSHA receives a formal (written) complaint filed by an employee or employee representative that addresses unsafe workplace conditions.
3. *Informal Complaint:* OSHA sent the company a letter asking it to respond to allegations of a hazard made in an informal (unwritten) employee complaint and the company failed to respond.
4. *Referral:* A referral has been made by another government agency concerning unsafe conditions at the jobsite. Referrals can be generated from government personnel, such as building inspectors, district attorneys, and emergency response personnel. Publicized accidents or accidents that result in contact with public emergency agencies may be considered as referrals and lead to an OSHA inspection.
5. *Programmed:* Your jobsite has been selected at random by OSHA from information obtained from Dodge reports for an inspection.
6. *Follow-Up Inspection:* OSHA conducts a follow-up inspection to confirm that violations noted in previous inspections or items to be corrected as a result of a settlement agreement with OSHA have been abated.
7. *Special/Local/National Emphasis Programs:* OSHA conducts an inspection due to any one of these OSHA emphasis programs.

PIAZZA, INC.

## **Procedure**

When OSHA arrives on site, the compliance officer will locate the designated point of contact (foreman) and present his/her credentials. The OSHA compliance officer should be invited into the job trailer. The foreman should inform the compliance officer that a representative from the main office must be contacted to accompany OSHA during the walkthrough. Request a delay of the inspection until a company representative is on site or has had an opportunity to speak to the compliance officer. Be polite with your requests and make sure the compliance officer understands that you are following a company policy requiring a representative from the main office be present during inspections and that the request is not a delay tactic.

In the event no one from the main office is able to accompany the compliance officer during the walkthrough, the foreman will be required to handle the inspection. The procedures for handling an inspection should be fully understood by the foreman.

## **Opening Conference**

An inspection begins with an opening conference. During this conference the appropriate information shall be documented on the OSHA Inspection Management Form. The objective of the opening conference is to provide affected employers and employees with an explanation of the scope and purpose of the inspection and how the inspection will be conducted. The compliance officer is required to inform the employer of what type of inspection will be conducted. Inspection types include:

- General scheduled inspection;
- Fatality/catastrophe investigation;
- Complaint investigation;
- Referral inspection;
- Special emphasis inspection; and
- Abatement (follow-up) inspection.

The compliance officer will request background information to fill out their inspection report, which includes:

- Jobsite name and address;
- Corporate office address and telephone number;
- Number of employees;
- Accident and illness information (form 300); and
- Names of employees and employee representatives.

If an inspection results from a formal employee complaint, the employer will receive a copy of the complaint from the OSHA compliance officer at the opening conference. Copies of the complaint should be furnished as follows:

- Copy of every complaint to the general contractor;
- Copy of every complaint against the general contractor to all subcontractors whose employees are exposed to the alleged hazards; and
- Copy of every complaint against a subcontractor to that subcontractor and to others whose employees are exposed.

If the compliance officer does not offer a copy of the complaint, the foreman should request it. If none is provided, inform OSHA that company policy requires a copy of the complaint be provided before granting an inspection. Inform the compliance officer that you will be happy to grant an inspection upon receiving a copy of the formal complaint.

## **The Inspection**

It is very important that during the opening conference you find out why the inspection is being conducted and what the scope of the inspection will cover. For a focused inspection, please refer to the attached document.

Inspections conducted due to alleged imminent danger and complaint inspections should be limited to the area of the alleged violative condition and fatality/accident investigations should be limited to the area of the accident. An expanded inspection may be done if the inspection record of the employer indicates a history of significant violations or other legitimate reasons. An expanded inspection in this case requires authorization by the OSHA Area Director.

Referral inspections should be limited to the specific items addressed in the original inspection.

Special emphasis inspections should be limited to the areas covered by the program.

**NOTE: The compliance officer should be limited to inspect only the areas addressed during the opening conference. The foreman should request another opening conference to explain any inspection activities that reach beyond the scope of the original inspection.**

## **The Walkaround**

A representative from the main office or the foreman will accompany the compliance officer during the walkaround. As discussed, it should be clearly understood from the beginning which areas the compliance officer intends to inspect. These areas are the only areas that the compliance officer should be allowed to inspect. If work is not being performed in certain areas, inform the compliance officer that these areas are inactive. Do not leave a compliance officer unattended and do not volunteer any extra information or expand the scope of the inspection. Anything that is said during the walkthrough could help the compliance officer prove a violation exists.

The compliance officer is required to follow all safety rules as detailed in Piazza's Safety Program. This includes requiring proper personal protective equipment. If the compliance officer can not comply with Piazza's rules and regulations, you should insist compliance to further prove the company's commitment to safety and health.

Do not allow the compliance officer to interfere with production activities unless those activities are endangering the employee(s).

If a violation is mentioned by the compliance officer, diplomatically demand a means or method of abatement. Get technical and ask questions about the compliance officer's background in each apparent violation. It is the compliance officer's responsibility to know how to abate the alleged violation. If there are any undisputed violations pointed out during the walkaround, they should be corrected immediately, if possible. This shows good faith and may help in future negotiations with OSHA. Do not admit any fault when taking corrective actions.

If a compliance officer feels a violation exists, do not argue but politely disagree with an interpretation and try to convince the compliance officer to understand and accept your point of view. Once a citation is issued, it is difficult to get it withdrawn.

During the inspection, the compliance officer is authorized to talk to employees about working conditions. You cannot forbid your employees to talk to the compliance officer but you are within your rights to inform employees that they are not required to talk to OSHA.

The compliance officer may use a video camera or a camera to document violations. A camera should be used to take the same photographs the compliance officer takes from the same angle at the same time. After the inspection, additional photos may be taken from different vantage points which may offer some insight into OSHA's case if citations are issued.

## **Closing Conference**

At the conclusion of the inspection, the compliance officer will hold a closing conference to inform all contractors of alleged violations. The violations should be described and the appropriate section of the standard violated should be indicated. The compliance officer should inform you if there will be a referral to another compliance officer to check on potential violations outside his/her expertise. Ask for a copy of the compliance officer's notes from the inspection. The compliance officer is not required to provide these notes but your request may be honored.

Immediately after the compliance officer leaves the jobsite, document your point of view about the alleged violations. Take additional pictures from different vantage points and obtain written statements from employees. If any employee(s) were interviewed by OSHA during the inspection, re-interview those employees and document what was discussed.

# OSHA Inspection Report Form

Project: Construction of Community School 35 Foreman: \_\_\_\_\_

Address: \_\_\_\_\_

## Compliance Officer (CSHO) Information:

Name: \_\_\_\_\_ CSHO#: \_\_\_\_\_

Office: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Area Office: \_\_\_\_\_ Foreman: \_\_\_\_\_

Address: \_\_\_\_\_

Arrival Time: \_\_\_\_\_ Date: \_\_\_\_\_

First Person Contacted: \_\_\_\_\_

Was the compliance officer asked to wait for the arrival of a company representative?

Yes\_\_\_ No\_\_\_

If Yes, did the CSHO wait for the arrival of a company representative? Yes\_\_\_No\_\_\_

Explain: \_\_\_\_\_

\_\_\_\_\_

Was an opening conference held to discuss the reason for the inspection? Yes\_\_\_No\_\_\_

List those present at the opening conference:

Name:

Company:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Route copies of this report to:

President     Vice President     Area Safety Director     Insurance Carrier

PIAZZA, INC.

**Reason for Inspection**

Complaint: \_\_\_\_\_ Fatality: \_\_\_\_\_ Accident: \_\_\_\_\_ Referral: \_\_\_\_\_  
Program: \_\_\_\_\_ Follow-Up: \_\_\_\_\_ Other: \_\_\_\_\_

**Walk-around Attendees**

Name:	Company:
_____	_____
_____	_____
_____	_____
_____	_____

Was a camera or video used by the CSHO officer to document the walkthrough?  
Yes\_\_\_ No\_\_\_

Were any pictures taken of the alleged violation by an employee of PIAZZA, INC.?  
Yes\_\_\_ No\_\_\_

If pictures were not taken, explain why: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**List Employees Interviewed during the inspection:**

Name:	Company:
_____	_____
_____	_____
_____	_____
_____	_____





## **15. Jobsite Safety Rules**

### **General Safety Rules**

1. Safety related tools and/or equipment must be available, used, and maintained to ensure work is performed in a safe manner. OSHA Standards govern what safety tools and/or equipment are required when performing any operation. Where appropriate, jobsite safety requirements may exceed applicable OSHA Standards. In these circumstances, employees are required to follow the jobsite safety requirements.
2. Report unsafe conditions to your foreman.
3. The use, possession, or sale of alcohol or illegal drugs is prohibited.
4. If asbestos, lead, PCBs or other potentially hazardous materials are encountered during operations, stop work immediately and notify a supervisor.
5. Be aware of the jobsite emergency response plan. Know the alarm signals, evacuation routes, and locations of emergency numbers.
6. All injuries, no matter how minor, must be immediately reported to the foreman.
7. Near miss incidents must be reported to the foreman as soon as possible.
8. Do not enter barricaded areas and obey all warning signs.
9. Proper clothing must be worn at all times on site.
10. Always remove nails from scrap lumber before stacking.
11. Do not stand under or beside suspended loads.
12. Horseplay of any kind is forbidden.
13. Firearms and weapons are forbidden.
14. **THINK SAFETY FIRST**

## **Scissor Lifts**

1. Only authorized and trained personnel may operate the lift.
2. Never exceed boom and basket load limits. Capacity will be identified on the lift.
3. Guardrail system on the lift must be maintained and the gate or chain opening used to access the equipment must be in the closed position.
4. Do not stand on the scissor lift midrail or toprail. Employee's feet must remain on the platform of the equipment.
5. Lift brakes shall be set and when outriggers are used, shall be positioned on pads or a solid surface.
6. Upper and lower controls must be provided and employees working from the lift must be familiar with operating them.
7. Lifts can only be moved with an employee if the equipment was designed for that use.
8. Modifications of scissor lift must not occur unless approved by the manufacturer.
9. Harnesses are not required when working from a scissor lift.

## **Boom Lifts**

1. Employees working from boom lifts must be provided with and wear a full body harness and lanyard attached to the anchor point provided in the boom lift basket.
2. Only authorized and trained personnel may operate the lift.
3. Never exceed boom and basket load limits. Capacity will be identified on the lift.
4. Guardrail system on the lift must be maintained and the gate or chain opening used to access the equipment must be in the closed position.
5. Do not stand on the scissor lift midrail or toprail. Employee's feet must remain on the platform of the equipment.
6. Lift brakes shall be set and when outriggers are used, shall be positioned on pads or a solid surface.
7. Upper and lower controls must be provided and employees working from the lift must be familiar with operating them.
8. Lifts can only be moved with an employee if the equipment was designed for that use.
9. Modifications of scissor lift must not occur unless approved by the manufacturer.

## **Personal Protective Equipment**

1. Approved hardhats (not bumpcaps), in good condition, must be worn at all times.
2. Metal hard hats must never be worn near energized overhead power lines or other high voltage sources.
3. ANSI Z 87.1 approved eye protection must be worn whenever operations present potential eye or face injury from physical, chemical, or radiation agents.
4. Additional protection such as face shields and goggles must be worn while performing high hazard tasks including grinding, chipping, overhead drilling, and working with caustics.
5. Gas and electric welding and cutting requires the use of burning goggles or a welder's hood with lenses having the proper color density.
6. Ear protection must be worn in high noise-level areas and when using certain tools and equipment.
7. Approved work boots or proper footwear as designated by specific jobsite requirements must be worn at all times.
8. Where needed, work gloves, in good condition and suitable for the task to be performed, must be worn.
9. Respirators are required in certain areas and while performing certain types of work. If you are required to wear a respirator you must be part of Piazza's respiratory protection program.

## **Housekeeping**

1. Materials must be kept in neat stockpiles for easy access. Aisles must be kept clear of loose materials, tools, cords, and waste.
2. Remove waste from site on a frequent basis and dispose of it in a suitable manner. Failing to maintain a clean work area will not be tolerated and means will be taken to correct the condition.
3. Protruding nails must be removed from material and forms. Stack clean lumber in orderly piles.

## **Tools**

### **I. Hand Tools**

- A. Every tool is designed for a certain job and must only be used for that purpose.
- B. Keep tools in peak condition. Worn tools are dangerous.
- C. Don't force tools beyond their capacity or use cheaters to increase leverage.

### **II. Power Tools**

- A. Do not use power tools unless you are completely familiar with them.
- B. Before using a power tool, examine it for damaged parts, loose fittings, frayed or cut electric cords. Tag and remove defective tools from service.
- C. Do not use tools with improper or damaged guards, or with guards removed.
- D. When using power tools make sure Ground Fault Circuit Interrupter Protection (GFCI) is provided.
- E. Use bits and blades designed to handle the RPM's of the tool in use.

### **III. Powder Actuated Tools**

- A. Only trained and qualified people may use powder actuated tools. Training cards must be provided for employees indicating the training was completed.
- B. Eye, face, and hearing protection must be worn by operators.
- C. Tool must remain unloaded until ready for use. Do not leave loaded tool unattended.
- D. Do not drive fastener into hard or brittle material, or into material it will pass through.

## **Electrical Safety**

1. Ground fault circuit interrupters must be used for electrical tools and equipment. When using an extension cord off permanent power, the extension cord is considered to be temporary power and therefore must have GFCI protection.
2. Examine all cords prior to use. Cords which are frayed, worn, or contain exposed wires must not be used. Damaged cords must be tagged and removed from service immediately.
3. All cords must be of the three-wire type and designed for hard or extra-hard usage. Flat yellow extension cords and Romex extension cords are prohibited.
4. All live electrical installations, such as receptacles, switches, and panel boxes, must be protected by a faceplate or cover. Cardboard is not an acceptable cover.
5. Bulbs used for temporary lighting must be covered by protective cage guards.
6. Cords must be kept clear of walkways and other locations where they may be subject to damage or present a tripping hazard.
7. Protect cords from foot and vehicle traffic, and sharp corners and edges.
8. All electric equipment and materials must be of an approved type.
9. All plugs, outlets, switches, and panel boxes must be installed according to the national electric code. This includes assuring that receptacle boxes are permanently affixed, Romex type NM cable is not used in damp or wet locations, and that temporary wiring is located where it will not be subject to damage.
10. Only qualified workers must be allowed to perform any type of electrical work.
11. All ground fault circuit interrupters must be inspected on a regular basis.
12. Receptacles must be tested for polarity and continuity of the ground. Receptacles whose polarity is reversed or whose ground is not continuous must be tagged out until repaired.
13. Missing knockouts inside panel boxes, on receptacle boxes and on all other equipment containing live parts must be covered or otherwise protected.

## **Lockout Tagout**

⇒ See Lockout-Tagout Program for specific rules and procedures.

1. Locks and tags must be used to prevent operation of a switch, valve, or piece of equipment in cases where someone may get hurt or equipment may be damaged.
2. Never operate any tagged-out piece of equipment.
3. Place your lock personally; never have somebody else do it.
4. Do not remove someone else's tag.
5. All locks and tags must be labeled to identify their owner.
6. Follow all switching and locking procedures to remove a piece of equipment from service.

## **Material Handling, Storage and Disposal**

### **I. By Hand**

- A. Know the weight of any object to be handled. If it is too heavy or bulky, get help.
- B. Establish firm footing, keep your back straight and lift with your legs. Lift gradually; do not jerk or twist. Reverse the motion when setting the object down.
- C. Know the weight of the object to be handled, and the capacity of the equipment you intend to use.
- D. When placing blocks under raised loads, make sure blocking material is large enough to support the load safely. Additionally, ensure that the load is not released until employees have clearly moved away from the load.

### **II. Storage**

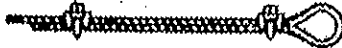
- A. Store materials so as not to block exits, aisles and passageways, and access to fire extinguishers and electrical panels.
- B. Materials stored in tiers must be secured to prevent sliding, falling, and collapse.
- C. Materials stored inside must not be placed within 6 feet of any hoistway or inside storage area, or within 10 feet of an exterior wall which does not extend above the materials stored.
- D. Brick stacks shall not be more than 7 feet in height. Loose brick stacks shall be tapered back 2 feet in every foot above 4 feet level.
- E. When masonry blocks are stacked higher than 6 feet, measures must be taken to prevent employee exposure. A fence should be provided.
- F. Lumber must not be stacked more than 16 feet high if it is handled manually; 20 feet is the maximum stacking height if a forklift is used.

1.



Refer to table 1 in following these instructions. Turn back specified amount of rope from thimble or loop. Apply first clip one base width from dead end of rope. Apply U-Bolt over dead end of wire rope — live end rests in saddle. Tighten nuts evenly, alternate from one nut to the other until reaching the recommended torque.

2.



When two clips are required, apply the second clip as near the loop or thimble as possible. Tighten nuts evenly, alternating until reaching the recommended torque. When more than two clips are required, apply the second clip as near the loop or thimble as possible, turn nuts on second clip firmly, but do not tighten. Proceed to Step 3.

3.



When three or more clips are required, space additional clips equally between first two — take up rope slack — tighten nuts on each U-Bolt evenly, alternating from one nut to the other until reaching recommended torque.

#### 4. IMPORTANT

Apply first load to test the assembly. This load should be of equal or greater weight than loads expected in use. Next, check and retighten nuts to recommended torque. In accordance with good rigging and maintenance practices, the wire rope end termination should be inspected periodically for wear, abuse, and general adequacy.

Table 1			
Clip Size Inches	Minimum No. of Clips	Amount of Rope to Turn Back in Inches	*Torque in Ft. Lbs.
1/8	2	3-1/4	45
3/16	2	3-3/4	75
1/4	2	4-3/4	15
5/16	2	5-1/4	30
3/8	2	6-1/2	45
7/16	2	7	65
1/2	3	11-1/2	65
9/16	3	12	95
5/8	3	12	95
3/4	4	18	130
7/8	4	18	225
1	5	26	225
1-1/8	6	34	225
1-1/4	7	44	360
1-3/8	7	44	360
1-1/2	8	54	360
1-5/8	8	58	430
1-3/4	8	61	590
2	8	71	750
2-1/4	8	73	750
2-1/2	9	84	750
2-3/4	10	100	750
3	10	106	1200
3-1/2	12	149	1200

If a pulley (sheave) is used for turning back the wire rope, add one additional clip.

If a greater number of clips are used than shown in the table, the amount of turnback should be increased proportionately.

\*The tightening torque values shown are based upon the threads being clean, dry, and free of lubrication.

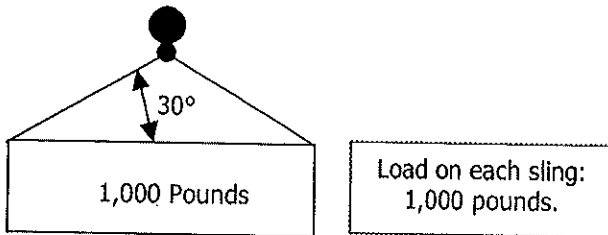
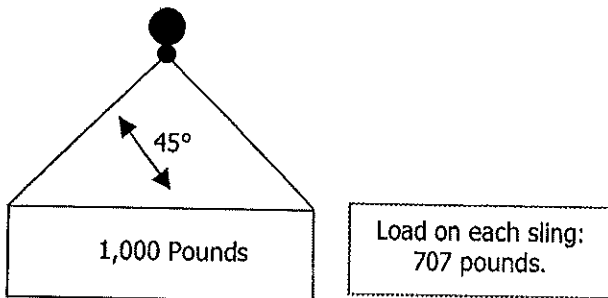
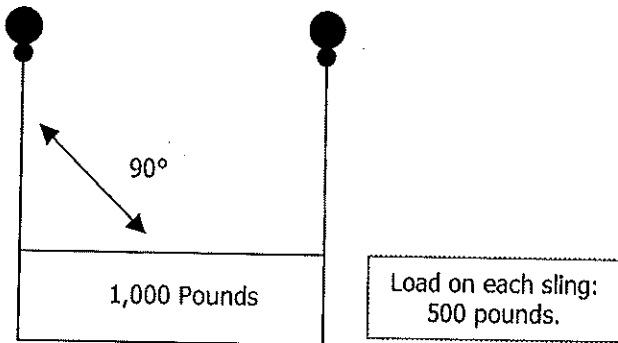
# Load Angle Factor

The following is an example of selecting a sling using the load angle factor, as shown on the chart below.

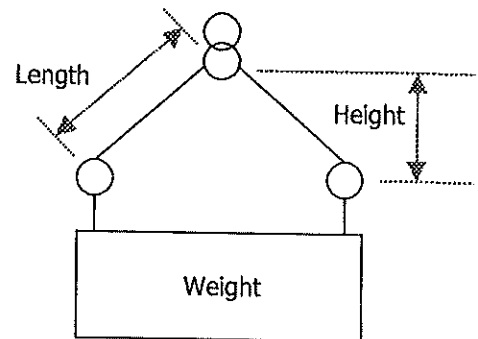
Sling = 2 legged bridle.      Load = 1,000 pounds.      Angle with horizontal 45°.

Load angle factor from the chart.

Each of the two legs would lift 500 pounds if a vertical pull were used. However, there is a 45° sling angle involved. Therefore, the 500 pound load would be multiplied by the load angle factor in the chart, giving a total of 707 pounds (500 pounds x 1.414 = 707 pounds) tension in each leg. Therefore, each leg must have a safe working load of 707 pounds.



Sling Angle	Load Angle Factor
90°	1.000
85°	1.004
80°	1.015
75°	1.035
70°	1.064
65°	1.104
60°	1.155
55°	1.221
50°	1.305
45°	1.414
40°	1.555
35°	1.742
30°	2.000
25°	2.364
20°	2.924
15°	3.861
10°	5.747
5°	11.49



**Note: Load never rigged less than 30°. Use spreader bars when necessary.**

**Formula for Stress on Sling Legs:**

$$S = \frac{W \times L}{H \times N}$$

S = Stress per leg  
N = Number of legs in bridle



- G. Bags and bundles must be stacked in interlocking rows to remain secure. Bagged material must be stacked by stepping back the layers and cross-keying the bags at least every 10 feet.
- H. Drums, barrels, and kegs must be stacked symmetrically. If stored on their sides, the bottom tiers must be blocked to keep them from rolling. If stored on end, put planks, sheets of plywood, or pallets between each tier to make a firm, flat, stacking surface.
- I. Nails must be removed from used lumber prior to stacking, and from formwork being stripped.

### **III. Rigging**

- A. Slings must be inspected before use.
- B. Slings and other rigging equipment must be removed from service if damage or defects are visible.
- C. Slings must not be shortened with knots, bolts, or other makeshift devices.
- D. Slings must not be loaded beyond their rated capacity, according to the manufacturer's instructions.
- E. Job or shop hooks and links, or makeshift fasteners, formed from bolts, rods, or other such attachments must not be used.
- F. When wire rope clamps are used for eye splices, the U-bolt portion of the wire rope clamp shall be so applied so that the "U" section is in contact with the dead end of the wire rope. The saddle portion of the clamp must be on the live end of the wire rope. Make sure the proper number of clamps are provided for the gauge of wire rope being used. Refer to the diagram on the following page.

## **LPG Liquefied Petroleum Gas**

1. Containers must be placed upright on firm foundations or otherwise firmly secured.
2. Storage of LPG within buildings is prohibited.
3. Storage locations must have at least one approved portable fire extinguisher, rated not less than 20-B:C.
4. A "No Smoking" Sign must be posted at LPG storage areas.
5. LPG containers must be separated from oxygen cylinders a minimum distance of 20 feet or by a noncombustible barrier at least five feet high having a fire-resistance of at least one-half hour.
6. Take precautions to protect LPG hoses from damage caused by equipment, tools and employees.
7. Storage of LPG outside of buildings:

## CYLINDER STORAGE FOR ACETYLENE (C<sub>2</sub>H<sub>2</sub>)

Acetylene gas may be stored in cylinders specifically designed for this purpose. The gas is first passed through filters and purifiers and then compressed into cylinders to a pressure of approximately 250 psig. The storage of acetylene in its gaseous form under pressure is not safe at pressures above 15 psig. The method used to safely store acetylene in cylinders is as follows:

1. The cylinders are filled with a substance such as pith from cornstalk, fuller's earth, lime silica, and similar substances, which absorb acetone.

2. The cylinders are then charged with acetone which absorbs acetylene.

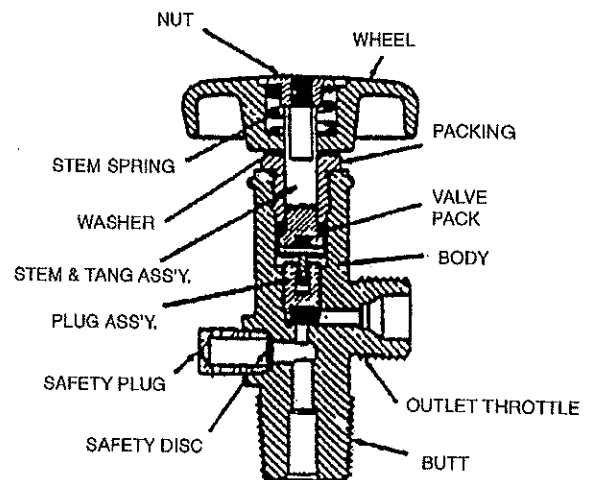
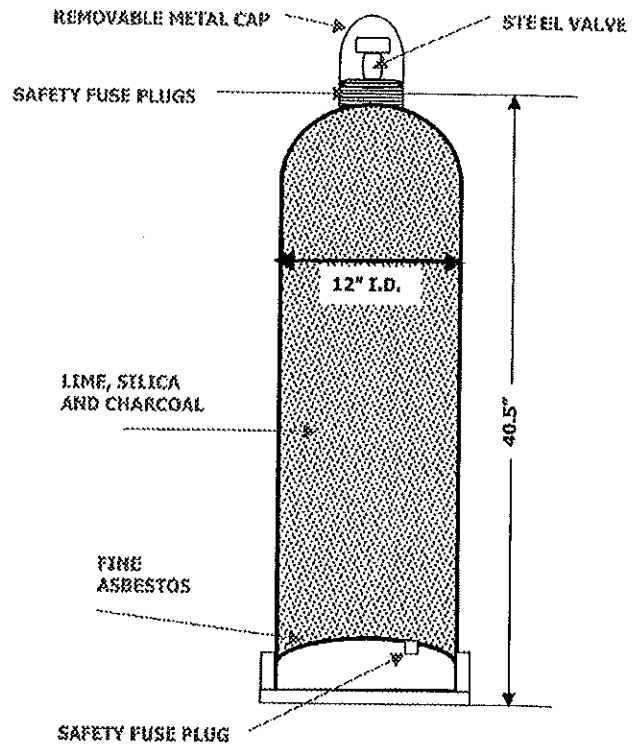
The theory is that the acetylene molecules fit in between the acetone molecules. Using both of these techniques prevents the accumulation of a pocket of high pressure acetylene.

Safety fuse plugs have a metal center which will melt at a temperature of approximately 212°F. If the cylinder should be subjected to a high temperature the plugs will melt and allow the gas to escape before the pressure builds up enough to burst the cylinder. These precautions are necessary as the pressure in an acetylene cylinder builds up rapidly with an increase of temperature.

Acetylene cylinder valves come in two types. A common type is provided with a 3/8-inch square shank. It is turned by means of a 3/8-inch square box socket wrench. It is recommended that this cylinder valve be opened only 1/4 to 1-1/2 turns. The wrench should be left on the valve stem at all times that the valve is open, in order that the valve may be closed quickly in emergencies.

Another type of acetylene cylinder valve is fitted with a hand-wheel (see sketch). The regulator fitting is a female fitting.

The amount of acetylene in a cylinder cannot be estimated by the pressure in the cylinder because the gas discharge pressure will remain fairly constant (depending on the temperature) until most of the gas is consumed.



## **STORAGE OF LPG OUTSIDE OF BUILDINGS**

Propane tanks shall be located away from the building in accordance with the following:

<b><u>Quantity of LPG Stored</u></b>	<b><u>Distance Away From Building</u></b>
500 lbs. or less	0 ft.
501 to 6,000 lbs.	10 ft.
6,000 to 10,000 lbs.	20 ft.
Over 10,000 lbs.	25 ft.

**STORAGE OF LPG WITHIN BUILDINGS IS PROHIBITED!**

# The Creeping Giant

Many of us are accustomed to compressed gas cylinders. Here is a reminder of just what respect they command.

## GET TO KNOW ME

I can contain very high pressure.  
I wear a label to identify the gas I am holding.  
My color does not tell you what gas I contain.  
I am only one piece of a two-part system. Without a correct regulator or manifold I cannot function safely.

## KNOW HOW TO USE ME

Know how to safely install and remove me from your system.  
Make sure I am properly secured when in use and when stored.  
Open my valve slowly when I am to be used.  
Close my valve when you are done.  
Know the dangers of my contents, read the MSDS, and follow proper procedures when using me.

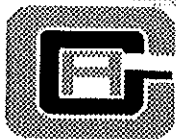
## WHEN THINGS GO WRONG

If my valve or regulator snaps off, all my power is unleashed through an opening no larger than a pencil.  
I will let away faster than any disaster.  
I will smash through brick walls.  
I will spin, decelerate, crash and splash through anything in my path.

## TO BE MY MASTER REMEMBER

Secure me.  
See me, and  
Always follow recommended safety procedures.

TREAT ME  
WITH  
RESPECT.  
I AM A  
SLEEPING  
GIANT.



Compressed Gas Association

For more information, contact your nearest CGA member:

[Blank box for contact information]

a) Propane tanks shall be located away from the building in accordance with the following:

Quantity of LPG Stored	Distance (feet away from building)
500 lbs. or less	0
501 to 6,000 lbs.	10
6,000 to 10,000 lbs.	20
over 10,001 lbs.	25

8. LPG containers stored next to roads or in the areas where vehicles and heavy equipment are in use shall be barricaded or otherwise protected from damage.

## **Welding & Cutting**

### **I. General**

- A. You must be instructed in the safe use of welding equipment before using it.
- B. Each welder is responsible for containing sparks and slag and/or removing combustibles to prevent fire.
- C. All employees engaged in welding and burning operations must use a face shield, goggles, or appropriate welding helmet and welding gloves.
- D. No arc or flame welding operation is permitted in areas where the application of flammable paints is taking place or where combustible dust or flammable liquids are present.
- E. A suitable fire extinguisher must be located in welding areas at all times.
- F. When practical, objects to be welded, cut, or heated shall be moved to a designated safe location or, if the object to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place, or otherwise protected.

### **II. Oxyacetylene Torches**

- A. All connections must be clean and free from grease and oil.
- B. Hoses must not be laid across traffic areas.
- C. Where a special wrench is required to operate the acetylene cylinder valve, the wrench must be kept in position on the valve to allow for emergency shutoff.
- D. For quick closing, valves on fuel gas cylinders must not be opened more than one and a half turns.
- E. Check valves and flash arrestors must be located at the torch.

### **III. Electric Arc Welders**

- A. When electrode holders are left unattended, the electrodes must be removed and the holders placed or protected so that they cannot make contact with each other, conductive objects, or people.
- B. Arc welding and cutting operations must be shielded by noncombustible or flameproof shields to protect fellow employees from direct arc rays.

- C. All welding cable must be insulated completely. Any splices or repairs must have insulation with a resistance equal to or greater than the original insulation. No repairs are permitted within 10 feet of the electrode holder.
- D. Insulated boot covers or other suitable protection must be provided to protect terminals where welding cables are connected to arc welder.

#### **IV. Compressed Gas Cylinders**

- A. Valve protection caps must be in place when compressed gas cylinders are not in use.
- B. Cylinder valves must be closed when work is finished and when cylinders are empty or moved.
- C. Compressed gas cylinder gauges must be in good working order.
- D. Compressed gas cylinders must be secured in an upright position at all times, except if necessary for short periods of time when cylinders are actually being moved or carried.
- E. Cylinders must be kept at a safe distance or shielded from welding and cutting operations. Cylinders must be placed where they cannot become part of an electrical circuit.
- F. When oxygen cylinders are stored, they must be separated from other fuel gas or highly combustible materials by 20 feet or by a noncombustible barrier (a wall at least 5 feet tall with a half hour resistance).

### **Stairways & Ladders**

#### **I. General**

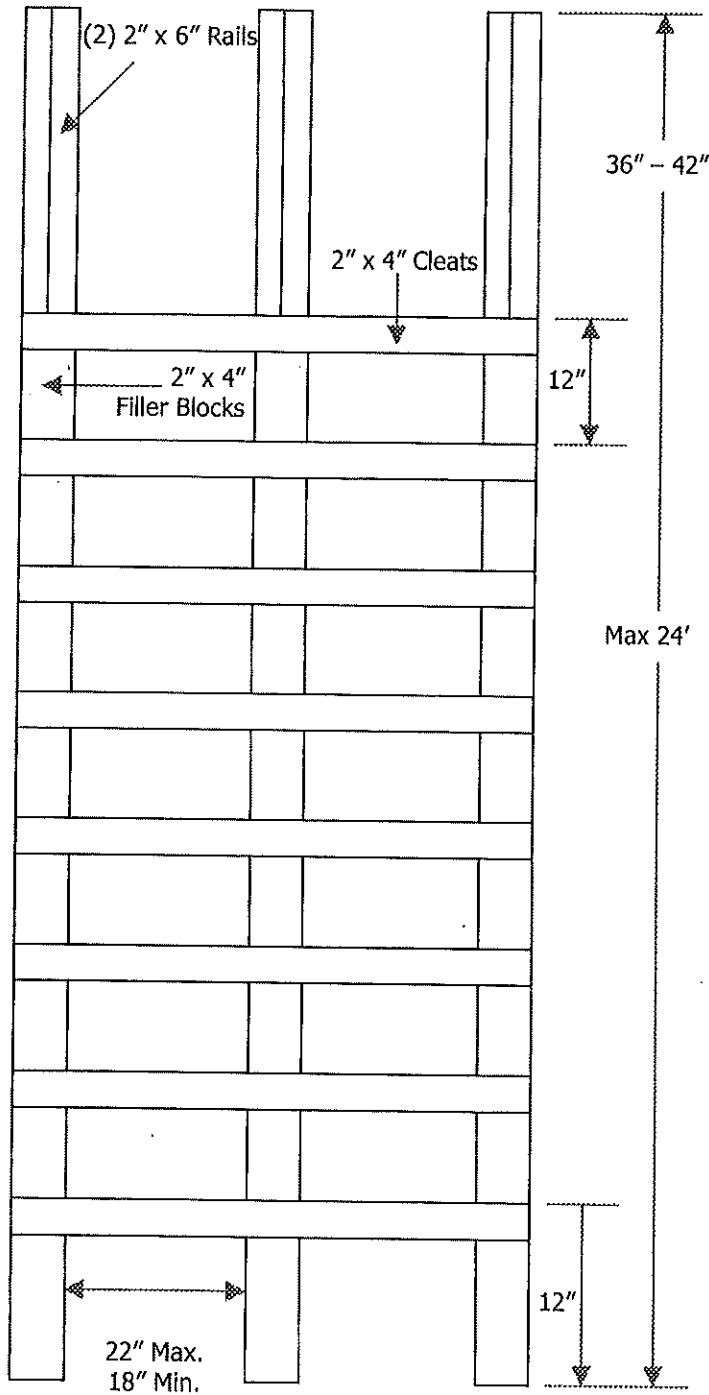
- A. A stairway or ladder must be provided at all points of access where there is a change in elevation of 19" or more and no ramp, runway, sloped embankment or personnel hoist is provided.

#### **II. Stairways**

- A. Stairways shall be kept free of hazardous projections such as nails and screws.
- B. Slippery conditions on stairways shall be eliminated before the stairways are used.
- C. Stairways greater than 30" high or with four or more risers must be equipped with a stair-rail system along unprotected sides or edges.
- D. Stairrail system top rails must be positioned between 36 and 37 inches high (in line with the face of the riser at the forward edge of the tread) and be capable of withstanding a 200 lb. load applied in a downward and outward direction. Midrails must be positioned in-between.
- E. Stairways greater than 30" high, or with four or more risers, that do not have an unprotected edge must be provided with at least one handrail. Handrails must be positioned between 36 and 37 inches high as mentioned above. Handrails must maintain a clearance of 3 inches between the inside of the handrail to the wall.

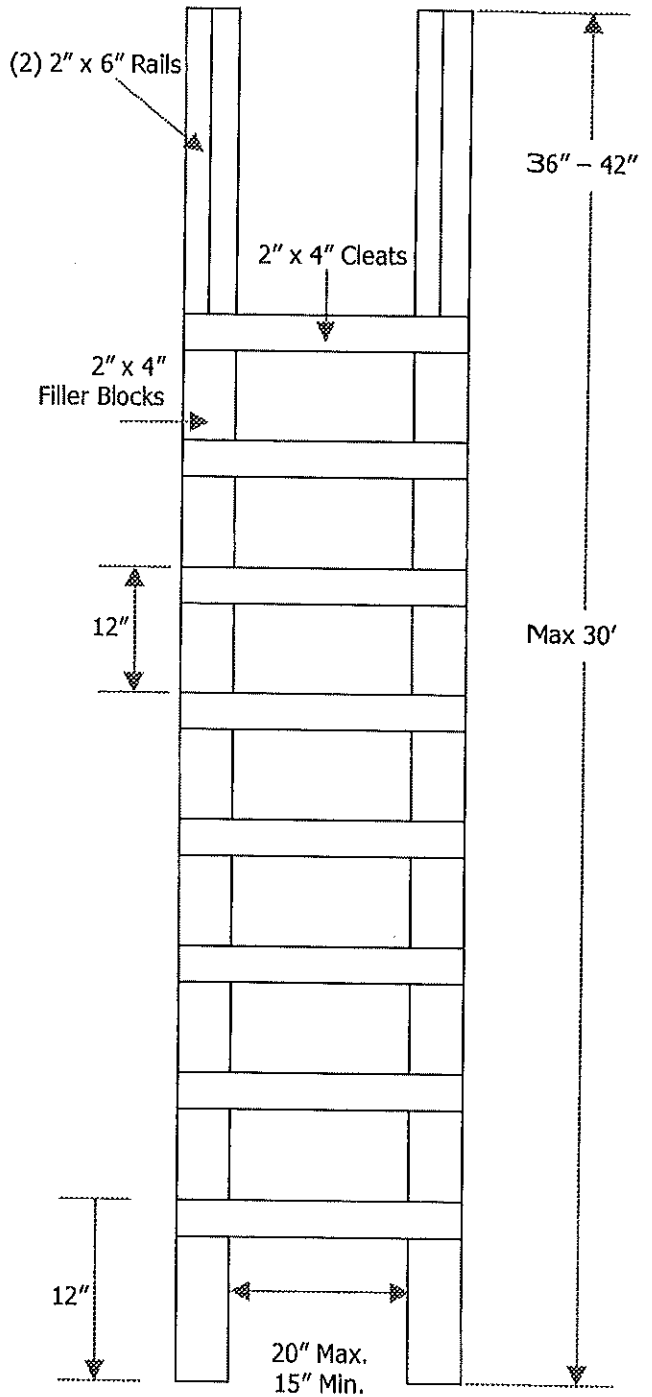
# Job Built Ladders

## Double Cleat Ladder



Rail Splices Must Overlap a Minimum of 48"

## Single Cleat Ladder



Rail Splices Must Overlap a Minimum of 36"

- > Always tie off the ladder at the upper landing and secure from any movement.
- > Ladders should extend a minimum of 3 feet above the upper landing.
- > Ladders should extend 4 feet vertically for every 1 foot horizontally.
- > Broken or damaged ladders must not be used. Repair or destroy them immediately.

- F. A platform must be provided wherever a door opens directly into a stairway. The platform must extend 20" beyond the swing of the door and be protected by a standard guardrail system. This includes doors to field offices and storage trailers.
- G. Except during construction, pan treads, stairs, and landings shall be filled with wood or other solid materials, and shall be installed the full width and depth if the stairs are going to accommodate any other foot traffic.

### **III. Ladders**

- A. Inspect ladders before use. Ladders with broken or missing rungs, cleats or steps, broken or split rails, or corroded parts must be tagged out and removed from the jobsite immediately.
- B. Ladders used to access an upper floor or platform must extend three feet above the upper landing surface.
- C. When in position, a ladder must be securely tied at the top to prevent slipping or secured at the base by a fellow employee.
- D. Portable ladders must be erected exercising the 4:1 ratio: For every four feet of working length of the ladder, the base will be placed one foot from vertical.
- E. The area at the top and bottom of ladders must be kept clear at all times.
- F. Always face a ladder when ascending or descending and maintain at least three points of contact with the ladder at all times (example: two feet and one hand).
- G. Make sure ladders are free from ice, snow, mud, or other slippery materials before use.
- H. Never use a ladder in a horizontal position as a platform or scaffold.
- I. A double cleated ladder or two or more separate ladders shall be provided if ladders are the only means of access/exit from a working area of 25 employees, or the ladder serves simultaneously two-way traffic.
- J. Ladders shall be used only for the purpose for which they were designed.
- K. Ladder rungs shall not be used to support the ends of planks or other similar work platforms.

### **IV. Step Ladders**

- A. Do not use ladders in the folded position as a straight ladder would be used. Open the legs and secure the locking mechanism.
- B. Do not stand on the top or top step of a step ladder.
- C. Step ladders shall be used only for the purpose for which they were designed. Rungs between step ladders shall not be used to support the ends of planks or other similar work platforms.



## **Hazard Communications**

- **See attached Hazard Communication Program for specific information.**
1. Be aware of hazardous chemicals being used on site.
  2. Know where the hazard communication program, hazardous materials list and safety data sheets (SDS) are maintained on site.
  3. Employees shall not work with a material until they have been informed of the hazards they may be exposed to and the steps personnel may take to protect themselves. Be knowledgeable of appropriate work practices, emergency procedures and personnel protective equipment when working with hazardous chemicals and refer to the Safety Data Sheet (SDS) for additional information.
  4. Employees shall be willing to share their knowledge of Hazard Communication and of materials with which they work with other employees and officials.
  5. Notify your foreman if you bring hazardous materials on site.
  6. The integrity of labels on the worksite shall be maintained by all personnel and should contain the chemical name and associated hazards

## **Fire Protection and Prevention Program**

1. Employees shall know where fire extinguishers are located and know how to operate them.
2. Only approved containers and portable tanks shall be used for the storage and handling of flammable and combustible liquids. Refer to SDS ( Safety Data Sheet) for approved container type).
3. One 2A rated fire extinguisher shall be present for every 3000 square feet of protected building area. Travel distance to the nearest fire extinguisher shall not exceed 100'.
4. Firefighting equipment shall be conspicuously located.
5. Materials shall not be stored in front of fire extinguishers. Access to fire fighting equipment shall be maintained at all times.
6. Fire extinguishers shall be inspected on a regular basis and serviced annually.
7. No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. No more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet.


## HOW TO USE A FIRE EXTINGUISHER

### “P.A.S.S.”

- P** – Pull the pin at the top of the extinguisher.
- A** – Aim the nozzle at the base of the fire.
- S** – Squeeze the handle to discharge the extinguisher.
- S** – Sweep the nozzle back and forth.



# TYPES OF FIRE EXTINGUISHERS

**CLASS A**  
TRASH-WOOD-PAPER





**CLASS AB**

TRASH-WOOD-PAPER      LIQUID-GREASE



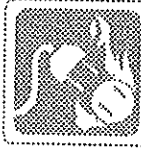


**CLASS BC**

LIQUID-GREASE      ELECTRICAL EQUIP.



**CLASS ABC**

TRASH-WOOD-PAPER      LIQUID-GREASE      ELECTRICAL EQUIP.



## TYPES OF FIRE

**A**



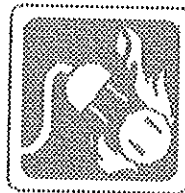
**A for ASH**  
Wood, paper, clothing  
and other ordinary  
materials.

**B**



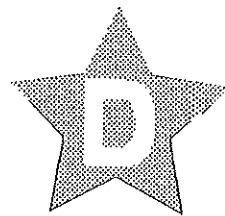
**B for BARRELS**  
Glass, grease, oil, paint  
and other flammable liq-  
uids.

**C**



**C for CURRENT**  
Live electrical equip-  
ment.

**D**



**D**  
Combustible metals.

# OSHA STANDARDS REQUIRING FIRE EXTINGUISHERS IN CONSTRUCTION

LOCATION	TYPE 2A OR BETTER (minimum)	DISTANCE
Protected Building Area	2A	100
Each Floor / One (1) Per 1,000 Feet	2A	---
Multistory Building	2A	Adjacent to Stairway
Storage of 5 Gallons of Flammable/Combustible or 5 Pounds of Flammable Gas	10B	50
Open Yard Storage	2A (or suitable for fire hazard)	100
Flammable Liquid Storage Room	20B	10, Outside
Outside Flammable Liquid Storage Area	20B	25 - 75
Vehicles Used for Dispersing or Transporting Flammable or Combustible Liquids	20B:C	75
Service or Fuel Area	20B:C	75
LPG Storage Area	20B:C	Readily Available
Welding, Cutting or Heating Areas	Suitable	Readily Available
Crane Cabs	5B:C	On Crane
Vehicles Used for Transportation of Explosives	10A:B:C	---

**Travel distance not to exceed 100 feet.**

8. Flammable liquids shall be kept in closed containers when not actually in use.
9. Conspicuous and legible signs prohibiting smoking shall be posted in service and refueling areas.

**Flammable Liquid-** Having a flashpoint below 100 Degrees Fahrenheit.  
(Refer to SDS)

**Combustible Liquid-** Having a flashpoint at or above 100 Degrees Fahrenheit.  
(Refer to SDS)

## **Motor Vehicles**

### **I. General**

- A. Seat belts shall be worn at all times by employees operating or riding on motor vehicles or machinery. (Exception: equipment designed for stand-up operation.)
- B. Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried. Employees shall not ride on fenders or running boards of equipment.
- C. Horns shall be in working order on all bi-directional machinery.
- D. Motor vehicle equipment with an obstructed view to the rear shall not be operated unless the vehicle has a reverse signal audible above the surrounding sound or the vehicle is backed up only when an observer signals that it is safe to do so.
- E. Operators of all motor vehicle equipment are responsible for the safe operation of their vehicle at all times.

### **II. Forklift and Lull Operation**

Operators of forklifts and Lulls must be certified by PIAZZA, INC. to insure they are properly trained to operate the equipment. Employees who operate forklifts or lulls must be part of Piazza,Inc.'s Powered Industrial Truck Operator Program. Using a forklift or a lull without being certified by PIAZZA, INC. is prohibited.

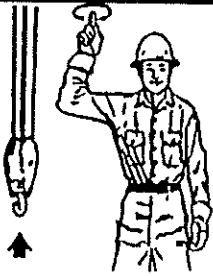
### **III. Heavy Equipment Operation**

- A. Heavy equipment such as backhoes and dump trucks will only be operated by authorized personnel.
- B. Unauthorized persons are not permitted to ride in the cabs of heavy equipment.
- C. Lower any movable buckets when you stop the vehicle.
- D. Always blockout/lockout any movable parts if it is being inspected or having maintenance.
- E. Report all operating malfunctions immediately.
- F. If the operator's compartment is designated a high noise level area, hearing protection must be worn.
- G. Maintenance or repairs must not be done with the engine running.

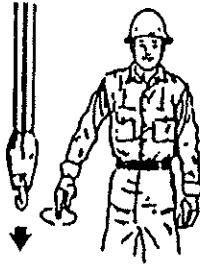
### **Cranes**

1. Crane usage shall comply with the manufacturer's specifications and limitations where available.
2. As per New York State Code Rule 23, crane operations performed in New York State must have an operator who is licensed with the Department of Labor. Operators must possess a card indicating that they are licensed with the New York State
3. Rated load capacities, recommended operating speeds, and special hazard warnings or instructions shall be conspicuously posted on all equipment. Instructions or warnings shall be visible from the operator's station.
4. Equipment shall be inspected daily by a competent person prior to and during use. A complete inspection must be performed annually. Documentation of daily, monthly, and annual inspections must be available upon request.
5. Accessible areas within the swing radius of the crane shall be properly barricaded.
6. A fire extinguisher rated 5:BC or better must be provided in the cab of the crane.
7. No one is permitted to ride loads.
8. Never operate equipment closer than 2' from the edge of an excavation. Cranes shall not be left near the edge of excavations or in an area that may become unstable.
9. Minimum clearance between power lines rated 50 KV. and below and any part of a crane shall be 10'. For power lines rated greater than 50 KV., the clearance shall be 10' plus 0.4" for every 1 KV. above 50 KV.

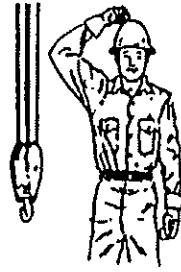
# CRANE HAND SIGNALS



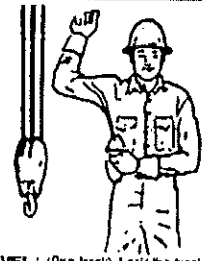
**HOIST:** With forearm vertical, forefinger pointing up, move hand in small horizontal circle.



**LOWER:** With arm extended downwards, forefinger pointing down, move hand in small horizontal circles.



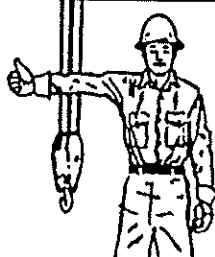
**USE MAIN HOIST:** Tap hat on head, then use regular signals.



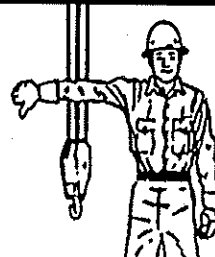
**TRAVEL:** (One track) Lock the track on side not acted by raised fist, travel opposite track in direction indicated by circular motion of either fist, rotated vertically in front of body. (For rail cranes only.)



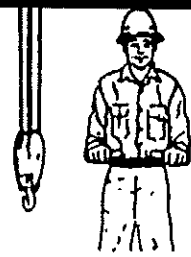
**USE WHIP LINE:** (Auxiliary Hoist) Tap elbow with one hand, then use regular signals.



**RAISE BOOM:** Arm extended, fingers closed, thumb pointing upward.



**LOWER BOOM:** Arm extended, fingers closed, thumb pointing downward.



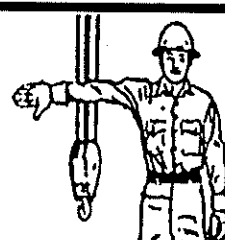
**RETRACT BOOM:** (Telescoping Boom) Both fists in front of body with thumbs pointing toward each other.



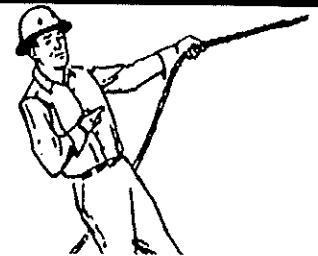
**MOVE SLOWLY:** Use one hand to give any motion signal and place other hand motionless in front of head giving the motion signal. (Hoist slowly as example.)



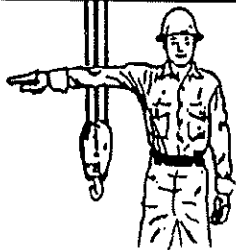
**RAISE THE BOOM & LOWER THE LOAD:** With arm extended, thumb pointing up, flex fingers in and out as long as load movement is desired.



**LOWER THE BOOM & RAISE THE LOAD:** With arm extended, thumb pointing down, flex fingers in and out as long as load movement is desired.



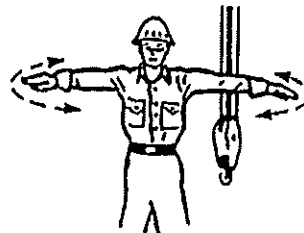
**RETRACT BOOM:** (Telescoping Boom) One Hand Signal. One fist in front of chest, thumb pointing outward and heel of fist lapping chest.



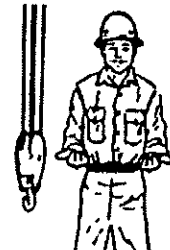
**SWING:** Arm extended, hand open, fingers in direction of swing of boom.



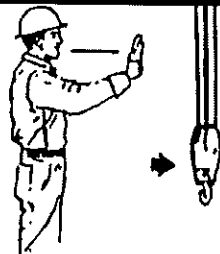
**STOP:** Arm extended, palm down, move arm back and forth horizontally.



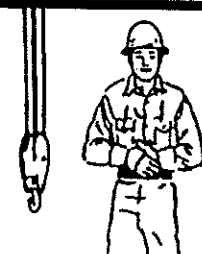
**EMERGENCY STOP:** Both arms extended, palms down, move arms back and forth horizontally.



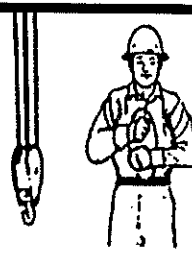
**EXTEND BOOM:** (Telescoping Booms) Both fists in front of body with thumbs pointing outward.



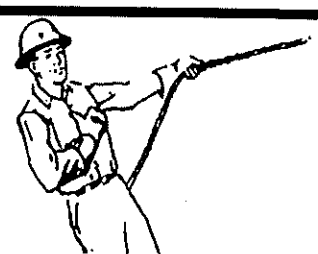
**TRAVEL:** (Both Tracks) Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.



**DOG EVERYTHING:** Arm extended, hand open, fingers in direction of swing of boom.



**TRAVEL:** (Both Tracks) Use both fists in front of body, making a circular motion, about each other, indicating direction of travel, forward or backward. (For land cranes only.)



**EXTEND BOOM:** (Telescoping Booms) One Hand Signal. One fist in front of chest with thumb tapping chest.



10. The operator shall avoid swinging load over workers and bystanders.
11. Taglines shall be used on all loads and shall be insulated to prevent shock.
12. Only one person shall be permitted to give signals to the operator.

**NOTE:** A copy of the standard hand signals is located on the following page. A copy of these hand signals must be posted at the jobsite trailer.

## **Concrete And Masonry Construction**

1. All protruding reinforcing steel, onto or into which employees could fall, shall be guarded to eliminate the hazard of impalement. Fall protection should be the primary means to preventing an impalement hazard.
2. No employee shall work under concrete buckets while buckets are being elevated or lowered into position.
3. Formwork shall be designed, fabricated, erected, supported, braced, and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork.
4. A limited access zone shall be constructed when a masonry wall is being constructed.
5. The limited access zone shall be established prior to the construction of the wall.
6. The limited access zone shall be equal to the height of the wall to be constructed plus four feet and shall run the entire length of the wall.
7. The limited access zone shall be established on the side of the wall without scaffolding.
8. The limited access zone shall be restricted to entry by workers actively engaged in constructing the wall. No other workers shall be permitted to enter.
9. The limited access zone shall remain in place until the wall is adequately supported.
10. All masonry walls over 8 feet in height shall be adequately braced unless the wall is supported by other means. The bracing shall remain in place until permanent supporting elements of the structure are in place.
11. Workers shall frequently wash exposed skin to prevent irritation from cement dust.
12. If respirators are used while working, employees must be part of Piazza, Inc.'s respiratory protection program.

# Sanitation

## Potable Water

1. An adequate supply of potable water shall be provided in all places of employment.
2. Potable containers used to dispense drinking water shall be capable of being tightly closed and equipped with a tap.
3. Common drinking cup is prohibited.

## Toilets

Toilets shall be provided for employees according to the following table:

NUMBER OF EMPLOYEES	MINIMUM NUMBER OF FACILITIES
20 or less	1 Toilet
20 to 199	1 Toilet Seat and 1 Urinal per 40 Workers.
200 or more	1 Toilet Seat and 1 Urinal per 50 Workers.

Jobsites not provided with a sanitary sewer shall be provided with one of the following toilet facilities unless prohibited by local codes:

1. Privies (where their use will not contaminate ground or surface water)
2. Chemical toilets
3. Recirculating toilets
4. Combustible toilets

## Signs and Signals

### Signs

Signs and symbols shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazard no longer exists. The types of signs and their use are as follows:

- *Danger signs*: Danger signs shall be used only where an immediate hazard exists.
- *Caution signs*: Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices.
- *Exit signs*: Exit signs, when required, shall be placed at all exits.
- *Traffic signs*: Construction areas shall be posted with legible traffic signs at points of hazard.

### Signals

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When operations are being performed and signs, signals, and barricades do not provide the necessary protection on or adjacent to a highway or street, flagmen or other appropriate traffic controls shall be provided. Signaling requirements are as follows:

- Signaling directions by flagmen shall conform to ANSI requirements.
- Hand signaling by flagmen shall be by use of red flags at least 18 inches square or sign paddles, and in periods of darkness, red lights.
- Flagmen shall be provided with and shall wear a red or orange warning garment while flagging. Warning garment worn at night shall be a reflective material.

**NOTE:** Signs, signals, and barricades are to be used to warn and protect employees and the public from jobsite hazards. These warning measures shall remain in place at the end of the workday if the public is exposed to the hazard.

## **16. Fall Protection**

### **Purpose**

To establish fall protection requirements for PIAZZA employees performing work activities on a walking/working surface that is 6 feet or more above lower levels. These requirements do not pertain to ladder use, working from scaffolds, or steel erection activities. These activities have their own fall protection criteria.

### **Responsibilities**

The job superintendent is responsible for making sure that measures are taken to provide for fall protection.

### **Duty to Have Fall Protection**

1. Employees on **walking or working surfaces** in excess of 6' above lower levels shall be protected from falls by one or more of the following:
  - a) Guardrail Systems
  - b) Safety Net Systems
  - c) Personal Fall Arrest Systems (includes harnesses, safety lines, retractable lifelines, anchorage points, etc.)
2. Employees engaged in **leading edge work** 6' above lower levels should be protected by one or more of the systems listed above unless it can be demonstrated that the use of these systems is infeasible or creates a greater hazard. In these circumstances a fall protection plan will be developed to cover the leading edge activities. (See Appendix A)
3. Employees working in **hoist/loading areas** 6' or more above lower levels shall be protected from falls by a guardrail system or personal fall arrest system. If guardrails are used, a removable system is recommended. In some circumstances, both a guardrail system and a personal fall arrest system will need to be utilized to safely perform activities at material handling areas.
4. Employees working on **formwork or reinforcing steel** six feet or more above adjacent levels shall be protected by personal fall arrest systems, safety net systems, or positioning device systems.
5. **Ramps, runways, and other walkways** 6 feet or more above lower levels shall be protected by guardrail systems. If multiple planks are used to create a walkway, cleats should be provided to prevent displacement and uneven deflection.
6. **Excavations** six feet or more in depth whose edges are not easily seen shall be protected by guardrail systems, fences, or barricades. If fences or barricades are used they must be positioned at least six feet back from the excavation edge unless they are capable of withstanding the strength requirements for guardrail systems.

7. **Wells, shafts, pits and similar excavations** shall be protected by guardrail systems, fences, barricades or covers. Excavations six feet or more in depth whose edges are not easily seen shall be protected by guardrail systems, fences, or barricades. If fences or barricades are used, they must be positioned at least six feet back from the excavation edge unless they are capable of withstanding the strength requirements for guardrail systems. Covers must meet the requirements provided in the Fall Protection Systems section.
8. **Overhand bricklaying** operations must be protected by guardrail systems, safety net systems, personal fall arrest systems, or shall take place in a controlled access zone. Employees reaching more than 10" below the level on which they are working shall be protected by a guardrail system, safety nets, or fall arrest system.

*Definition: Overhand Bricklaying and Related Work:* The process of laying bricks and masonry units such that the surface of the wall to be jointed is on the opposite side of the wall from the mason, requiring the mason to lean over the wall to complete the work. Related work includes mason tending and electrical installation incorporated into the wall during the overhand bricklaying process.

9. **Wall openings** whose inside bottom edge height is 39", and whose outside edge height is six feet or greater shall be protected by guardrail systems, safety nets, or fall arrest systems. Areas such as window openings and door openings leading to a porch area must be checked to ensure fall protection is provided.
10. **Low-slope roofs** with unprotected sides and edges greater than six feet above a lower level shall be protected by guardrail systems, safety nets, slide guards, personal fall arrest systems, or warning line systems in conjunction with a safety monitor. A low slope is a roof having a slope less than or equal to 4 in 12 (vertical to horizontal). See the Fall Protection Systems section for specific requirements.
11. **Steep roofs** with unprotected sides and edges greater than six feet shall be protected by guardrail systems, safety nets, slide guards, or personal fall arrest systems. A steep roof is a roof having a slope greater than 4 in 12 (vertical to horizontal). See the Fall Protection Systems section for specific requirements.
12. Employees engaged in **built-up roofing work** on roofs with a ground-to-eave height greater than 6' shall be protected by one of the following:
  - a) Motion Stopping System(s) (MSS) - MSS are fall protection using any one or more of the following: standard guardrails, scaffolds or platforms with guardrails, safety nets, safety harness systems.
  - b) Warning Line Systems installed in accordance with OSHA standards.
  - c) Safety Monitoring System on roofs less than 50' wide where no mechanical equipment is being used.
13. Employees engaged in **precast concrete erection** at heights greater than six feet shall be protected by guardrail systems, safety nets, or personal fall arrest systems unless the use of these systems is infeasible or creates a greater hazard, in which case a written fall protection plan must be implemented. (See Appendix A)

## Floor Holes

1. Floor holes which employees may fall through shall be protected by guardrail systems, covers, or personal fall arrest systems.
2. Floor holes, which employees may trip in or step into shall be protected by covers.
3. Floor holes through which objects may fall shall be protected by covers.

## Fall Protection Systems

### 1. Guardrail Systems

- a) Toprails shall be installed between 39 and 45 inches in height and shall not deflect below 39 inches under an outward and downward force of 200 pounds.
- b) Midrails shall be installed midway between the toprail and the walking/working surface. Midrails must be able to withstand 150 pounds of force applied in an outward and downward direction.
- c) If wire rope is used for toprails, it shall be flagged every 6 feet with highly visible materials. Wire rope toprails and midrails shall be at least 1/4" diameter.
- d) If 2x4's are used for guardrails, it is recommended that posts do not exceed 8 feet on center. Lumber used in the construction of guardrails shall be sound and shall not contain large or loose knots. All nails shall be driven in completely. Double-headed nails are not permitted. Using sinker nails or screws is recommended.

*Note:* Prior to erecting any guardrail system, consider what height the guardrail should be positioned, taking into account the height of a slab that may be poured. Also consider how access and loading activities will be done so measures can be taken to accomplish these activities in a safe manner. Also consider where guardrails should be positioned so they do not interfere with future operations.

### 2. Covers

Covers shall be capable of withstanding two times the weight of any object or employee, which may pass over them, and be color coded or marked "**hole**" or "**cover.**" Covers also must be secured from movement. Securing the cover to prevent access to a manhole, vault, or other similar opening is suggested where practical.

### 3. Controlled Access Zones (CAZ) for overhand bricklaying shall be erected as follows:

- a) The controlled access zone shall be defined by a control line not less than 10 feet, no more than 15 feet from the working edge.
- b) The control line shall extend a sufficient distance to completely enclose the overhand bricklaying operations including the ends of the controlled access area.
- c) The line shall be made of rope, wire, or tape with a minimum tensile strength of 200 lbs.
- d) Stanchions or some other means of support will be used to support the control line at a height no less than 39" and no more than 45". The control line will be flagged every 6 feet with high visibility material.

- e) On floors where guardrails have not yet been erected, the controlled access zone should be enlarged, as necessary, to enclose all points of access, materials handling areas, and storage areas.
- f) On floors where guardrails are already in place but need to be removed to allow overhand bricklaying work or other leading edge work to take place, only that portion of the guardrail necessary to accomplish the day's work shall be removed.

*Note:* Employees removing guardrails or other fall protection devices are responsible for replacing those devices when their work is complete.

#### 4. **Warning line systems** for roofing work.

- a) Warning lines shall be erected along all sides of the low slope roof work area and positioned at least 6 feet from the roof edge when mechanical equipment is not being used. If mechanical equipment is being used, the warning line must be positioned at least 10 feet from the roof edge in the direction in which the equipment is being used.
- b) Mechanical equipment shall only be used on a low slope roof if it is inside a warning line system or in areas where employees are protected by a guardrail system or personal fall arrest system.
- c) Warning lines shall be rigged and supported in such a way that its lowest point (including sag) is not less than 34 inches from the roof surface and its highest point is not higher than 39 inches from the roof surface.
- d) Points of access, material handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines. Guardrails shall be provided along the perimeter of the roof where these activities are being performed.
- e) No employee shall be allowed in the area between a roof edge and a warning line system unless guardrails, safety nets, personal fall arrest systems, or a safety monitor system is provided.

#### 5. **Safety Monitors**

Safety monitors can only be used on low slope roofs (4 in 12 pitch or less -vertical to horizontal). Safety monitors cover work activities performed outside the warning line system and cannot be used if mechanical equipment is being used. Mechanical equipment is anything bigger than a mop cart or a wheelbarrow. Safety monitors can be used without warning lines if the roof is 50 feet or less in width.

Safety Monitors must be competent and comply with the following:

- a) The safety monitor must be able to recognize fall hazards and be capable of warning employees when it appears an employee is unaware of a fall hazard or is acting in an unsafe manner.
- b) The safety monitor must be on the same working level and within visual sighting distance of employees. Safety monitors also must be close enough to communicate audibly to employees. This means on a multilevel roof, a safety monitor may be required at each roof level.

- c) The safety monitor shall not have any other responsibilities, which could distract him/her from monitoring employees work activities.
- d) No employees, other than those engaged in roofing work or covered by a fall protection plan, shall be in the area where the safety monitoring system is being utilized.

## 6. **Fall Arrest Systems**

- a) Lanyards, vertical lifelines, D-rings, and snap hooks shall have a 5000 lbs. tensile strength.
- b) All lanyard snap-hooks shall be of the locking type.
- c) Body belts, harnesses, lanyards and other fall protection equipment are not to be used for any purpose other than employee fall protection.
- d) As of January 1, 1998, using body belts as part of a fall arrest system is prohibited.
- e) Fall arrest anchorage points must be able to withstand 5000 lbs. per employee or must be designed as a system, which maintains a safety factor of at least 2.
- f) Fall protection systems must be erected under the supervision of a competent person. Any employee who is unsure whether an anchorage point is appropriate should ask their supervisor.
- g) The length of lanyard's and safety lines should be limited so as not to allow a free fall greater than 6 feet. Additionally, care should be given when designing a system to ensure that an employee will not strike lower levels prior to, or during, the activation of the fall arrest system. This is especially of concern when using shock-absorbing and retractable lanyards due to their elongation when arresting a fall.
- h) Positioning devices should allow for a free fall of no more than 2 feet.
- i) Employees climbing built-up walls of reinforcing steel must tie-off when they reach their work location. Continuous fall protection must be used when climbing above 24 feet vertically.

## **Fall Protection Training**

1. All employees must be trained in the following items:
  - a) The nature of fall hazards in the work area.
  - b) The correct procedures for erecting, maintaining, disassembling and inspecting the fall protection systems to be used.
  - c) The use and operation of guardrail systems, personal fall arrest systems, controlled access zones and other protection to be used.
  - d) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.
  - e) The role of employees in fall protection plans.

*Note:* Employees engaged in built-up roofing operations will require additional training.



# APPENDIX A

## *Fall Protection Plan For Precast/Prestress Concrete Structures*

**Fall Protection Plan**  
**1926 Subpart M App E**

**Non-Mandatory Guidelines for Complying with 1926.502(k)**

Employers engaged in leading edge work, precast concrete construction work and residential construction work who can demonstrate that it is infeasible or creates a greater hazard to use conventional fall protection systems must develop and follow a fall protection plan. Below are sample fall protection plans developed for precast concrete construction and residential work that could be tailored to be site specific for other precast concrete or residential jobsite. This sample plan can be modified to be used for other work involving leading edge work. The sample plan outlines the elements that must be addressed in any fall protection plan. The reasons outlined in this sample fall protection plan are for illustrative purposes only and are not necessarily a valid, acceptable rationale (unless the conditions at the job site are the same as those covered by these sample plans) for not using conventional fall protection systems for a particular precast concrete or residential construction worksite. However, the sample plans provide guidance to employers on the type of information that is required to be discussed in fall protection plans.

***Fall Protection Plans***

*Fall Protection Plan For Precast/Prestress Concrete Structures (This plan can be adapted for leading edge work.)*

This Fall Protection Plan is specific for the following project:

Location of Job \_\_\_\_\_  
Erecting Company \_\_\_\_\_  
Date Plan Prepared or Modified \_\_\_\_\_  
Plan Prepared By \_\_\_\_\_  
Plan Approved By \_\_\_\_\_  
Plan Supervised By \_\_\_\_\_

The following Fall Protection Plan is a sample program prepared for the prevention of injuries associated with falls. A Fall Protection Plan must be developed and evaluated on a site by site basis. It is recommended that erectors discuss the written Fall Protection Plan with their OSHA Area Office prior to going on a jobsite.

***I. Statement of Company Policy***

(Company Name) is dedicated to the protection of its employees from on-the-job injuries. All employees of (Company Name) have the responsibility to work safely on the job. The purpose of this plan is: (a) To supplement our standard safety policy by providing safety standards specifically designed to cover fall protection on this job and; (b) to ensure that each employee is trained and made aware of the safety provisions which are to be implemented by this plan prior to the start of erection.

This Fall Protection Plan addresses the use of other than conventional fall protection at a number of areas on the project, as well as identifying specific activities that require non-conventional means of fall protection. These areas include:

- a. Connecting activity (point of erection).
- b. Leading edge work.
- c. Unprotected sides or edge.
- d. Grouting.

This plan is designed to enable employers and employees to recognize the fall hazards on this job and to establish the procedures that are to be followed in order to prevent falls to lower levels or through holes and openings in walking/working surfaces. Each employee will be trained in these procedures and strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify the foreman of the concern and the concern addressed before proceeding.

Safety policy and procedure on any one project cannot be administered, implemented, monitored and enforced by any one individual. The total objective of a safe, accident free work environment can only be accomplished by a dedicated, concerted effort by every individual involved with the project from management down to the last employee. Each employee must understand their value to the company; the costs of accidents, both monetary, physical, and emotional; the objective of the safety policy and procedures; the safety rules that apply to the safety policy and procedures; and what their individual role is in administering, implementing, monitoring, and compliance of their safety policy and procedures. This allows for a more personal approach to compliance through planning, training, understanding and cooperative effort, rather than by strict enforcement. If for any reason an unsafe act persists, strict enforcement will be implemented.

It is the responsibility of (name of competent person) to implement this Fall Protection Plan. (Name of Competent Person) is responsible for continual observational safety checks of their work operations and to enforce the safety policy and procedures. The foreman also is responsible to correct any unsafe acts or conditions immediately. It is the responsibility of the employee to understand and adhere to the procedures of this plan and to follow the instructions of the foreman. It is also the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or acts that may cause injury to either themselves or any other employees. Any changes to this Fall Protection Plan must be approved by (name of Qualified Person).

## ***II. Fall Protection Systems to Be Used on This Project***

Where conventional fall protection is infeasible or creates a greater hazard at the leading edge and during initial connecting activity, we plan to do this work using a safety monitoring system and expose only a minimum number of employees for the time necessary to actually accomplish the job. The maximum number of workers to be monitored by one safety monitor is six (6). We are designating the following trained employees as designated erectors and they are permitted to enter the controlled access zones and work without the use of conventional fall protection.

Safety monitor:

Designated erector:

Designated erector:

Designated erector:

Designated erector:

Designated erector:

Designated erector:

The safety monitor shall be identified by wearing an orange hard hat. The designated erectors will be identified by one of the following methods:

1. They will wear a blue colored arm band, or
2. They will wear a blue colored hard hat, or
3. They will wear a blue colored vest.

Only individuals with the appropriate experience, skills, and training will be authorized as designated erectors. All employees that will be working as designated erectors under the safety monitoring system shall have been trained and instructed in the following areas:

1. Recognition of the fall hazards in the work area (at the leading edge and when making initial connections-point of erection).
2. Avoidance of fall hazards using established work practices, which have been made known to the employees.
3. Recognition of unsafe practices or working conditions that could lead to a fall, such as windy conditions.

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4. The function, use, and operation of safety monitoring systems, guardrail systems, body belt/harness systems, control zones and other protection to be used.
5. The correct procedure for erecting, maintaining, disassembling and inspecting the system(s) to be used.
6. Knowledge of construction sequence or the erection plan.

A conference will take place prior to starting work involving all members of the erection crew, crane crew and supervisors of any other concerned contractors. This conference will be conducted by the precast concrete erection supervisor in charge of the project. During the pre-work conference, erection procedures and sequences pertinent to this job will be thoroughly discussed and safety practices to be used throughout the project will be specified. Further, all personnel will be informed that the controlled access zones are off limits to all personnel other than those designated erectors specifically trained to work in that area.

### ***Safety Monitoring System***

A safety monitoring system means a fall protection system in which a competent person is responsible for recognizing and warning employees of fall hazards. The duties of the safety monitor are to:

1. Warn by voice when approaching the open edge in an unsafe manner.
2. Warn by voice if there is a dangerous situation developing which cannot be seen by another person involved with product placement, such as a member getting out of control.
3. Make the designated erectors aware they are in a dangerous area.
4. Be competent in recognizing fall hazards.
5. Warn employees when they appear to be unaware of a fall hazard or are acting in an unsafe manner.
6. Be on the same walking/working surface as the monitored employees and within visual sighting distance of the monitored employees.
7. Be close enough to communicate orally with the employees.
8. Not allow other responsibilities to encumber monitoring. If the safety monitor becomes too encumbered with other responsibilities, the monitor shall
  - (1) Stop the erection process; and
  - (2) Turn over other responsibilities to a designated erector; or
  - (3) Turn over the safety monitoring function to another designated competent person.

The safety monitoring system shall not be used when the wind is strong enough to cause loads with large surface areas to swing out of radius, or result in loss of control of the load, or when weather conditions cause the walking-working surfaces to become icy or slippery.

### ***Control Zone System***

A controlled access zone means an area designated and clearly marked in which leading edge work may take place without the use of guardrail, safety net or personal fall arrest systems to protect the employees in the area. Control zone systems shall comply with the following provisions:

1. When used to control access to areas where leading edge and other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.

When control lines are used, they shall be erected not less than 6 feet (1.8 m) nor more than 60 feet (18 m) or half the length of the member being erected, whichever is less, from the leading edge.
2. The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.
3. The control line shall be connected on each side to a guardrail system or wall.
4. Control lines shall consist of ropes, wires, tapes, or equivalent materials, and supporting stanchions as follows:
  5. Each line shall be flagged or otherwise clearly marked at not more than 6-foot (1.8 m) intervals with high-visibility material.
  6. Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches (1 m) from the walking/working surface and its highest point is not more than 45 inches (1.3 m) from the walking/working surface.
  7. Each line shall have a minimum breaking strength of 200 pounds (.88 kN).

### ***Holes***

All openings greater than 12 in. x 12 in. will have perimeter guarding or covering. All predetermined holes will have the plywood covers made in the precasters' yard and shipped with the member to the jobsite. Prior to cutting holes on the job, proper protection for the hole must be provided to protect the workers. Perimeter guarding or covers will not be removed without the approval of the erection foreman.

Precast concrete column erection through the existing deck requires that many holes be provided through this deck. These are to be covered and protected. Except for the opening being currently used to erect a column, all opening protection is to be left undisturbed. The opening being uncovered to erect a column will become part of the point of erection and will be addressed as part of this Fall Protection Plan. This uncovering is to be done at the erection foreman's direction and will only occur immediately prior to "feeding" the column through the opening. Once the end of the column is through the slab opening, there will no longer exist a fall hazard at this location.

### ***III. Implementation of Fall Protection Plan***

The structure being erected is a multistory total precast concrete building consisting of columns, beams, wall panels and hollow core slabs and double tee floor and roof members.

The following is a list of the products and erection situations on this job:

#### ***Columns***

For columns 10 ft to 36 ft long, employees disconnecting crane hooks from columns will work from a ladder and wear a body belt/harness with lanyard and be tied off when both hands are needed to disconnect. For tying off, a vertical lifeline will be connected to the lifting eye at the top of the column, prior to lifting, to be used with a manually operated or mobile rope grab. For columns too high for the use of a ladder, 36-ft and higher, an added cable will be used to reduce the height of the disconnecting point so that a ladder can be used. This cable will be left in place until a point in erection that it can be removed safely. In some cases, columns will be unhooked from the crane by using an erection tube or shackle with a pull pin which is released from the ground after the column is stabilized.

The column will be adequately connected and/or braced to safely support the weight of a ladder with an employee on it.

#### ***Inverted Tee Beams***

Employees erecting inverted tee beams, at a height of 6 to 40 ft, will erect the beam, make initial connections, and final alignment from a ladder. If the employee needs to reach over the side of the beam to bar or make an adjustment to the alignment of the beam, they will mount the beam and be tied off to the lifting device in the beam after ensuring the load has been stabilized on its bearing. To disconnect the crane from the beam an employee will stand a ladder against the beam. Because the use of ladders is not practical at heights above 40 ft, beams will be initially placed with the use of tag lines and their final alignment made by a person on a manlift or similar employee positioning systems.

#### ***Spandrel Beams***

Spandrel beams at the exterior of the building will be aligned as closely as possible with the use of tag lines with the final placement of the spandrel beam made from a ladder at the open end of the structure. A ladder will be used to make the initial connections and a ladder will be used to disconnect the crane. The other end of the beam will be placed by the designated erector from the double tee deck under the observation of the safety monitor. The beams will be adequately connected and/or braced to safely support the weight of a ladder with an employee on it.

## ***Floor and Roof Members***

During installation of the precast concrete floor and/or roof members, the work deck continuously increases in area as more and more units are being erected and positioned. Thus, the unprotected floor/roof perimeter is constantly modified with the leading edge changing location as each member is installed. The fall protection for workers at the leading edge shall be assured by properly constructed and maintained control zone lines not more than 60 ft away from the leading edge supplemented by a safety monitoring system to ensure the safety of all designated erectors working within the area defined by the control zone lines.

The hollow core slabs erected on the masonry portion of the building will be erected and grouted using the safety monitoring system. Grout will be placed in the space between the end of the slab and face shell of the concrete masonry by dumping from a wheelbarrow. The grout in the keyways between the slabs will be dumped from a wheelbarrow and then spread with long handled tools, allowing the worker to stand erect facing toward the unprotected edge and back from any work deck edge.

Whenever possible, the designated erectors will approach the incoming member at the leading edge only after it is below waist height so that the member itself provides protection against falls.

Except for the situations described below, when the arriving floor or roof member is within 2 to 3 inches of its final position, the designated erectors can then proceed to their position of erection at each end of the member under the control of the safety monitor. Crane hooks will be unhooked from double tee members by designated erectors under the direction and supervision of the safety monitor.

Designated erectors, while waiting for the next floor or roof member, will be constantly under the control of the safety monitor for fall protection and are directed to stay a minimum of six (6) ft from the edge. In the event a designated erector must move from one end of a member, which has just been placed at the leading edge, they must first move away from the leading edge a minimum of six (6) ft and then progress to the other end while maintaining the minimum distance of six (6) ft at all times.

Erection of double tees, where conditions require bearing of one end into a closed pocket and the other end on a beam ledge, restricting the tee legs from going directly into the pockets, require special considerations. The tee legs that are to bear in the closed pocket must hang lower than those at the beam bearing. The double tee will be "two-lined" in order to elevate one end higher than the other to allow for the low end to be ducked into the closed pocket using the following procedure.

The double tee will be rigged with a standard four-way spreader off of the main load line. An additional choker will be attached to the married point of the two-legged spreader at the end of the tee that is to be elevated. The double tee will be hoisted with the main load line and swung into a position as close as possible to the tee's final bearing elevation. When the tee is in this position and stabilized, the whip line load block will be lowered to just above the tee deck. At this time, two erectors will walk out on the suspended tee deck at midspan of the tee member and pull the load block to the end of the tee to be elevated and attach the additional choker to the load block. The possibility of entanglement with the crane lines and other obstacles during this two lining process while raising and lowering the crane block on that second line could be hazardous to an encumbered employee. Therefore, the designated erectors will not tie off during any part of this process. While the designated erectors are on the double tee, the safety monitoring system will be used. After attaching the choker, the two erectors then step back on the previously erected tee deck and signal the crane operator to hoist the load with the whip line to the elevation that will allow for enough clearance to let the low end tee legs slide into the pockets when the main load line is lowered. The erector, who is handling the lowered end of the tee at the closed pocket bearing, will step out on the suspended tee. An erection bar will then be placed between the end of the tee leg and the inside face of the pocketed spandrel member. The tee is barred away from the pocketed member to reduce the friction and lateral force against the pocketed member. As the tee is being lowered, the other erector remains on the tee, which was previously erected to handle the other end. At this point the tee is slowly lowered by the crane to a point where the tee legs can freely slide into the pockets. The erector working the lowered end of the tee must keep pressure on the bar between the tee and the face of the pocketed spandrel member to very gradually let the tee legs slide into the pocket to its proper bearing dimension. The tee is then slowly lowered into its final erected position.

The designated erector should be allowed onto the suspended double tee, otherwise there is no control over the horizontal movement of the double tee and this movement could knock the spandrel off of its bearing or the column out of plumb. The control necessary to prevent hitting the spandrel can only be done safely from the top of the double tee being erected.

**Loadbearing Wall Panels:** The erection of the loadbearing wall panels on the elevated decks requires the use of a safety monitor and a controlled access zone that is a minimum of 25 ft and a maximum of 1/2 the length of the wall panels away from the unprotected edge, so that designated erectors can move freely and unencumbered when receiving the panels. Bracing, if required for stability, will be installed by ladder. After the braces are secured, the crane will be disconnected from the wall by using a ladder. The wall to wall connections will also be performed from a ladder.

**Non-Loadbearing Panels (Cladding):** The locating of survey lines, panel layout and other installation prerequisites (prewelding, etc.) for non-loadbearing panels (cladding) will not commence until floor perimeter and floor openings have been protected. In some areas, it is necessary because of panel configuration to remove the perimeter protection as the cladding is being installed. Removal of perimeter protection will be performed on a bay to bay basis, just ahead of cladding erection to minimize temporarily unprotected floor edges. Those workers within 6 ft of the edge, receiving and positioning the cladding when the perimeter protection is removed shall be tied off.

### ***Detailing***

Employees exposed to falls of six (6) feet or more to lower levels, who are not actively engaged in leading edge work or connecting activity, such as welding, bolting, cutting, bracing, guying, patching, painting or other operations, and who are working less than six (6) ft from an unprotected edge will be tied off at all times or guardrails will be installed. Employees engaged in these activities but who are more than six (6) ft from an unprotected edge as defined by the control zone lines, do not require fall protection but a warning line or control lines must be erected to remind employees they are approaching an area where fall protection is required.

## ***IV. Conventional Fall Protection Considered for the Point of Erection or Leading Edge Erection Operations***

### **A. Personal Fall Arrest Systems**

In this particular erection sequence and procedure, personal fall arrest systems requiring body belt/harness systems, lifelines and lanyards will not reduce possible hazards to workers and will create offsetting hazards during their usage at the leading edge of precast/prestressed concrete construction.

Leading edge erection and initial connections are conducted by employees who are specifically trained to do this type of work and are trained to recognize the fall hazards. The nature of such work normally exposes the employee to the fall hazard for a short period of time and installation of fall protection systems for a short duration is not feasible because it exposes the installers of the system to the same fall hazard, but for a longer period of time.

1. It is necessary that the employee be able to move freely without encumbrance in order to guide the sections of precast concrete into their final position without having lifelines attached which will restrict the employee's ability to move about at the point of erection.

2. A typical procedure requires 2 or more workers to maneuver around each other as a concrete member is positioned to fit into the structure. If they are each attached to a lifeline, part of their attention must be diverted from their main task of positioning a member weighing several tons to the task of avoiding entanglements of their lifelines or avoiding tripping over lanyards. Therefore, if these workers are attached to lanyards, more fall potential would result than from not using such a device.

In this specific erection sequence and procedure, retractable lifelines do not solve the problem of two workers becoming tangled. In fact, such a tangle could prevent the lifeline from retracting as the worker moved, thus potentially exposing the worker to a fall greater than 6 ft. Also, a worker crossing over the lifeline of another worker can create a hazard because the movement of one person can unbalance the other. In the event of a fall by one person there is a likelihood that the other person will be caused to fall as well. In addition, if contamination such as grout (during hollow core grouting) enters the retractable housing it can cause excessive wear and damage to the device and could clog the retracting mechanism as the lanyard is dragged across the deck. Obstructing the cable orifice can defeat the device's shock absorbing function, produce cable slack and damage, and adversely affect cable extraction and retraction.

3. Employees tied to a lifeline can be trapped and crushed by moving structural members if the employee becomes restrained by the lanyard or retractable lifeline and cannot get out of the path of the moving load. The sudden movement of a precast concrete member being raised by a crane can be caused by a number of factors. When this happens, a connector may immediately have to move a considerable distance to avoid injury. If a tied off body belt/harness is being used, the connector could be trapped. Therefore, there is a greater risk of injury if the connector is tied to the structure for this specific erection sequence and procedure.

When necessary to move away from a retractable device, the worker cannot move at a rate greater than the device locking speed typically 3.5 to 4.5 ft/sec. When moving toward the device it is necessary to move at a rate, which does not permit cable slack to build up. This slack may cause cable retraction acceleration and cause a worker to lose their balance by applying a higher than normal jerking force on the body when the cable suddenly becomes taut after building up momentum. This slack can also cause damage to the internal spring-loaded drum, uneven coiling of cable on the drum, and possible cable damage.

The factors causing sudden movements for this location include:

(a) Cranes

- (1) Operator error.
- (2) Site conditions (soft or unstable ground).
- (3) Mechanical failure.
- (4) Structural failure.
- (5) Rigging failure.
- (6) Crane signal/radio communication failure.

(b) Weather Conditions

- (1) Wind (strong wind/sudden gusting) - particularly a problem with the large surface areas of precast concrete members.
- (2) Snow/rain (visibility).
- (3) Fog (visibility).
- (4) Cold - causing slowed reactions or mechanical problems.

(c) Structure/Product Conditions.

- (1) Lifting Eye failure.
- (2) Bearing failure or slippage.
- (3) Structure shifting.
- (4) Bracing failure.
- (5) Product failure.

(d) Human Error.

- (1) Incorrect tag line procedure.
- (2) Tag line hang-up.
- (3) Incorrect or misunderstood crane signals.
- (4) Misjudged elevation of member.
- (5) Misjudged speed of member.
- (6) Misjudged angle of member.

4. Anchorages or special attachment points could be cast into the precast concrete members if sufficient preplanning and consideration of erectors' position is done before the members are cast. Any hole or other attachment must be approved by the engineer who designed the member. It is possible that some design restrictions will not allow a member to be weakened by an additional hole; however, it is anticipated that such situations would be the exception, not the rule. Attachment points, other than on the deck surface, will require removal and/or patching. In order to remove and/or patch these points requires the employee to be exposed to an additional fall hazard at an unprotected perimeter. The fact that attachment points could be available anywhere on the structure does not eliminate the hazards of using these points for tying off as discussed above. A logical point for tying off on double tees would be using the lifting loops, except that they must be cut off to eliminate a tripping hazard at an appropriate time.

5. Providing attachment at a point above the walking/working surface would also create fall exposures for employees installing their devices. Final positioning of a precast concrete member requires it to be moved in such a way that it must pass through the area that would be occupied by the lifeline and the lanyards attached to the point above. Resulting entanglements of lifelines and lanyards on a moving PIAZZA, INC.



member could pull employees from the work surface. Also, the structure is being created and, in most cases, there is no structure above the members being placed.

(a) Temporary structural supports, installed to provide attaching points for lifelines limit the space which is essential for orderly positioning, alignment and placement of the precast concrete members. To keep the lanyards a reasonable and manageable length, lifeline supports would necessarily need to be in proximity to the positioning process. A sudden shift of the precast concrete member being positioned because of wind pressure or crane movement could make it strike the temporary supporting structure, moving it suddenly and causing tied off employees to fall.

(b) The time in man-hours, which would be expended, in placing and maintaining temporary structural supports for lifeline attaching points could exceed the expended man-hours involved in placing the precast concrete members. No protection could be provided for the employees erecting the temporary structural supports and these supports would have to be moved for each successive step in the construction process, thus greatly increasing the employee's exposure to the fall hazard.

(c) The use of a cable strung horizontally between two columns to provide tie off lines for erecting or walking a beam for connecting work is not feasible and creates a greater hazard on this multi-story building for the following reasons:

(1) If a connector is to use such a line, it must be installed between the two columns. To perform this installation requires an erector to have more fall exposure time attaching the cable to the columns than would be spent to make the beam to column connection itself.

(2) If such a line is to be installed so that an erector can walk along a beam, it must be overhead or below him. For example, if a connector must walk along a 24-in. wide beam, the presence of a line next to the connector at waist level, attached directly to the columns, would prevent the connector from centering their weight over the beam and balancing themselves. Installing the line above the connector might be possible on the first level of a two-story column; however, the column may extend only a few feet above the floor level at the second level or be flush with the floor level. Attaching the line to the side of the beam could be a solution; however, it would require the connector to attach the lanyard below foot level which would most likely extend a fall farther than 6 ft.

(3) When lines are strung over every beam, it becomes more and more difficult for the crane operator to lower a precast concrete member into position without the member becoming fouled. Should the member become entangled, it could easily dislodge the line from a column. If a worker is tied to it at the time, a fall could be caused.

6. The ANSI A10.14-1991 American National Standard for Construction and Demolition Operations - Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use, states that the anchor point of a lanyard or deceleration device should, if possible, be located above the wearer's belt or harness attachment. ANSI A10.14 also states that a suitable anchorage point is one, which is located as high as possible to prevent contact with an obstruction below should the worker fall. Most manufacturers also warn in the user's handbook that the safety block/retractable lifeline must be positioned above the D-ring (above the work space of the intended user) and OSHA recommends that fall arrest and restraint equipment be used in accordance with the manufacturer's instructions.

Attachment of a retractable device to a horizontal cable near floor level or using the inserts in the floor or roof members may result in increased free fall due to the dorsal D-ring of the full-body harness riding higher than the attachment point of the snaphook to the cable or insert (e.g., 6 foot tall worker with a dorsal D-ring at 5 feet above the floor or surface, reduces the working length to only one foot, by placing the anchorage five feet away from the fall hazard). In addition, impact loads may exceed maximum fall arrest forces (MAF) because the fall arrest D-ring would be 4 to 5 feet higher than the safety block/retractable lifeline anchored to the walking-working surface; and the potential for swing hazards is increased. Manufacturers also require that workers not work at a level where the point of snaphook attachment to the body harness is above the device because this will increase the free fall distance and the deceleration distance and will cause higher forces on the body in the event of an accidental fall.

Manufacturers recommend an anchorage for the retractable lifeline, which is immovably fixed in space and is independent of the user's support systems. A moveable anchorage is one which can be moved around (such as equipment or wheeled vehicles) or which can deflect substantially under shock loading (such as a horizontal cable or very flexible beam). In the case of a very flexible anchorage, a shock load applied to the PIAZZA, INC.

anchorage during fall arrest can cause oscillation of the flexible anchorage such that the retractable brake mechanism may undergo one or more cycles of locking/unlocking/locking (ratchet effect) until the anchorage deflection is dampened. Therefore, use of a moveable anchorage involves critical engineering and safety factors and should only be considered after fixed anchorage has been determined to be not feasible.

Horizontal cables used as an anchorage present an additional hazard due to amplification of the horizontal component of maximum arrest force (of a fall) transmitted to the points where the horizontal cable is attached to the structure. This amplification is due to the angle of sag of a horizontal cable and is most severe for small angles of sag. For a cable sag angle of 2 degrees the horizontal force on the points of cable attachment can be amplified by a factor of 15.

It is also necessary to install the retractable device vertically overhead to minimize swing falls. If an object is in the worker's swing path (or that of the cable) hazardous situations exist:

(1) due to the swing, horizontal speed of the user may be high enough to cause injury when an obstacle in the swing fall path is struck by either the user or the cable;

(2) the total vertical fall distance of the user may be much greater than if the user had fallen only vertically without a swing fall path.

With retractable lines, overconfidence may cause the worker to engage in inappropriate behavior, such as approaching the perimeter of a floor or roof at a distance appreciably greater than the shortest distance between the anchorage point and the leading edge. Though the retractable lifeline may arrest a worker's fall before he or she has fallen a few feet, the lifeline may drag along the edge of the floor or beam and swing the worker like a pendulum until the line has moved to a position where the distance between the anchorage point and floor edge is the shortest distance between those two points. Accompanying this pendulum swing is a lowering of the worker, with the attendant danger that he or she may violently impact the floor or some obstruction below.

The risk of a cable breaking is increased if a lifeline is dragged sideways across the rough surface or edge of a concrete member at the same moment that the lifeline is being subjected to a maximum impact loading during a fall. The typical 3/16-in. cable in a retractable lifeline has a breaking strength of from 3000 to 3700 lbs.

7. The competent person, who can take into account the specialized operations being performed on this project, should determine when and where a designated erector cannot use a personal fall arrest system.

## B. Safety Net Systems

The nature of this particular precast concrete erection worksite precludes the safe use of safety nets where point of erection or leading edge work must take place.

1. To install safety nets in the interior high bay of the single story portion of the building poses rigging attachment problems. Structural members do not exist to which supporting devices for nets can be attached in the area where protection is required. As the erection operation advances, the location of point of erection or leading edge work changes constantly as each member is attached to the structure. Due to this constant change it is not feasible to set net sections and build separate structures to support the nets.

2. The nature of the erection process for the precast concrete members is such that an installed net would protect workers as they position and secure only one structural member. After each member is stabilized the net would have to be moved to a new location (this could mean a move of 8 to 10 ft or the possibility of a move to a different level or area of the structure) to protect workers placing the next piece in the construction sequence. The result would be the installation and dismantling of safety nets repeatedly throughout the normal workday. As the time necessary to install a net, test, and remove it is significantly greater than the time necessary to position and secure a precast concrete member, the exposure time for the worker installing the safety net would be far longer than for the workers whom the net is intended to protect. The time exposure repeats itself each time the nets and supporting hardware must be moved laterally or upward to provide protection at the point of erection or leading edge.

3. Strict interpretation of 1926.502(c) requires that operations shall not be undertaken until the net is in place and has been tested. With the point of erection constantly changing, the time necessary to install and test a safety net significantly exceeds the time necessary to position and secure the concrete member.

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4. Use of safety nets on exposed perimeter wall openings and opensided floors, causes attachment points to be left in architectural concrete which must be patched and filled with matching material after the net supporting hardware is removed. In order to patch these openings, additional numbers of employees must be suspended by swing stages, boatswain chairs or other devices, thereby increasing the amount of fall exposure time to employees.

5. Installed safety nets pose an additional hazard at the perimeter of the erected structure where limited space is available in which members can be turned after being lifted from the ground by the crane. There would be a high probability that the member being lifted could become entangled in net hardware, cables, etc.

6. The use of safety nets where structural wall panels are being erected would prevent movement of panels to point of installation. To be effective, nets would necessarily have to provide protection across the area where structural supporting wall panels would be set and plumbed before roof units could be placed.

7. Use of a tower crane for the erection of the high rise portion of the structure poses a particular hazard in that the crane operator cannot see or judge the proximity of the load in relation to the structure or nets. If the signaler is looking through nets and supporting structural devices while giving instructions to the crane operator, it is not possible to judge precise relationships between the load and the structure itself or to nets and supporting structural devices. This could cause the load to become entangled in the net or hit the structure causing potential damage.

### C. Guardrail Systems

On this particular worksite, guardrails, barricades, ropes, cables or other perimeter guarding devices or methods on the erection floor will pose problems to safe erection procedures. Typically, a floor or roof is erected by placing 4 to 10 ft wide structural members next to one another and welding or grouting them together. The perimeter of a floor and roof changes each time a new member is placed into position. It is unreasonable and virtually impossible to erect guardrails and toe boards at the ever-changing leading edge of a floor or roof.

1. To position a member safely it is necessary to remove all obstructions extending above the floor level near the point of erection. Such a procedure allows workers to swing a new member across the erected surface as necessary to position it properly without worrying about knocking material off of this surface.

Hollow core slab erection on the masonry wall requires installation of the perimeter protection where the masonry wall has to be constructed. This means the guardrail is installed then subsequently removed to continue the masonry construction. The erector will be exposed to a fall hazard for a longer period of time while installing and removing perimeter protection than while erecting the slabs.

In hollow core work, as in other precast concrete erection, others are not typically on the work deck until the precast concrete erection is complete. The deck is not complete until the leveling, aligning, and grouting of the joints is done. It is normal practice to keep others off the deck until at least the next day after the installation is complete to allow the grout to harden.

2. There is no permanent boundary until all structural members have been placed in the floor or roof. At the leading edge, workers are operating at the temporary edge of the structure as they work to position the next member in the sequence. Compliance with the standard would require a guardrail and toe board be installed along this edge. However, the presence of such a device would prevent a new member from being swung over the erected surface low enough to allow workers to control it safely during the positioning process. Further, these employees would have to work through the guardrail to align the new member and connect it to the structure. The guardrail would not protect an employee who must lean through it to do the necessary work, rather it would hinder the employee to such a degree that a greater hazard is created than if the guardrail were absent.

3. Guardrail requirements pose a hazard at the leading edge of installed floor or roof sections by creating the possibility of employees being caught between guardrails and suspended loads. The lack of a clear work area in which to guide the suspended load into position for placement and welding of members into the existing structure creates still further hazards.

4. Where erection processes require precast concrete stairways or openings to be installed as an integral part of the overall erection process, it must also be recognized that guardrails or handrails must not project above the surface of the erection floor. Such guardrails should be terminated at the level of the erection floor to avoid placing hazardous obstacles in the path of a member being positioned.

#### ***V. Other Fall Protection Measures Considered for This Job***

The following is a list and explanation of other fall protection measures available and an explanation of limitations for use on this particular jobsite. If during the course of erecting the building the employee sees an area that could be erected more safely by the use of these fall protection measures, the foreman should be notified.

A. Scaffolds are not used because:

1. The leading edge of the building is constantly changing and the scaffolding would have to be moved at very frequent intervals. Employees erecting and dismantling the scaffolding would be exposed to fall hazards for a greater length of time than they would by merely erecting the precast concrete member.

2. A scaffold tower could interfere with the safe swinging of a load by the crane.

3. Power lines, terrain and site do not allow for the safe use of scaffolding.

B. Vehicle mounted platforms are not used because:

1. A vehicle-mounted platform will not reach areas on the deck that are erected over other levels.

2. The leading edge of the building is usually over a lower level of the building and this lower level will not support the weight of a vehicle-mounted platform.

3. A vehicle-mounted platform could interfere with the safe swinging of a load by the crane, either by the crane swinging the load over or into the equipment.

4. Power lines and surrounding site work do not allow for the safe use of a vehicle-mounted platform.

C. Crane suspended personnel platforms are not used because:

1. A second crane close enough to suspend any employee in the working and erecting area could interfere with the safe swinging of a load by the crane hoisting the product to be erected.

2. Power lines and surrounding site work do not allow for the safe use of a second crane on the job.

#### ***VI. Enforcement***

Constant awareness of and respect for fall hazards, and compliance with all safety rules are considered conditions of employment. The jobsite Superintendent, as well as individuals in the Safety and Personnel Department, reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

#### ***VII. Accident Investigations***

All accidents that result in injury to workers, regardless of their nature, shall be investigated and reported. It is an integral part of any safety program that documentation take place as soon as possible so that the cause and means of prevention can be identified to prevent a reoccurrence.

In the event that an employee falls or there is some other related, serious incident occurring, this plan shall be reviewed to determine if additional practices, procedures, or training need to be implemented to prevent similar types of falls or incidents from occurring.

### ***VIII. Changes to Plan***

Any changes to the plan will be approved by (name of the qualified person). This plan shall be reviewed by a qualified person as the job progresses to determine if additional practices, procedures or training needs to be implemented by the competent person to improve or provide additional fall protection. Workers shall be notified and trained, if necessary, in the new procedures. A copy of this plan and all approved changes shall be maintained at the jobsite.

# APPENDIX B

## *Fall Protection Plan For Residential Construction*

# Fall Protection Plan for Residential Construction

(Insert Company Name)

This Fall Protection Plan Is Specific For The Following Project:

Location of Job \_\_\_\_\_  
Date Plan Prepared or Modified \_\_\_\_\_  
Plan Prepared By \_\_\_\_\_  
Plan Approved By \_\_\_\_\_  
Plan Supervised By \_\_\_\_\_

The following Fall Protection Plan is a sample program prepared for the prevention of injuries associated with falls. A Fall Protection Plan must be developed and evaluated on a site by site basis. It is recommended that builders discuss the written Fall Protection Plan with their OSHA Area Office prior to going on a jobsite.

## *I. Statement of Company Policy*

(Your company name here) is dedicated to the protection of its employees from on-the-job injuries. All employees of (Your company name here) have the responsibility to work safely on the job. The purpose of the plan is to supplement our existing safety and health program and to ensure that every employee who works for (Your company name here) recognizes workplace fall hazards and takes the appropriate measures to address those hazards.

This Fall Protection Plan addresses the use of conventional fall protection at a number of areas on the project, as well as identifies specific activities that require non-conventional means of fall protection. During the construction of residential buildings under 48 feet in height, it is sometimes infeasible or it creates a greater hazard to use conventional fall protection systems at specific areas or for specific tasks. The areas or tasks may include, but are not limited to:

- a. Setting and bracing of roof trusses and rafters;
- b. Installation of floor sheathing and joists;
- c. Roof sheathing operations; and
- d. Erecting exterior walls.

In these cases, conventional fall protection systems may not be the safest choice for builders. This plan is designed to enable employers and employees to recognize the fall hazards associated with this job and to establish the safest procedures that are to be followed in order to prevent falls to lower levels or through holes and openings in walking/working surfaces.

Each employee will be trained in these procedures and will strictly adhere to them except when doing so would expose the employee to a greater hazard. If, in the employee's opinion, this is the case, the employee is to notify the competent person of their concern and have the concern addressed before proceeding.

It is the responsibility of (name of competent person) to implement this Fall Protection Plan. Continual observational safety checks of work operations and the enforcement of the safety policy and procedures shall be regularly enforced. The crew supervisor or foreman (insert name) is responsible for correcting any unsafe practices or conditions immediately.

It is the responsibility of the employer to ensure that all employees understand and adhere to the procedures of this plan and to follow the instructions of the crew supervisor. It is also the responsibility of the employee to bring to management's attention any unsafe or hazardous conditions or practices that may cause injury to either themselves or any other employees. Any changes to the Fall Protection Plan must be approved by (name of qualified person).

## ***II. Fall Protection Systems To Be Used on This Job***

Installation of roof trusses/rafters, exterior wall erection, roof sheathing, floor sheathing and joist/truss activities will be conducted by employees who are specifically trained to do this type of work and are trained to recognize the fall hazards. The nature of such work normally exposes the employee to the fall hazard for a short period of time. This Plan details how (Your company name here) will minimize these hazards.

### ***Controlled Access Zones***

When using the Plan to implement the fall protection options available, workers must be protected through limited access to high hazard locations. Before any non-conventional fall protection systems are used as part of the work plan, a controlled access zone (CAZ) shall be clearly defined by the competent person as an area where a recognized hazard exists. The demarcation of the CAZ shall be communicated by the competent person in a recognized manner, either through signs, wires, tapes, ropes or chains.

(Your company name here) shall take the following steps to ensure that the CAZ is clearly marked or controlled by the competent person:

All access to the CAZ must be restricted to authorized entrants;

All workers who are permitted in the CAZ shall be listed in the appropriate sections of the Plan (or be visibly identifiable by the competent person) prior to implementation;

The competent person shall ensure that all-protective elements of the CAZ be implemented prior to the beginning of work.

### ***Installation Procedures for Roof Truss and Rafter Erection***

During the erection and bracing of roof trusses/rafters, conventional fall protection may present a greater hazard to workers. On this job, safety nets, guardrails and personal fall arrest systems will not provide adequate fall protection because the nets will cause the walls to collapse, while there are no suitable attachment or anchorage points for guardrails or personal fall arrest systems.

On this job, requiring workers to use a ladder for the entire installation process will cause a greater hazard because the worker must stand on the ladder with his back or side to the front of the ladder. While erecting the truss or rafter the worker will need both hands to maneuver the truss and therefore cannot hold onto the ladder. In addition, ladders cannot be adequately protected from movement while trusses are being maneuvered into place. Many workers may experience additional fatigue because of the increase in overhead work with heavy materials, which can also lead to a greater hazard.

Exterior scaffolds cannot be utilized on this job because the ground, after recent backfilling, cannot support the scaffolding. In most cases, the erection and dismantling of the scaffold would expose workers to a greater fall hazard than erection of the trusses/rafters.

On all walls eight feet or less, workers will install interior scaffolds along the interior wall below the location where the trusses/rafters will be erected. "Sawhorse" scaffolds constructed of 46-inch sawhorses and 2x10 planks will often allow workers to be elevated high enough to allow for the erection of trusses and rafters without working on the top plate of the wall.

In structures that have walls higher than eight feet and where the use of scaffolds and ladders would create a greater hazard, safe working procedures will be utilized when working on the top plate and will be monitored by the crew supervisor. During all stages of truss/rafter erection the stability of the trusses/rafters will be ensured at all times.

(Your company name here) shall take the following steps to protect workers who are exposed to fall hazards while working from the top plate installing trusses/rafters:

Only the following trained workers will be allowed to work on the top plate during roof truss or rafter installation:



- 
- Workers shall have no other duties to perform during truss/rafter erection procedures;
  - All trusses/rafters will be adequately braced before any worker can use the truss/rafter as a support;
  - Workers will remain on the top plate using the previously stabilized truss/rafter as a support while other trusses/rafters are being erected;
  - Workers will leave the area of the secured trusses only when it is necessary to secure another truss/rafter;
  - The first two trusses/rafters will be set from ladders leaning on side walls at points where the walls can support the weight of the ladder; and
  - A worker will climb onto the interior top plate via a ladder to secure the peaks of the first two trusses/rafters being set.

The workers responsible for detaching trusses from cranes and/or securing trusses at the peaks traditionally are positioned at the peak of the trusses/rafters. There are also situations where workers securing rafters to ridge beams will be positioned on top of the ridge beam.

(Your company name here) shall take the following steps to protect workers who are exposed to fall hazards while securing trusses/rafters at the peak of the trusses/ridge beam:

Only the following trained workers will be allowed to work at the peak during roof truss or rafter installation:

- 
- 
- 
- Once truss or rafter installation begins, workers not involved in that activity shall not stand or walk below or adjacent to the roof opening or exterior walls in any area where they could be struck by falling objects;
  - Workers shall have no other duties than securing/bracing the trusses/ridge beam;
  - Workers positioned at the peaks or in the webs of trusses or on top of the ridge beam shall work from a stable position, either by sitting on a "ridge seat" or other equivalent surface that provides additional stability or by positioning themselves in previously stabilized trusses/rafters and leaning into and reaching through the trusses/rafters;
  - Workers shall not remain on or in the peak/ridge any longer than necessary to safely complete the task.

### ***Roof Sheathing Operations***

Workers typically install roof sheathing after all trusses/rafters and any permanent truss bracing is in place. Roof structures are unstable until some sheathing is installed, so workers installing roof sheathing cannot be protected from fall hazards by conventional fall protection systems until it is determined that the roofing system can be used as an anchorage point. At that point, employees shall be protected by a personal fall arrest system.

Trusses/rafters are subject to collapse if a worker falls while attached to a single truss with a belt/harness. Nets could also cause collapse, and there is no place to attach guardrails.

All workers will ensure that they have secure footing before they attempt to walk on the sheathing, including cleaning shoes/boots of mud or other slip hazards.

To minimize the time workers must be exposed to a fall hazard; materials will be staged to allow for the quickest installation of sheathing.

(Your company name here) shall take the following steps to protect workers who are exposed to fall hazards while installing roof sheathing:

- Once roof sheathing installation begins, workers not involved in that activity shall not stand or walk below or adjacent to the roof opening or exterior walls in any area where they could be struck by falling objects;
- The competent person shall determine the limits of this area, which shall be clearly communicated to workers prior to placement of the first piece of roof sheathing;
- The competent person may order work on the roof to be suspended for brief periods as necessary to allow other workers to pass through such areas when this would not create a greater hazard;
  - Only qualified workers shall install roof sheathing;
  - The bottom row of roof sheathing may be installed by workers standing in truss webs;
- After the bottom row of roof sheathing is installed, a slide guard extending the width of the roof shall be securely attached to the roof. Slide guards are to be constructed of no less than nominal 4" height capable of limiting the uncontrolled slide of workers. Workers should install the slide guard while standing in truss webs and leaning over the sheathing;
- Additional rows of roof sheathing may be installed by workers positioned on previously installed rows of sheathing. A slide guard can be used to assist workers in retaining their footing during successive sheathing operations; and
- Additional slide guards shall be securely attached to the roof at intervals not to exceed 13 feet as successive rows of sheathing are installed. For roofs with pitches in excess of 9-in-12, slide guards will be installed at four-foot intervals.
- When wet weather (rain, snow, or sleet) are present, roof-sheathing operations shall be suspended unless safe footing can be assured for those workers installing sheathing.
- When strong winds (above 40 miles per hour) are present, roof-sheathing operations are to be suspended unless windbreakers are erected.

#### ***Installation of Floor Joists and Sheathing***

During the installation of floor sheathing/joists (leading edge construction), the following steps shall be taken to protect workers:

Only the following trained workers will be allowed to install floor joists or sheathing:

- 
- 
- Materials for the operations shall be conveniently staged to allow for easy access to workers;
  - The first floor joists or trusses will be rolled into position and secured either from the ground, ladders or sawhorse scaffolds;
  - Each successive floor joist or truss will be rolled into place and secured from a platform created from a sheet of plywood laid over the previously secured floor joists or trusses;
  - Except for the first row of sheathing which will be installed from ladders or the ground, workers shall work from the established deck; and

- Any workers not assisting in the leading edge construction while leading edges still exist (e.g. cutting the decking for the installers) shall not be permitted within six feet of the leading edge under construction.

### ***Erection of Exterior Walls***

During the construction and erection of exterior walls, employers shall take the following steps to protect workers:

Only the following trained workers will be allowed to erect exterior walls:

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- A painted line six feet from the perimeter will be clearly marked prior to any wall erection activities to warn of the approaching unprotected edge;
  - Materials for operations shall be conveniently staged to minimize fall hazards; and
  - Workers constructing exterior walls shall complete as much cutting of materials and other preparation as possible away from the edge of the deck.

### ***III. Enforcement***

Constant awareness of and respect for fall hazards, and compliance with all safety rules are considered conditions of employment. The crew supervisor or foreman, as well as individuals in the Safety and Personnel Department, reserve the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the guidelines of this program.

### ***IV. Accident Investigations***

All accidents that result in injury to workers, regardless of their nature, shall be investigated and reported. It is an integral part of any safety program that documentation take place as soon as possible so that the cause and means of prevention can be identified to prevent a reoccurrence.

In the event that an employee falls or there is some other related, serious incident occurring, this plan shall be reviewed to determine if additional practices, procedures, or training need to be implemented to prevent similar types of falls or incidents from occurring.

### ***V. Changes to Plan***

Any changes to the plan will be approved by (name of the qualified person). This plan shall be reviewed by a qualified person as the job progresses to determine if additional practices, procedures or training needs to be implemented by the competent person to improve or provide additional fall protection. Workers shall be notified and trained, if necessary, in the new procedures. A copy of this plan and all approved changes shall be maintained at the jobsite.

[59 FR 40746, Aug. 9, 1994; 60 FR 5131, Jan. 26, 1995]

# APPENDIX C

## *Interim Fall Protection Compliance Guidelines for Residential Construction*

**SHA Directives**  
**STD 3-0.1A - Plain Language Revision of OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction**

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OSHA Directives - Table of Contents

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- **Record Type:** Instruction
  - **Directive Number:** STD 3-0.1A
  - **Subject:** Plain Language Revision of OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction
  - **Information Date:** 06/18/1999
- 

**DIRECTIVE NUMBER:** STD 3-0.1A **EFFECTIVE DATE:** June 18, 1999  
**SUBJECT:** Plain Language Revision of OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction

**ABSTRACT**

**Purpose:** This Instruction is a plain language re-write of OSHA Instruction STD 3.1, the Agency's interim enforcement policy on fall protection for certain residential construction activities.

**Scope:** OSHA-wide

**References:** 29 CFR Part 1926 Subpart M

**Cancellations:** OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction, dated December 8, 1995.

**State Plan Impact:** None

**Action Offices:** National, Regional and Area Offices

**Originating Office:** Directorate of Construction

**Contact:** Garvin M. Branch (202) 693-2345  
Directorate of Construction  
N3621, FPB  
200 Constitution Ave., N.W.  
Washington, DC 20210

By and Under the Authority of  
R. Davis Layne  
Deputy Assistant Secretary, OSHA

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PIAZZA, INC.

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- I. PURPOSE.
  - A. This Instruction is a plain language re-write of OSHA Instruction STD 3.1, the Agency's interim enforcement policy on fall protection for certain residential construction activities.
  - B. Fall protection requirements for residential construction are set out in 29 CFR 1926.501(b)(13). In general, that provision requires conventional fall protection for work at or over six feet. However, OSHA Instruction STD 3.1 modifies those requirements. It permits employers engaged in certain residential construction activities to use alternative procedures routinely instead of conventional fall protection. No showing of unfeasibility of conventional fall protection is needed before using these procedures. A fall protection plan is required but it does not have to be written nor does it have to be specific to the jobsite. Different alternative procedures are specified for different activities.
- II. SCOPE. This Instruction applies OSHA-Wide.
- III. CANCELLATION. OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction, dated December 8, 1995, is cancelled.
- IV. REFERENCE. 29 CFR Part 1926 Subpart M.
- V. ACTION INFORMATION.
  - A. Responsible Office. Directorate of Construction.  
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- B. Action Offices. National, Regional, and Area Offices
  - C. Information Offices. State Plan Offices, Consultation Project Managers
- VI. FEDERAL PROGRAM CHANGE. This Notice describes a Federal OSHA program change for which State adoption is not required.
- VII. BACKGROUND. On December 8, 1995 OSHA published an interim fall protection compliance policy for fall protection for certain residential construction activities, pending further rulemaking on Subpart M. This Notice is a plain language re-write of that policy; it does not make substantive changes to the policy. The Agency will solicit public comment on fall protection issues in residential construction in an Advance Notice of Proposed Rulemaking on Subpart M. After analyzing those comments; we will re-evaluate this policy.
- VIII. AVAILABILITY OF ALTERNATIVE PROCEDURES. Alternative procedures are available to employers who are (1) engaged in residential construction, and (2) doing one of the listed activities.

A. Definition of "residential construction."

1. For purposes of this instruction, an employer is engaged in residential construction where the working environment, materials, methods and procedures are essentially the same as those used in building a typical single-family home or townhouse.
2. Residential construction is characterized by:
  - Materials: Wood framing (not steel or concrete); wooden floor joists and roof structures.
  - Methods: Traditional wood frame construction techniques.
3. In addition, the construction of a discrete part of a large commercial building (not the entire building), such as a wood frame, shingled entranceway to a mall, may fit within the definition of residential construction. Such discrete parts of a commercial building would qualify as residential construction where the characteristics listed above are present.

B. Listed Activities and Alternative Procedures.

There are four groups of residential construction activities for which alternative fall protection plans are available. Each group has its own set of alternative procedures and will be discussed in Sections IX through XII. The groups are:

1. GROUP 1. Installation of floor joists, floor sheathing, and roof sheathing; erecting exterior walls; setting and bracing roof trusses and rafters.
2. GROUP 2. Working on concrete and block foundation walls and related formwork.
3. GROUP 3. This group consists of the following activities when performed in attics and on roofs: installing drywall, insulation, HVAC



systems, electrical systems (including alarms, telephone lines, and cable TV), plumbing and carpentry.

4. GROUP 4. Roofing work (removal, repair, or installation of weatherproofing roofing materials such as shingles, tile and tar paper).

C. Questions.

- Do any of these plans have to be written and site specific? No.
- Does the employer have to determine that conventional fall protection is infeasible before being permitted to use an alternative procedure? No.

IX. ALTERNATIVE PROCEDURES FOR GROUP 1: INSTALLATION OF FLOOR JOISTS, FLOOR SHEATHING, AND ROOF SHEATHING; ERECTING EXTERIOR WALLS; SETTING AND BRACING ROOF TRUSSES AND RAFTERS.

The alternative measures for this group are set out in Appendix E to Subpart M. Appendix E requires the employer to implement a Fall Protection Plan. Such a plan must lay out the safest procedures to be followed at the work site to prevent falls. Although the plan need not be in writing, it must be communicated to all employees on site who might be subject to fall hazards.

NOTE: Height Limitation: The Appendix E plan may only be used on structures up to three and a half stories or 48 feet (including basement, two finished levels, attic). The 48' measure is from the base of the building, at the lowest ground level (including any excavation), to the point of greatest height. The following are the required elements of the Plan:

A. General Requirements For Group 1 Activities. Training, Implementation/ Supervision By Designated Individuals, Controlled Access Zones, Plan Administration (required for all Group 1 activities).

1. Training

Each employee performing work in Group 1 activities must be trained in the requirements of the Plan. The employer must ensure that the employees (1) understand the procedures and follow the instructions of the crew supervisor or foreman; (2) are able to recognize unsafe/hazardous conditions and are to report them to the employer; (3) can recognize when compliance with the Plan would create a greater hazard and are instructed to inform the Competent Person before proceeding when that occurs. Training and retraining violations shall be cited under 29 CFR 1926.503(a) and 1926.503(c). Subsection 1926.503 (b) may not be cited for residential construction.

NOTE: Any concerns raised by employees at any time during construction must be addressed (determined to be valid or not) before work proceeds.

2. Implementation/Supervision.

a. Competent Person.

The employer must designate a Competent Person, who will be charged with implementing the Plan. The Competent Person must continually

monitor compliance with the Plan, including the provision of training and the proper use of Controlled Access Zones.

b. Qualified Person.

The employer must designate a qualified person to approve any changes to the Plan.

c. Crew Supervisor/Foreman.

The employer must designate a crew supervisor or foreman and charge him or her with the responsibility of immediately correcting any unsafe practice or condition.

3. Controlled Access Zones.

For purposes of this Instruction, a Controlled Access Zone (CAZ) restricts access to a clearly designated area where a Group One activity (installation of floor joists, floor sheathing, roof sheathing; erecting exterior walls; setting and bracing roof trusses and rafters) is taking place. The CAZ must meet the following requirements:

a. Boundaries.

The competent person shall determine the boundaries of the CAZ and clearly mark them with signs, wires, tapes, ropes or chains.

b. Monitor.

The crew supervisor/foreman shall monitor the workers in the CAZ to ensure that they do not engage in unsafe practices.

c. Restricted Access.

Access to the CAZ must be restricted to authorized entrants. An authorized entrant is a worker who has received the training described above. The competent person must identify each entrant as an authorized entrant after the employee has successfully completed the training.

d. Final Check.

Before work begins in the CAZ, the competent person must ensure that all protective measures in the Plan have been implemented.

4. Plan Administration.

a. Employer Enforcement.

The employer is required to enforce the Plan. The crew supervisor/foreman, as well as individuals in the Safety and Personnel Department, must have the right to issue disciplinary warnings to employees, up to and including termination, for failure to follow the requirements of the Plan. Unsafe practices or conditions must be corrected immediately.

b. Changes To The Plan.

- **Designation of qualified person:** the employer must designate a qualified person to approve changes to the Plan.
- **Approval required:** changes to the Plan may not be made unless approved by the qualified person.

- **Plan Review:** the qualified person must review the Plan as the job progresses to determine if additional practices, procedures or training need to be implemented. The employer shall notify and, if necessary, train workers in the new procedures.

c. Accident Investigations/Plan Review.

All accidents resulting in injury to workers shall be reported and investigated. To help prevent further accidents, the investigation must be documented so that the cause and means of prevention can be identified. In the event of a fall or other serious incident, the Plan shall be reviewed to determine if additional practices, procedures, or training need to be implemented.

B. Additional Requirements For Specific Group (1) Activities.

1. Installing Roof Trusses and Erecting Rafters.

a. Walls Up To 8 Feet.

Interior scaffolds must be installed along the interior wall, below the area where the trusses/rafters will be located. This can often be accomplished with "sawhorse" scaffolds constructed of 46-inch sawhorses and 2 x 10 planks.

b. Walls Over 8 Feet.

If using scaffolds and ladders throughout the process would create a greater hazard, the following general requirements and specific procedures apply.

(1) Walls over 8 feet. General requirements.

(a) Falling Objects/Restricted Access.

Once truss/rafter installation begins, workers not involved in that activity shall not stand or walk below or adjacent to the roof opening or exterior walls in any area where they could be struck by falling objects.

(b) Bracing.

Trusses/rafters must be adequately braced before any worker may use them as a support.

(c) Designated Trained Workers.

The employer must designate the trained workers who will work on the top plate, and those who will work on the peak.

(d) Restricted Duties.

Top plate workers shall have no other duties during truss/rafter erection.

(2) Procedures for working on the top plate.

(a) Installing the First Two Trusses.

The first two trusses/rafters must be set from ladders. The ladders must lean on sidewalls at points where the walls can

support the load imposed by the ladder and worker. After the first two trusses/rafters have been set, a worker will climb a ladder onto the interior top plate to secure their peaks.

(b) Remain On the Top Plate.

Workers will remain on the top plate and use the previously stabilized trusses/rafters as support while the other trusses/rafters are erected.

(3) Procedures for working at the peak.

(a) When Workers May Work On Peaks/Ridge Beam.

Workers detaching trusses from cranes or securing trusses at the peaks may be positioned at the peak of the trusses/rafters.

Workers may be stationed on the top of the ridge beam where that is the only feasible way to secure rafters to the ridge beam.

(b) Stable Work Position

Workers at the peak, in the web of trusses, or on top of the ridge beam shall work from a stable position. They must either sit on a ridge seat (or the equivalent) or position themselves in previously stabilized trusses/rafters and lean into, and reach through, the trusses/rafters.

(c) Limited Fall Hazard Exposure.

Workers must not remain on or in the peak/ridge any longer than necessary to complete the task safely.

2. Roof Sheathing Operations. The competent person must determine when the roof system is stable enough to support a conventional fall protection system anchorage. The following provisions apply until the roof system can be used as an anchorage point; at that time personal fall arrest systems must be used.

a. Qualified Workers.

Only qualified workers shall install roof sheathing.

b. Secure Footing/Weather.

The employer must ensure that workers remove slip hazards before walking on sheathing. Such measures include removing mud from shoes or boots. When wet weather is present, roof sheathing shall be suspended unless safe footing can be assured. If winds exceed 40 miles per hour, sheathing operations are to be suspended, unless windbreakers are erected.

c. Staging of Materials.

To minimize exposure to fall hazards, materials must be staged so those workers on the roof have quick and safe access to them.

d. Falling Objects/Restricted Access.

Workers not involved in roof sheathing shall not stand or walk below or adjacent to the roof opening or exterior walls where they could be struck by falling objects. The competent person shall clearly designate the restricted area before placement of the first piece of sheathing. The competent person may order a brief halt to the sheathing work to allow other workers to pass through

the restricted area, as long as suspending work does not create a greater hazard.

e. Slide Guards.

- **Bottom Row:** The bottom row of roof sheathing may be installed by workers standing in truss webs and leaning over the sheathing. After the bottom row is installed, a slide guard of at least four (4) inches nominal in height shall be securely attached to the roof. It must extend across the full width of the roof.
- **Slide Guard Intervals: Roof Pitch Up To (and including) 9 in 12:** Additional slide guards are required at 13 foot intervals as successive rows of sheathing are installed.
- **Slide Guard Intervals: Roof Pitch Over 9 in 12:** Additional slide guards are required at four foot intervals.

NOTE: These slideguard requirements, which come from Appendix E, differ from those for Group 4 Activities (roofing work).

3. Installation of Floor Joists and Floor Sheathing.

a. Designated Trained Workers.

The employer must designate the trained workers who will do this work.

b. Staging of Materials.

To minimize exposure to fall hazards, materials must be staged so those workers have quick and safe access to them.

c. Restricted Access.

While this work is taking place, workers not directly assisting in it shall not be permitted within six (6) feet of the leading edge.

d. Installation Process: Floor Joists/Trusses.

The first floor joist or truss must be rolled into position and secured by workers on the ground, ladders, or sawhorse scaffolds. Successive joists/trusses must be rolled into place. They are then to be secured from a platform. The platform is to be built from a sheet of plywood laid over the previously secured floor joists or trusses.

e. Installation Process: Floor Sheathing.

The first row of floor sheathing must be installed by workers on the ground, ladders, or sawhorse scaffolds. After the first row of sheathing has been installed, workers shall work from the established deck.

4. Erection of Exterior Walls.

a. Designated Trained Workers.

The employer must designate the trained workers who will do this work.

- b. **Warning Line.**  
A painted warning line six (6) feet from the perimeter will be clearly marked before any wall erection activities take place.  
  
NOTE: As discussed above, this work must be done within a CAZ. A crew supervisor/foreman is required to monitor this work and warn anyone who approaches the unprotected edge. The warning line does not replace the monitor; it is an additional safety measure.
- c. **Staging of Materials.**  
To minimize exposure to fall hazards, materials must be staged so those workers have quick and safe access to them.
- d. **Limit Fall Hazard Exposure.**  
Workers constructing exterior walls shall complete as much cutting of materials and other preparatory work as possible away from the edge of the deck.

NOTE: **Wall openings (more than six feet above the lower level), floor holes and roof holes:** As soon as sheathing has been installed around a floor hole, roof hole, or wall opening that is not going to be sheathed (such as a hole for a doorway, stairwell or skylight), it must be covered, or protected by a guardrail.

X. **ALTERNATIVE PROCEDURES FOR GROUP 2: WORKING ON CONCRETE AND BLOCK FOUNDATION WALLS AND RELATED FORMWORK.**

This Instruction specifies the alternative procedures for protecting employees working from the top surface of block foundation walls, concrete foundation walls, and related form work. These procedures are:

- A. **Trained Workers Only.**  
Only trained workers shall be allowed to work on the top of the foundation wall/form work, and only as necessary to complete the construction of the wall.
- B. **Adequate Support.**  
All formwork shall be adequately supported before any worker may work on top of the formwork.
- C. **Bad Weather.**  
When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, operations shall be suspended until the hazardous condition no longer exists.
- D. **Staging of Materials/Equipment.**  
Materials and equipment for the work shall be conveniently located to the workers on the top of the foundation/formwork.
- E. **Impalement Hazards.**  
Materials and other objects which could pose impalement hazards shall be kept out of the area below where workers are working or shall be properly guarded.

XI. **ALTERNATIVE PROCEDURES FOR GROUP 3: THIS GROUP CONSISTS OF THE FOLLOWING ACTIVITIES WHEN PERFORMED IN ATTICS AND ON ROOFS: INSTALLING DRYWALL, INSULATION, HVAC SYSTEMS, ELECTRICAL**  
PIAZZA, INC.

SYSTEMS (INCLUDING ALARMS, TELEPHONE LINES, AND CABLE TV),  
PLUMBING AND CARPENTRY.

This Instruction specifies the procedures for this group. They are:

A. Trained Workers Only.

Only trained workers shall be allowed to work in attics and on roofs, and only as necessary to complete the construction of the system being installed.

B. Staging of Materials.

Materials and equipment for the work shall be located conveniently close to the workers.

C. Impalement Hazards.

Materials and other objects which could pose impalement hazards shall be kept out of the area below where workers are working, or properly guarded.

D. Restricted Access.

While attic or roof work is in progress, workers not involved in such work shall not stand or walk below or adjacent to any openings in the ceiling where they could be struck by falling objects.

E. Bad Weather.

When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, operations shall be suspended until the hazardous condition no longer exists.

NOTE: The provisions of this Instruction do not apply to interior finishing work when done outside of attics or roofs areas. Subpart M applies to such work with respect to stairways, stairway openings, walkways, floor or window openings, floor holes or other elevated openings or open sides.

XII. ALTERNATIVE PROCEDURES FOR GROUP 4: ROOFING WORK (REMOVAL, REPAIR, OR INSTALLATION OF WEATHERPROOFING ROOFING MATERIALS SUCH AS SHINGLES, TILE AND TARPAPER).

Restriction on Application for Roofing Work. The alternative procedures in this Instruction may only be used for this work where: (a) the roof slope is 8 in 12 or less, and (b) the fall distance, measured from the eave to the ground level, is 25 feet or less.

A. General Requirements.

1. Trained Workers Only.

Only workers who have been trained to be proficient in the alternative methods of fall protection shall be allowed onto the roof. In addition, each affected employee shall be trained to ensure specific awareness of the fall hazards associated with work on roofs with rake edges ("rake edges" are inclined roof edges, such as those on the gable end of a building).

2. Slip Hazards

The roof surfaces shall be inspected for slipping hazards. The employer shall either eliminate any such hazards or take effective measures to have

workers avoid them. The employer shall have workers wear appropriate footwear to reduce the potential for slipping.

3. **Bad Weather.**  
When adverse weather (such as high winds, rain, snow, or sleet) creates a hazardous condition, roofing operations shall be suspended until the hazardous condition no longer exists.
4. **Roof holes/openings.**  
The employer shall have any damaged portions of the roof deck repaired as soon as practicable. Any holes (including skylight openings) or other areas where employees would not have safe footing shall be covered or surrounded by guardrails that comply with the requirements of 1926.502.
5. **Ladders/Scaffolds.**  
If ladders or scaffolds are used, they shall be erected and maintained in accordance with the requirements of Subparts X and L of OSHA's construction standards. In addition, employees shall be trained in accordance with the requirements of Subparts X & L.
6. **Access To Roof.**  
Employers shall not allow workers to ascend or descend the roof's slope within 6 feet of the rake edge except where that limitation would prevent the performance of work.
7. **Location of Materials.**  
Supplies and materials shall not be stored within 6 feet of the rake edge, or three feet where tile roof systems are being installed.
8. **Impalement Hazards.**  
The area below the eaves and rakes shall be kept clear of materials and other objects which could pose impalement or other hazards, or properly guarded.

**B. Safety Monitors and Slide Guards (for roofs with an eave height of up to and including 25 feet).**

1. **Roof Slope (Any Roof Type): Up to 4 in 12.** The employer must use either a safety monitoring system that complies with §1926.502, or roofing slide guards. If slide guards are used, they must be built and installed in accordance with the requirements set out below.
2. **Roof Slope (Except Tile or Metal Roofs): Over 4 in 12 (and up to 8 in 12):** Slide guards are required.
3. **Roof Slope (Tile or Metal Roofs): Up to (and including) 8 in 12:** The safety monitoring system may be used instead of slide guards.
4. **Roof Slope (Any Roof Type): Over 8 in 12:** Alternatives to the requirements of the standards are not available.
5. **Eave Height Over 25 feet (Any Slope, Any Roof Type):** Alternatives to the requirements of the standards are not available.

**C. Slide Guards: Requirements for Materials, Configuration and Installation.**



Roof Slope: 6 in 12 or less:

- a. Material. All slide guards must be constructed of 2"x 6" (nominal) stock.
- b. Installation. No more than three rows of roofing material (installed across the lower eave) shall be applied before installing the slide guards. The roof jacks (or similar supports) shall be installed using nails long enough to withstand an employee sliding into the guard.
- c. Configuration. The face of the slide guard must be perpendicular (about 90 degrees) to the surface of the roof. There must be continuous slide guards along the eave.

Roof Slope: Over 6 in 12 (up to and including 8 in 12):

- a. Material: 2"x 6" stock.
- b. Installation: Continuous slide guards shall be installed along the eave, as described above. Additional slide guards shall be installed below each work area at intervals not to exceed eight feet. They shall be installed using the following procedure: the employee, while standing on the slide guard below, secures the roof jacks for the next slide guard with nails and then installs the planks. The employee then climbs up to the new slide guard to continue the roofing work. This sequence is repeated as work proceeds up the roof.
- c. Configuration: The continuous slide guards at the eave must be at about 90 degrees to the roof surface, as described above. The additional slide guards need not be continuous -- but they must be long enough to protect the work area. They do not have to be at 90 degrees to the roof surface.
- d. Removal: Once the roofing material is installed to the ridge, the employee is to climb down to the next lower slide guard and remove the upper slide guard. The employee repeats this process down the roof until all the slide guards are removed. Only when the roofing job is completed may the slide guards at the eave be removed.

XIII. CITATION POLICY.

If an employer (engaged in residential construction) does not provide conventional fall protection, the compliance officer must determine if STD 3-0.1a provides alternative procedures for the activity in question. If alternative procedures are available, the compliance officer must determine if they have been implemented. If there is a deficiency in the implementation of the alternative procedures, the fall hazard shall be cited as a violation of 1926.501(b)(13). No other provision may be cited for a fall hazard addressed by 1926.501(b)(13). Deficiencies in training required by 1926.20 may also be cited where appropriate.

INDEX

1926.501(b)(13)

Adverse Weather

Bad Weather

Ladders or Scaffolds

Roof Slope

Slide Guards

Trained Workers

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Revision Date: Jun 17 1999

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OSHA Directives - Table of Contents

# CALCULATING TOTAL FALL DISTANCE (Retracting Lifeline)

FALL  
DISTANCE



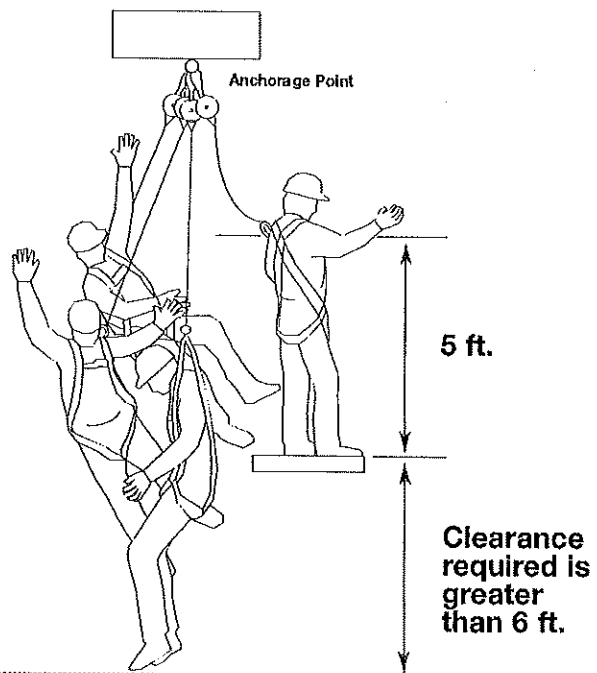
2.0 ft. max. free fall

3.5 ft. to stop max.

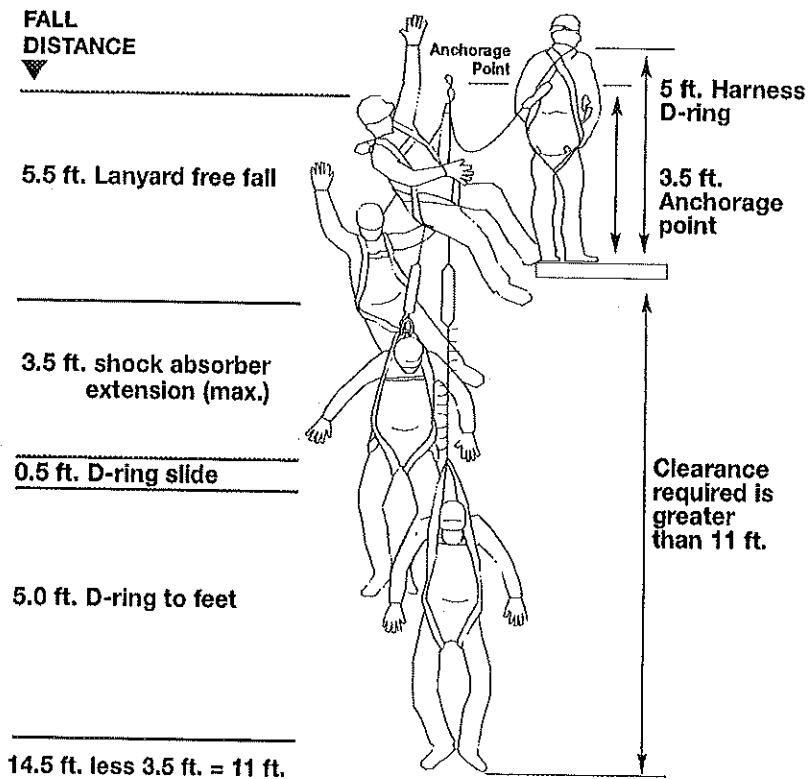
0.5 ft. D-ring slide

5.0 ft. D-ring to feet

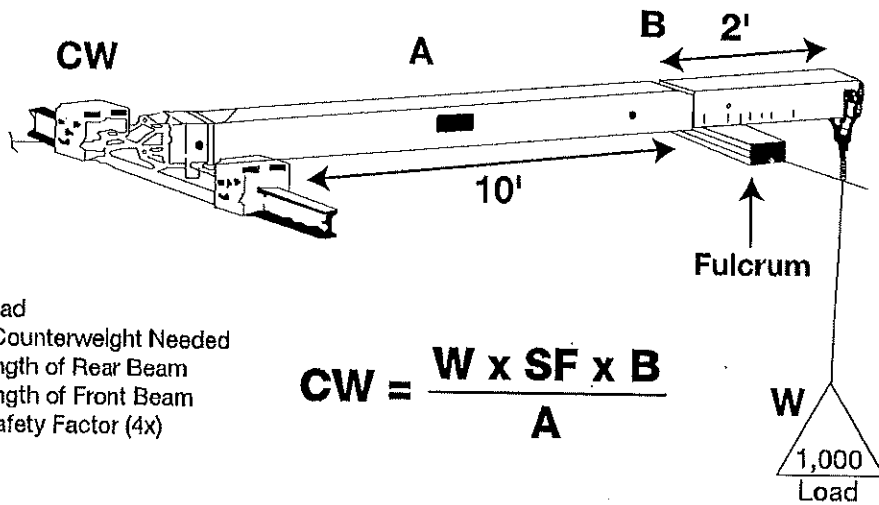
11 ft. less 5 ft. = 6 ft.



# CALCULATING TOTAL FALL DISTANCE (4 ft. Shock Absorbing Lanyard)



# COUNTERWEIGHT REQUIREMENT FORMULA



W = Load  
CW = Counterweight Needed  
A = Length of Rear Beam  
B = Length of Front Beam  
SF = Safety Factor (4x)

$$CW = \frac{W \times SF \times B}{A}$$

## **17. Steel Erection**

### **Purpose**

To provide protection to PIAZZA employees from the hazards associated with steel erection activities involved in the construction, alteration, and/or repair of single and multi-story buildings, bridges, and other structures where steel erection occurs.

NOTE: This program does not cover electrical transmission towers, communication and broadcast towers or tanks.

### ***Steel Erection Activities***

Steel erection activities include:

- *Hoisting*
- *Laying out*
- *Placing*
- *Connecting*
- *Welding*
- *Burning*
- *Guying*
- *Bracing*
- *Bolting*
- *Plumbing and rigging structural steel*
- *Steel joists and metal buildings*

Installing

- *Metal decking;*
- *Curtain walls*
- *Window walls*
- *Siding system*
- *Miscellaneous metals*
- *Ornamental iron and similar materials*
- *Moving point-to-point while performing these activities*

## ***Controlling Contractor***

Definition: Controlling Contractor is a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project-its planning, quality and completion.

*When PIAZZA operates as a controlling contractor as defined by 29 CFR 1926.751 (see above definition), PIAZZA will be responsible for ensuring the following:*

1. Before authorizing commencement of steel erection, the controlling contractor must provide written notification to the steel erector that the concrete in the piers, walls, and footings and the mortar in the masonry walls and piers has reached 75% of its intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection. Also, written notification must be provided for any repairs, replacements and modifications to anchor bolts.
2. The controlling contractor must provide and maintain adequate access roads into and through the site for safe delivery and movement of cranes, derricks, trucks and other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular traffic.
3. The controlling contractor must provide a firm, properly drained area, readily accessible to the work with adequate space for the safe storage of materials and safe operation of equipment.
4. Fall protection provided by the steel erector shall remain in place, to be used by other trades, only if the controlling contractor has directed the steel erector to leave the fall protection in place and has inspected and accepted control and responsibility of it before authorizing persons other than steel erectors to work in the area.
5. *The controlling contractor shall bar other construction processes below the steel erection unless overhead protection is provided.*

## ***Site-Specific Erection Plan***

A site-specific erection plan may be used to deviate from the requirements of the standard ONLY for the following activities: (To do so a *qualified person* must design the alternative method and document this in the site-specific erection plan)

1. Safety latches on hooks can be deactivated only when a qualified rigger has determined that the hoisting and placing of purlins and single joists can be performed more safely by doing so and documents this in a site-specific erection plan.
2. Steel joists at or near columns spanning 60 feet or more must be set in tandem with all bridging installed except when a qualified person develops an alternate method of erection which ensures equivalent stability of the steel joist is maintained and documents this in a site-specific erection plan.

3. No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached; except when a qualified person determines and documents in the site-specific erection plan the following:
  - a) The structure or portion of the structure is capable of supporting the load;
  - b) The bundle of decking is placed on a minimum of three steel joists;
  - c) The joists supporting the bundle of decking are attached at both ends;
  - d) At least one row of bridging is installed and anchored
  - e) The total weight of the bundle of decking does not exceed 4,000 pounds;
  - f) The edge of the construction load shall be placed within one foot of the bearing surface of the joist end.



## Steel Erection Controlling Contractor Checklist

Project: School 35 - Yonkers	Superintendent:
Steel Subcontractor:	Erection Start Date:

This checklist is designed to assist the project superintendent in meeting the controlling contractor requirements outlined in the 29 CFR 1926.750 Standards for Steel Erection. This checklist should be completed on all projects where steel erection activities will be performed.

### Approval to Begin Steel Erection:

Before authorizing the commencement of steel erection, the controlling contractor shall ensure the steel erector is provided with the following:

- 1) **Written** Notification that the concrete in the footings, piers, and walls and the mortar in the masonry piers and walls has attained, 75 percent of the intended minimum compressive design strength to support the loads imposed during steel erection.

**Notification Provided:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- 2) **Written** Notification of any repaired, replaced, or field modified anchor bolts. Note: Approval from the structural engineer is required.

**Notification Provided:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Site Layout:

The controlling contractor shall ensure that the following is provided and maintained:

- 1) Adequate access roads into and through the site for the safe delivery and movement of necessary equipment and materials to be erected, as well as means and methods for pedestrian and vehicular traffic.

**Provided and Maintained:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

- 2) A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment.

**Provided and Maintained:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Protection from Falling Objects and Custody of Fall Protection:

The controlling contractor shall bar other construction processes below steel erection. Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative has done the following:

- 1) Has directed the steel erector to leave the fall protection in place.
- 2) Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area.

**Status of Fall Protection:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Steel Erection Visual Crane Inspection & Hoisting Form

This form must be completed every day before steel erection begins. The visual crane inspection will normally be done by the crane operator. The crane inspection forms must be available to Controlling Contractor upon request.

Project: Construction of Community School 35

Location: \_\_\_\_\_

Crane \_\_\_\_\_ Lift Activity \_\_\_\_\_

Crane Inspector \_\_\_\_\_ Date \_\_\_\_\_

**INSPECTION ITEM**

**COMMENTS**

- Drive Mechanism \_\_\_\_\_
- Control mechanisms \_\_\_\_\_
- Safety devices \_\_\_\_\_
- Boom angle indicators \_\_\_\_\_
- Boom stops \_\_\_\_\_
- Boom kick out devices \_\_\_\_\_
- Anti-two block devices \_\_\_\_\_
- Load moment indicators \_\_\_\_\_
- Air & hydraulic lines \_\_\_\_\_
- Hooks and latches \_\_\_\_\_
- Wire rope receiving \_\_\_\_\_
- Electrical equipment \_\_\_\_\_
- Hydraulic fluid levels \_\_\_\_\_
- Tires \_\_\_\_\_
- Ground conditions \_\_\_\_\_
- Level of equipment \_\_\_\_\_
- Comments \_\_\_\_\_

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**All items must check out OK before crane may be used for Steel Erection.**

Safety latches will be deactivated  
(If YES state material to be hoisted)  
Other \_\_\_\_\_

YES \_\_\_\_\_ NO \_\_\_\_\_  
Bar Joists \_\_\_\_\_ Purlins \_\_\_\_\_

Multi-lifting will be performed  
(If YES complete and attach multi-lift Checklist)

YES \_\_\_\_\_ NO \_\_\_\_\_

Crane Supported Platforms will be used  
(If YES Complete and attach Crane Supported Platform Checklist)

YES \_\_\_\_\_ NO \_\_\_\_\_

Name of Qualified Rigger who inspected rigging for this  
shift \_\_\_\_\_

*Site Specific  
Steel Erection Plan*

XYZ Erectors  
123 Street  
Anytown, US 12345  
800-123-4567

Project School 35 - Yonkers Date     /     /    

Controlling Contractor: \_\_\_\_\_

1. Material Deliveries: \_\_\_\_\_

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---

2. Material Staging/Storage: \_\_\_\_\_

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---

3. Coordination with Other Trades: \_\_\_\_\_

---

---

4. Crane Site Preparation: \_\_\_\_\_

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---

5. Path for Overhead Loads: \_\_\_\_\_

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---

6. Critical Lifts: \_\_\_\_\_

---

---

7. Heaviest Pick: \_\_\_\_\_

---

---

8. Temp Bracing: \_\_\_\_\_

---

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9. Anchor Bolt Modification Notification: \_\_\_\_\_

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10. Erection Bridging Terminus Point: \_\_\_\_\_

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11. Steel Erection Activities: \_\_\_\_\_

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12. Columns & Beams: \_\_\_\_\_

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---

13. Purlins and/or Bar Joist: \_\_\_\_\_

---

---

14. Connections: \_\_\_\_\_

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15. Decking: \_\_\_\_\_

---

16. Misc. Iron: \_\_\_\_\_

---

17. Falling Object Protection: \_\_\_\_\_

---

18. Special Procedures: \_\_\_\_\_

---

19. Employee Certification: \_\_\_\_\_

---

20. Competent Persons: \_\_\_\_\_

---

21. Emergency Procedures: \_\_\_\_\_

---

22. Directions to Nearest Hospital/Emergency  
Treatment: \_\_\_\_\_

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Attach Following:

- Map of area, highlighting route from jobsite to hospital/emergency treatment center.
- Correspondence of training received regarding steel erection activities.
- Compliance /inspection certificate for crane being used.
- Welding Procedure Specification (WPS).
- Welder, Welding Operator, or Tack Welder Qualification Test Records.
- Written notification from controlling contractor of 75% cure rate for concrete.



## **18. Scaffolding**

### **1. General**

- a) Scaffolding should be erected plumb and secure on sound rigid ground under the supervision of a competent person.
- b) Precautionary measures, including fall protection, to be used during the erection and dismantling of scaffolds should be planned out prior to beginning work. The competent person will decide the feasibility of using fall protection during the erection and dismantling of scaffolds and whether the use of fall protection creates a greater hazard.
- c) No work shall occur on any scaffold until the erection competent person has certified the complete installation of all necessary fall protection and turned the scaffold over to the production crews.
- d) The front edge of all platforms shall not be more than 14" from the face of the work unless a guardrail system is erected along the front edge or personal fall arrest systems are used. The distance from the face for plastering and lathing operations shall not exceed 18".
- e) Standard guardrails and toeboards are required on all open sides and edges of scaffolds greater than 10' tall. Cross bracing is acceptable in place of a midrail when the crossing point of two braces is between 20" and 30" above the work platform or as a toprail when the crossing point of the two braces is between 38" and 48" above the work platform. To utilize the cross braces as partial guardrail protection, the endpoints at each upright shall be no more than 48" apart.
- f) Screen should be installed where tools or materials are stacked above the toeboard and workers are required to pass below scaffold (i.e., to access building).
- g) A ladder, stair-tower, ramp or other safe means should be used to access scaffold platforms more than 24" above or below a point of access. Climbing on end frames is prohibited unless the frames are designed with integral ladder frames. Integral ladder frames have a rung length of at least 8"; a uniform rung spacing of no more than 16 <sup>3</sup>/<sub>4</sub>" (non-uniform rung spacing caused by joining end frames together is allowed provided rung spacing does not exceed 16 <sup>3</sup>/<sub>4</sub>"); and rest platforms must be provided at 35' maximum intervals.
- h) Ladders and stair-towers shall be positioned such that their bottom step/rung is not more than 24" above the scaffold supporting level.
- i) Cross braces on tubular welded scaffolds shall not be used as a means of access or egress.
- j) Scaffold planks should overhang end supports no less than 6" and no more than 12" unless cleated or otherwise secured in place. The 12" overhang may be exceeded where guardrails block the cantilevered portion of the platform or where the platform length exceeds 10" the maximum overhang increases to 18".
- k) Any scaffolding component damaged or weakened by any cause should be braced and if possible removed or repaired.
- l) All scaffold platforms shall be fully planked between the front uprights and the guardrail supports. Platforms shall be decked so that no space between the planks or scaffold supports exceeds 1". Where platforms

must fit around scaffold uprights or similar components, the space between the platform and the uprights should not exceed 9 ½".

- m) Each scaffold platform and walkway shall be at least 18" wide. Exceptions to this rule are on ladder jack, pump jack, and top plate bracket scaffolds whose platform must be at least 12" wide. One further exception occurs where the area in which the scaffold is located is so narrow the platform or walkway cannot be at least 18" wide.
- n) All planking should be scaffold grade or equivalent. Cracked or split planks should be immediately replaced.
- o) Do not overload scaffold. Materials should be brought up as needed.
- p) Unstable objects shall not be used as working platforms.

## **2. Supported Scaffolds (i.e., Tubular Welded Frame)**

- a) Scaffold legs should be set on adjustable bases or plain bases set on mud sills or foundations adequate to support the maximum rated load.
- b) Where uplift may occur, panels should be locked together vertically by pins or other equivalent means.
- c) Scaffolds should be properly braced by cross-braces, diagonal braces or both.
- d) Scaffolds shall be tied off at the closest horizontal scaffold member to a 4:1 height to minimum base dimension ratio, then repeated every 26' vertically at locations of horizontal members. Ties and braces should be located at each end of a scaffold and at 30' intervals horizontally.
- e) Scaffold ties shall brace the scaffold from moving into or away from the building structure. To accomplish this, ties should be constructed of tie wire to prevent movement away from the structure and a rigid "standoff" to provide compressive strength to prevent movement into the building. Other methods may be used to construct tie-offs provided they meet the above support requirements.

## **3. Mobile Scaffolds**

- a) The height of mobile scaffolds should not exceed four times their minimum base dimension.
- b) Scaffolds shall be braced by cross, horizontal, and diagonal braces to prevent racking or collapse and to automatically square and align the vertical members.
- c) Platforms should be tightly planked.
- d) An access ladder should be affixed to the scaffold in a location where its usage will not have a tendency to tip the scaffold.
- e) When in use, casters or wheels should be locked to prevent movement. Only in rare instances are employees allowed to ride mobile scaffolds. 1926.452 (w) should be consulted and jobsite supervisor's approval must be obtained to ensure that operations meet the requirements of this standard prior to employees riding on a mobile scaffold.

#### **4. Suspension Scaffolds**

- a) Swing scaffold platforms should not be less than 18 inches nor more than 36 inches wide overall.
- b) Roof irons should be of proper size and design and should be securely installed and anchored.
- c) Secondary tiebacks equivalent in strength to the suspension ropes should be installed at right angles to the face of the building, whenever possible, and secured to a structurally sound portion of the building.
- d) Counterweights should be made of a non-flowable material. Sand, gravel and similar materials are not permitted. Additionally, construction material such as masonry units and rolled roofing should also not be used at counterweight.
- e) Counterweights shall be mechanically fastened to the outrigger beam to prevent displacement.
- f) Workers shall be protected by appropriate safety harnesses and independent lifelines.
- g) All supporting parts should be inspected prior to installation and periodically during use.
- h) Check load limits prior to using scaffold and make sure those limits are not exceeded.
- i) Guardrails should be installed on all open sides and ends of suspension scaffolds.
- j) All power operated gears and brakes should be enclosed.

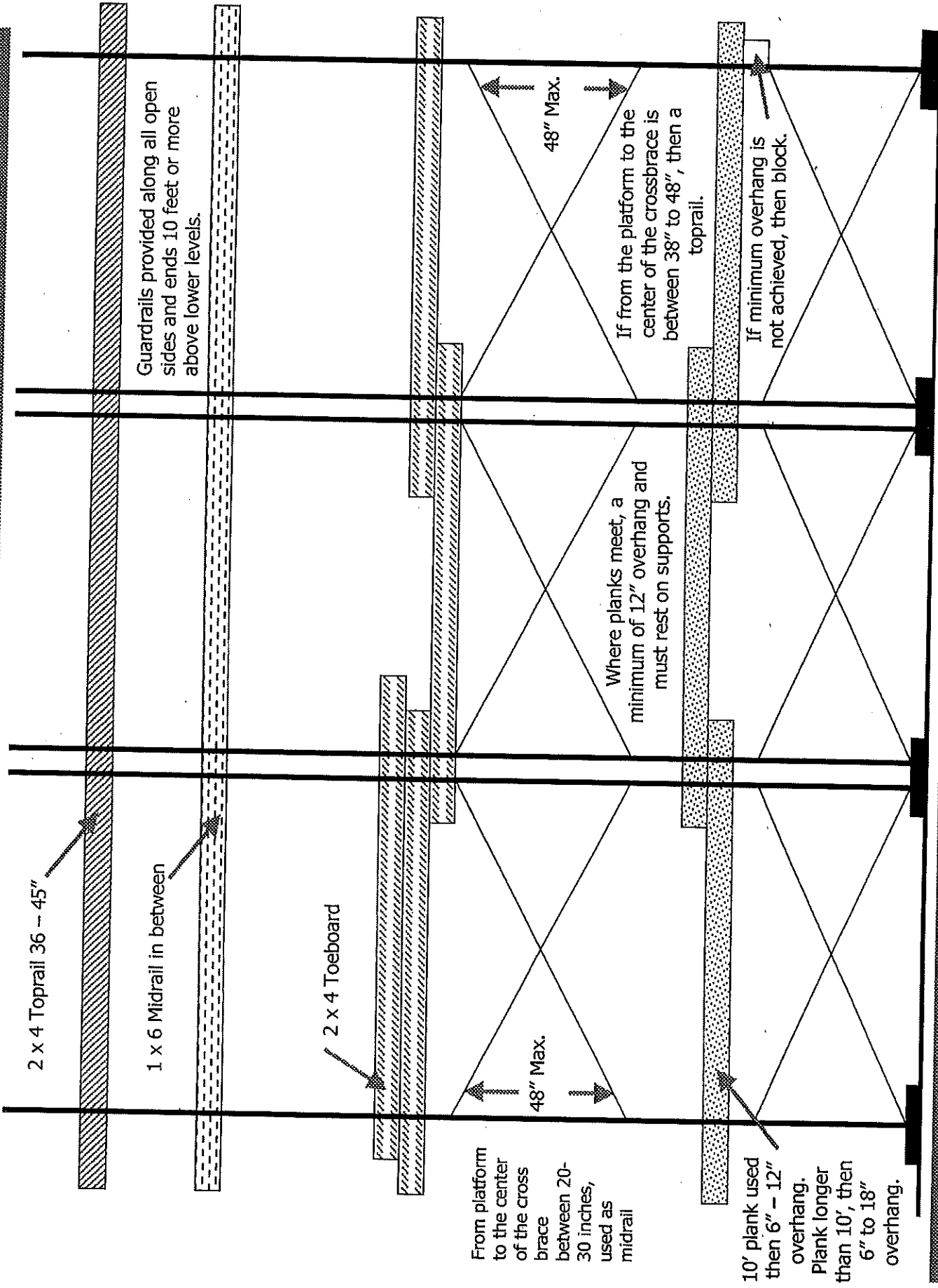
#### **5. Ramps and Walkways**

- a) Ramps and walkways 6' or more above a lower level shall be equipped with a standard guardrail system.
- b) No ramp or walkway should be sloped greater than 1 vertical to 3 horizontal
- c) If the slope of the ramp or walkway is steeper than 1:8, cleats shall be securely fastened to the walkway spaced no further than 14" apart to provide footing.

# **Appendix A**

## *Scaffolding Diagram*

**PLANKING & GUARDRAIL REQUIREMENTS FOR TUBULAR WELDED SCAFFOLD FRAMES**



2 x 4 Toprail 36 - 45"

1 x 6 Midrail in between

2 x 4 Toeboard

From platform to the center of the cross brace between 20-30 inches, used as midrail

48" Max.

48" Max.

Where planks meet, a minimum of 12" overhang and must rest on supports.

If from the platform to the center of the crossbrace is between 38" to 48", then a toprail.

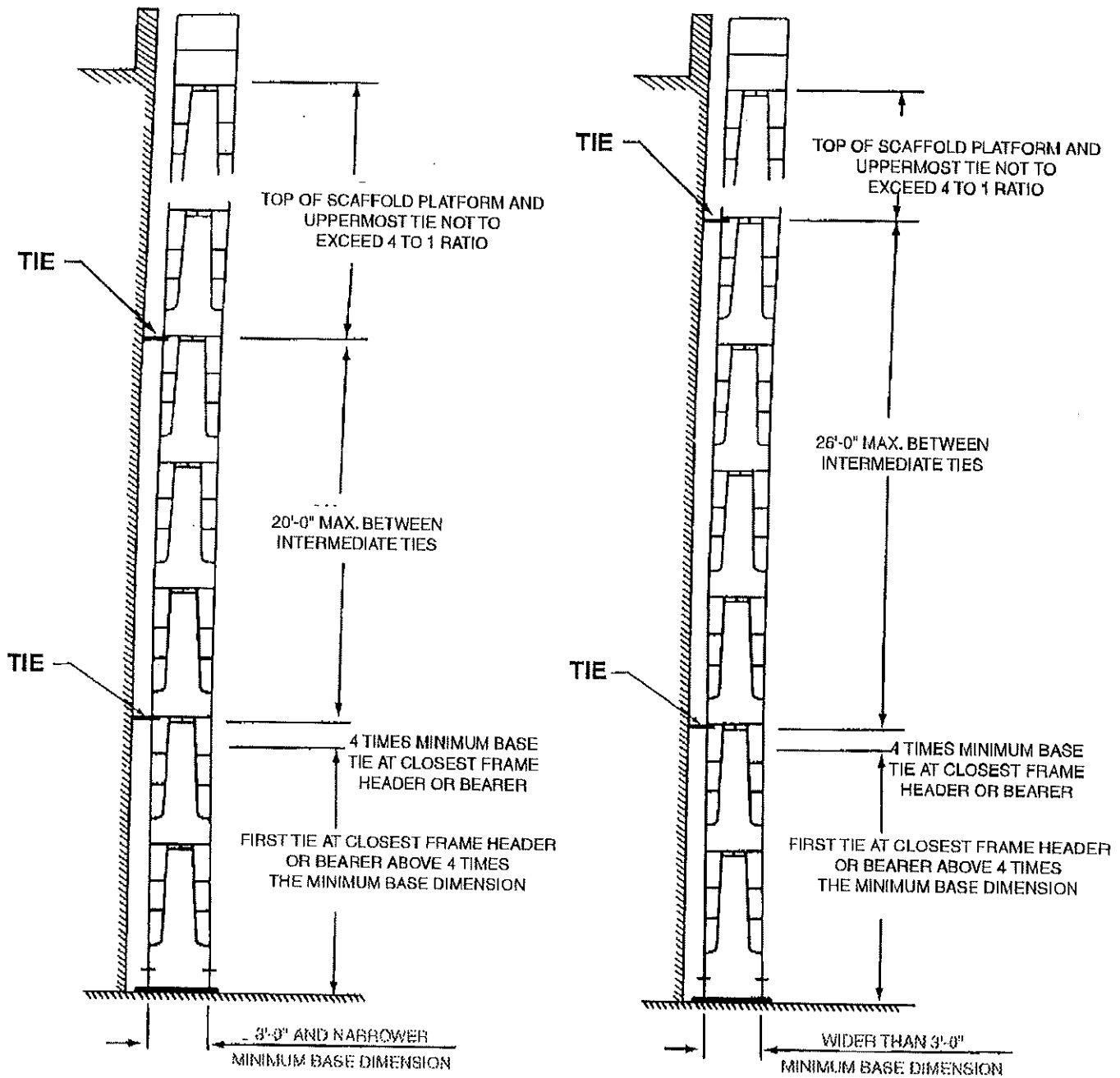
10' plank used then 6" - 12" overhang. Plank longer than 10', then 6" to 18" overhang.

If minimum overhang is not achieved, then block.

Guardrails provided along all open sides and ends 10 feet or more above lower levels.

**NOTE:** Planks laid at an angle other than a right angle should be laid first followed by planks that are laid on their bearers at right angles.

# OSHA MAXIMUM VERTICAL TIE SPACING



Code of Safe Practices for  
Frame Scaffolds, System Scaffolds,  
Tube and Clamp Scaffolds & Rolling Scaffolds

Developed for Industry by  
Scaffold Industry Association, Inc.

It shall be the responsibility of all users to read and comply with the following common-sense guidelines which are designed to promote safety in the erecting, dismantling and use of scaffolds. These guidelines do not purport to be all-inclusive, nor to supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines in any way conflict with any state, local, federal or other government statute or regulation, said statute or regulation shall supercede these guidelines and it shall be the responsibility of each user to comply therewith.

General Guidelines

- A. POST THESE SCAFFOLDING SAFETY GUIDELINES in a conspicuous place and be sure that all persons who erect, dismantle, or use scaffolding are aware of them.
- B. FOLLOW ALL STATE, LOCAL AND FEDERAL CODES, ORDINANCES AND REGULATIONS pertaining to scaffolding.
- C. SURVEY THE JOBSITE. A survey shall be made of the job site for hazards, such as untamped earth fills, ditches, debris, high tension wires, unguarded openings, and other hazardous conditions created by other trades. These conditions should be corrected or avoided as noted in the following sections.
- D. INSPECT ALL EQUIPMENT BEFORE USING. Never use any equipment that is damaged or defective in any way. Remove it from the job site.
- E. SCAFFOLDS MUST BE ERECTED IN ACCORDANCE WITH DESIGN AND/OR MANUFACTURER'S RECOMMENDATIONS.
- F. DO NOT ERECT, DISMANTLE, OR ALTER A SCAFFOLD unless under the supervision of a qualified person.
- G. DO NOT ABUSE OR MISUSE THE SCAFFOLD EQUIPMENT.
- H. ERECTED SCAFFOLDS SHOULD BE CONTINUALLY INSPECTED by users to be sure that they are maintained in a safe condition. Report any unsafe condition to your supervisor.
- I. NEVER TAKE CHANCES! IF IN DOUBT REGARDING THE SAFETY OR USE OF THE SCAFFOLD, CONSULT YOUR SCAFFOLD SUPPLIER.
- J. NEVER USE EQUIPMENT FOR PURPOSES OR IN WAYS FOR WHICH IT WAS NOT INTENDED.
- K. DO NOT WORK ON SCAFFOLDS if your physical condition is such that you feel dizzy or unsteady in any way.

GUIDELINES FOR ERECTION AND USE OF SCAFFOLDS

- A. SCAFFOLD BASE MUST BE SET ON AN ADEQUATE SILL OR PAD to prevent slipping or sinking and fixed thereto where required. Any part of a building or structure used to support the scaffold shall be capable of supporting the maximum intended load to be applied.
- B. USE ADJUSTING SCREWS or other approved methods instead of blocking to adjust to uneven grade conditions.
- C. BRACING, LEVELING, & PLUMBING OF FRAME SCAFFOLDS –

PIAZZA, INC.

1. Plumb and level all scaffolds as the erection proceeds. Do not force frames or braces to fit. Level the scaffold until proper fit can easily be made.
  2. Each frame or panel shall be braced by horizontal bracing, cross bracing, diagonal bracing or any combination thereof for securing vertical members together laterally. All brace connections shall be made secure, in accordance with the manufacturer's recommendations.
- D. BRACING, LEVELING & PLUMBING OF TUBE & CLAMP AND SYSTEM SCAFFOLDS –
1. POSTS SHALL BE ERECTED PLUMB in all directions, with the first level of runners and bearers positioned as close to the base as feasible. The distance between bearers and runners shall not exceed manufacturer's recommended procedures.
  2. PLUMB, LEVEL, AND TIE all scaffolds as erection proceeds.
  3. FASTEN ALL COUPLERS AND/OR CONNECTIONS securely before assembly of next level.
  4. VERTICAL AND/OR HORIZONTAL DIAGONAL BRACING MUST BE INSTALLED according to manufacturer's recommendations.
- E. TIE CONTINUOUS (RUNNING) SCAFFOLDS TO THE WALL OR STRUCTURE at each end and at least every 30 feet of length when scaffold height exceeds the maximum allowable free standing dimension.

Begin ties or stabilizers when the scaffold height exceeds that dimension, and repeat at vertical intervals not greater than 16 feet. The top anchor shall be placed no lower than four (4) times the base dimension from the top of the completed scaffold. Anchors must prevent scaffold from tipping into or away from wall or structure. Stabilize circular or irregular scaffolds in such a manner that completed scaffold is secure and restrained from tipping.

When scaffolds are partially or fully enclosed or subjected to overturning loads, specific precautions shall be taken to insure the frequency and accuracy of ties to the wall and structure. Due to increased loads resulting from wind or overturning loads the scaffolding component to which ties are subjected shall be checked for additional loads.

- F. WHEN FREE STANDING SCAFFOLD TOWERS exceed four (4) times their minimum base dimension vertically, they must be restrained from tipping. (CAL/OSHA and some government agencies require stricter ratio of 3:1).
- G. DO NOT ERECT SCAFFOLDS NEAR ELECTRICAL POWER LINES UNLESS PROPER PRECAUTIONS ARE TAKEN. Consult the power service company for advice.
- H. A MEANS OF ACCESS TO ALL PLATFORMS SHALL BE PROVIDED.
- I. DO NOT USE ladders or makeshift devices on top of scaffolds to increase the height.
- J. PROVIDE GUARDRAILS AND MID-RAILS AT EACH WORKING PLATFORM LEVEL where open sides and ends exist, and toeboards where required by code.



## **19. Excavations & Trenching**

### **Purpose**

The purpose of this program is to protect all of Piazza's employees that are exposed to hazards associated with excavation and trenching activities.

### **Policy**

When PIAZZA is performing excavation or trenching activities, our designated competent person will be responsible for classifying soil type as well as performing daily inspections.

### **Specific Requirements**

1. **CALL BEFORE YOU DIG!!** (UFPO 1-800-962-7962) Prior to opening an excavation, the exact location of underground utilities shall be determined. Call the local centralized utility agency before you dig or drill.
2. Excavations exceeding 20 feet in depth must have protective systems designed by a registered professional engineer.
3. **Benching/Sloping:** All excavations and trenches 5 feet or deeper shall be sloped or benched wide enough to achieve stable bank conditions according to the following ratios (Horizontal : Vertical):
4.
  - a) Type C soil, at least 1-1/2 : 1
  - b) Type B soil, at least 1 : 1
  - c) Type A soil, at least 3/4 : 1
  - d) Or, if it is not possible to cut back to the angles prescribed, all trenches 5 feet or more in depth shall be shored or shielded.
  - e) Unclassified soils must be sloped or benched at least 1-1/2 : 1.
  - f) **For instructions on how to classify soil, refer to Appendix A, Soil Classification, of Subpart P - Excavations, 29 CFR 1926, 650-652.**
5. **Inspections:** No employee shall enter an excavation until it has been inspected by a competent person and declared safe to enter. Excavations shall be inspected daily before employees are allowed to enter and after every rainstorm or other hazard-causing occurrence.  
\* Definition: *Competent Person* means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
6. **Access/Egress:** A stairway, ladder, ramp or other safe means of egress shall be located in excavations that are 4' or more in depth so as to allow no more than 25' of lateral travel for employees. Earthen ramps shall be sloped so that employees

do not have to climb on hands and feet when accessing or egressing an excavation or trench.

7. **Loose Debris:** Spoil piles, loose rock and soil, tools, and other debris shall be kept at least 2' back from excavation edges, secured or removed to prevent it from falling into excavation where it could cause injuries.
8. **Vehicular Traffic:** All employees working near traffic shall wear vests or garments made of or marked with reflective or high visibility material.
9. **Falling Loads:** No employee shall be permitted beneath a load handled by loading or digging equipment, and operators remaining in their vehicles must have adequate canopy protection.
10. **Fall Protection:** Trenches which are not readily visible will be protected by barricades, covers or other suitable means. Also, where ramps or walkways are utilized to cross over excavations and a fall hazard of 6 feet or more exists, guardrails or some other form of fall protection will be provided.
11. **Hazardous Atmosphere:** When it is expected or reasonably predictable to expect that a hazardous atmosphere exists, or an atmosphere containing less than 19.5% oxygen, precautions necessary to ensure employee safety will be taken. Examples include:
  - a) Ventilation
  - b) Air purifying respirators will be provided in accordance with Piazza, Inc.'s Respirator Program.
  - c) Supplied air respirators will be provided in accordance with Piazza, Inc.'s Respirator Program.
  - d) **When a hazardous atmosphere exists, refer to the Confined Space section of this program.**
12. **Water Accumulation:** Employees will not be permitted to work in excavations where water is accumulating. The designated competent person must determine what safeguards will be taken to protect against the hazards of water accumulation.
13. **Mechanical Equipment:** When mechanical equipment is operated adjacent to an excavation and the operator does not have a clear view of the edge barricades, stop logs or someone providing signals will be utilized.
14. **Surface Encumbrances:** Sidewalks, trees, and other miscellaneous surface encumbrances whose stability may be weakened by excavation operations should be braced, secured or removed to prevent their falling into the open excavation.
15. **Stability of Adjacent Structures:** Whenever excavating operations could weaken adjoining buildings, wall or structures, support systems such as shoring, bracing or underpinning will be utilized.

## Support Systems

1. **Timber Shoring:** All timber shoring systems will be designed in accordance with Appendices A and C of **Subpart P - Excavations** from 29 CFR 1926 Standards for Construction.
2. **Aluminum Hydraulic Shoring (AHD):** All aluminum hydraulic shoring systems will be designed from *Manufacturers Tabulated Data* or when not available in accordance with Appendix D of **Subpart P - Excavations** from 29 CFR 1926 Standards for Construction.

Aluminum hydraulic shoring systems designed from the manufacturer's tabulated data will be in accordance with the manufacturer's recommendations, specifications and limitations.

- a) **Important:** Any deviation from the manufacturer's recommendations or specifications must be approved by the manufacturer.
  - b) Altered systems with the manufacturer's approval shall have a written copy of that approval on site during construction of the system and a copy kept at the main office.
3. **Registered Professional Engineer:** Systems designed by a registered professional engineer shall include the following:
    - a) A plan indicating the sizes, types and configurations of the materials to be used in the protective system; and
    - b) The identity of the professional engineer designing the system.
    - c) A copy of the design shall be kept onsite during the construction of the system and a copy will be kept at the main office.
  4. **Trench Boxes:** Trench Boxes will be used in accordance with the loads for which they were designed.
    - a) Trench Boxes shall be installed to prevent lateral movement in the event of cave-ins, etc.
    - b) Employees shall not enter or exit a trench box from any part of the trench that is unprotected.
    - c) Employees will not be allowed inside of trench boxes when they are being installed, removed or moved vertically.
    - d) Trench boxes must extend at least 18 inches above the top of the vertical side to prevent tools and/or debris from falling into the excavation/trench.
    - e) Excavations of earth material to a level not greater than two feet below the bottom of the shield or trench box shall be permitted, but only if the shield

or support system is designed to resist the forces calculated for the full depth of the trench, and there are no indications of soil movement from behind the shield or support system.

**Daily Excavation Checklist**

Competent Person(s) \_\_\_\_\_ Date \_\_\_\_\_

Use one or more of the following Comment Codes listed below to describe your trench inspection. Use a "checkmark" to indicate yes, or fill in the blank with applicable information or description. Leave blank if not applicable.

DESCRIPTIONS:	(G) Good	(P) Poor	(S) Stable	(U) Unstable
SOIL TYPE:	Rock	"A"	"B"	"C"
MOISTURE CONDITIONS	(M) Moist (D) Dry	(SA) Saturated (PS) Partial Saturation	(R) Rain	

**JOB SITE DESCRIPTION**

LOCATION \_\_\_\_\_ AREA CONGESTED \_\_\_\_\_

BLUE STAKE DATE \_\_\_\_\_ LOG #: \_\_\_\_\_ RIGHT OF WAY & CLEARANCE OK \_\_\_\_\_

TRENCH DEPTH \_\_\_\_\_ WIDTH \_\_\_\_\_ LENGTH \_\_\_\_\_ INTERSECT OR ANGULAR \_\_\_\_\_

CROSSING TRENCH: LINES \_\_\_\_\_ ROAD/ALLEY \_\_\_\_\_

PARALLEL TO TRENCH: LINES \_\_\_\_\_ ROAD/ALLEY \_\_\_\_\_ BUILDING(S) \_\_\_\_\_

POLE BRACING \_\_\_\_\_ OVERHEAD LINES \_\_\_\_\_ STRUCTURAL BRACING \_\_\_\_\_

OPEN DATE/TIME \_\_\_\_\_ JOB # \_\_\_\_\_

RPE CONSULTED \_\_\_\_\_ REASON: \_\_\_\_\_

**TRENCH/EXCAVATION INSPECTION COMMENTS:**

Describe any changing conditions, plans, or shoring equipment damage in space below using COMMENT CODES defined above.

Soil Type \_\_\_\_\_ Time(s) Inspected \_\_\_\_\_

**EMPLOYEE & PUBLIC SAFETY INSPECTION**

Air Quality Test _____	Cones _____	Ladders _____	Steel Plating _____
Barricades _____	Emergency Equipment _____	Ramp/Employee _____	Traffic Control _____
Barricade Type _____	Fencing _____	Ramp/Equipment _____	Water Removal _____
Weekend Protection _____			

**PROTECTION SYSTEM SELECTION**

Installed according to Excavation Safety Resource Manual

<b>Hydraulic Uprights:</b>	<b>Sloping:</b>	<b>Compound Slope:</b>	<b>Other:</b>
No Sheeting _____	Simple Slope ___H:___V	Upper Slope ___H:___V	Hydraulic Wales _____
Closed Sheeting _____	Slope/Bench ___H:___V	Lower Slope ___H:___V	Timber Shores _____
Spaced Sheeting _____	Multiple Benches _____		Trench Shield _____
	Slope w/Support _____		Unsupported Wall _____

## SOIL CONDITIONS

Results (circle one type) of Visual & Manual tests indicate soil is Type.....Rock A B C

If no Manual & Visual tests performed, trench shall be shored for Type "C" soil (ESRM) \_\_\_\_\_

Manual Tests (OSHA requires one or more)

	Cohesive Fissured	Cohesive Unfissured	Granular
1. PLASTICITY/PAT		_____	_____
2. DRY STRENGTH	_____	_____	_____
3. DRYING	_____	_____	_____
4. THUMB PENETRATION			
Type "A", 1/4" or less	_____		
Type "B", 1/4" to 1"	_____		
Type "C", 1" or more	_____		
5. POCKET PENETROMETER	_____		
6. OTHER tests	_____		

### VISUAL TESTS(OSHA requires one or more. Do as many as possible.)

	Cohesive Soil Presence indicates more stability	Granular Soil Presence indicates less stability
1. Spoil Pile:	Remains in clumps _____ (Fine Grained Clay)	Breaks up easily _____ (Coarse grained sand or gravel: silt)
2. Trench Sides:	Stands Vertical _____ for over 2 hours (Fine Grained Clay)	Sloughs into trench _____ (Coarse grained sand or gravel: silt)
Presence indicates less trench stability		
3. Fissures:	Cracks or spalls _____	trench side _____ trench top _____
4. Soil layers slope into trench estimated at 4H:1V or steeper	_____	
5. Rock layer above soil layer	_____	
6. Sloughing or caving of sides into trench during excavation	_____	
7. Seepage into trench from	sides _____	surface _____ bottom _____
8. Water up to bottom half of trench within last 24 hours	_____	
9. Vibration sources near trench may affect stability	_____	
10. Prior or existing excavation	crossing trench _____	parallel to trench _____
11. Organics present in soil can result in trench failure or hazardous air	_____	

### CONSTRUCTION/DESIGN COMMENTS

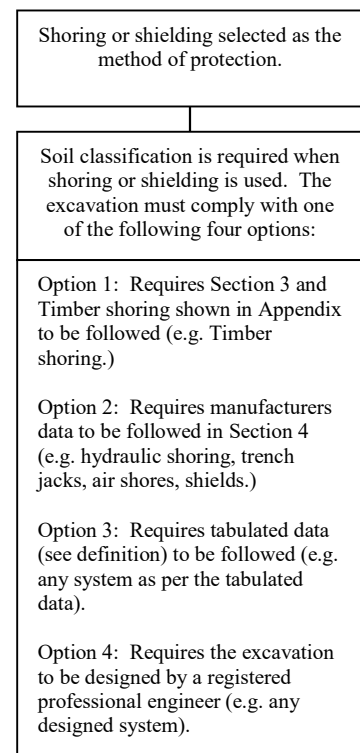
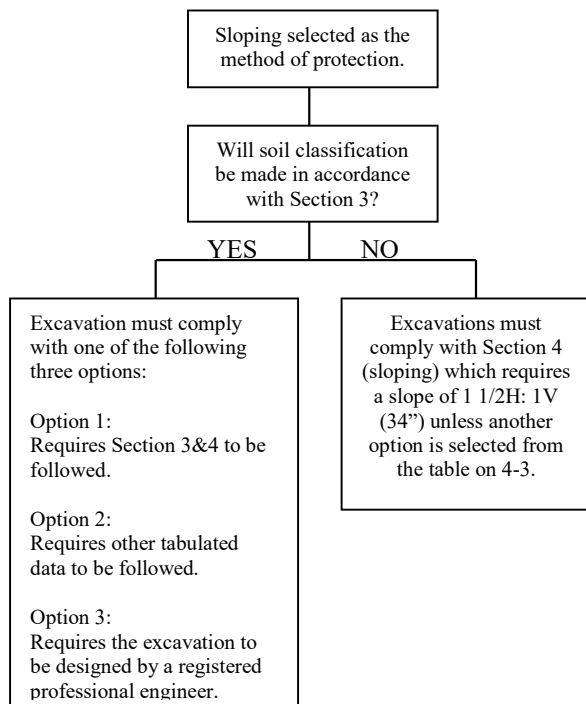
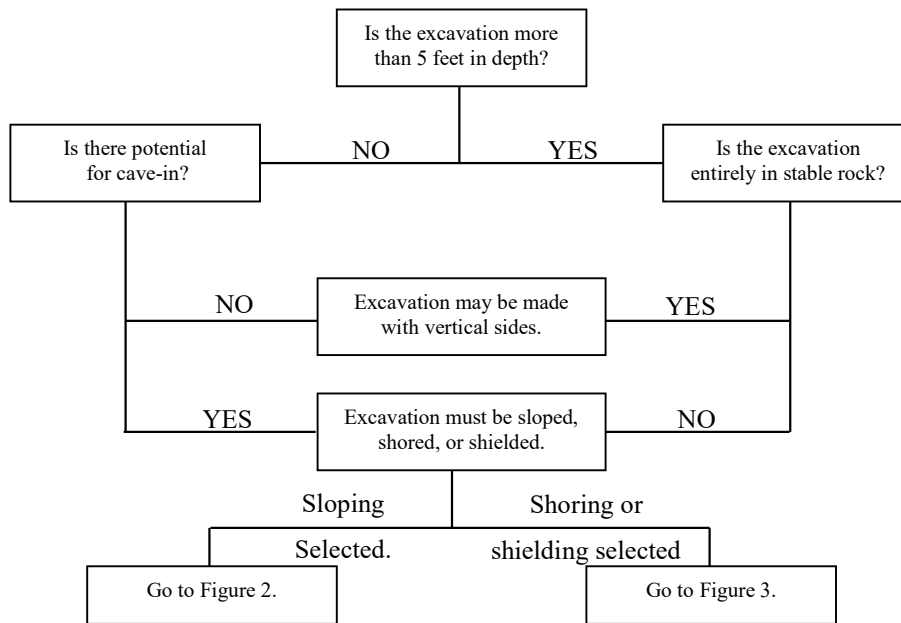
Tailboard \_\_\_\_\_

On-site review with construction supervisor & design \_\_\_\_\_

**The "Competent Person" is responsible for all items in checklist.  
CP has authority to make prompt, corrective decisions to remedy any existing or predictable hazard.**

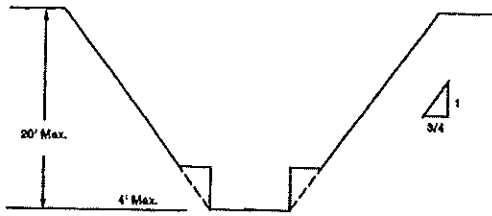
## SELECTION OF PROTECTIVE SYSTEMS

The following figures are a graphic summary of the requirements for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance with § 1926.652(b) and (c).



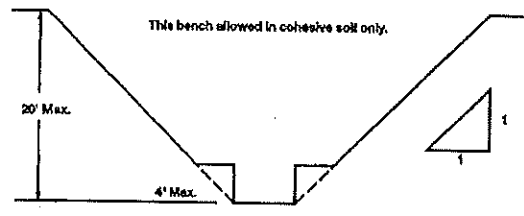
# EXCAVATIONS

All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 3/4 to 1 and maximum bench dimensions as follows:

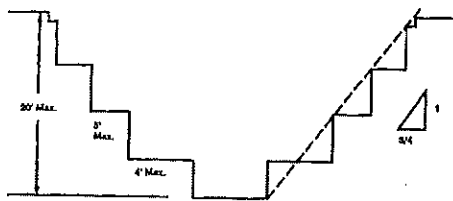


**SIMPLE BENCH**

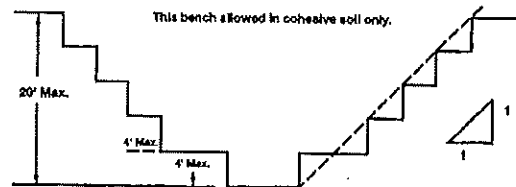
All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as follows:



**SINGLE BENCH**

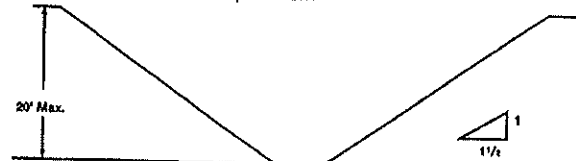


**MULTIPLE BENCH**



**MULTIPLE BENCH**

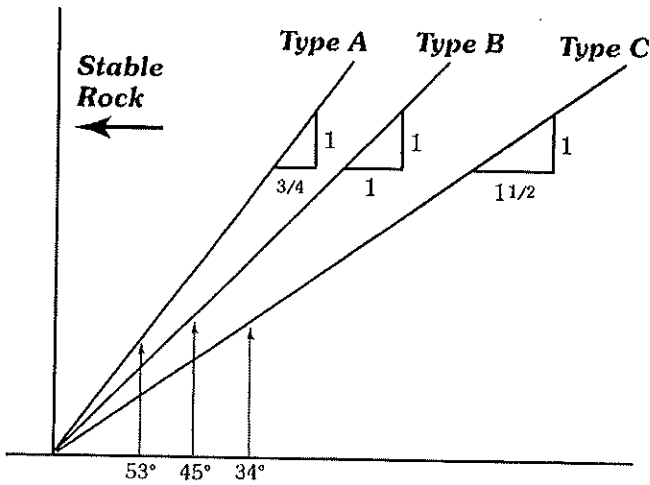
All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1.5:1.



**SIMPLE SLOPE**

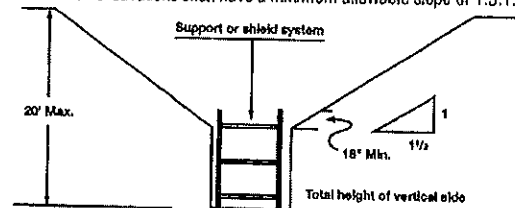
**Stable Rock**

**Type A Type B Type C**




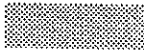






**SLOPES FOR DIFFERENT SOIL TYPES**

All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a minimum allowable slope of 1.5:1.



**VERTICALLY SIDED LOWER PORTION**

## UNIFORM LOCATION & COORDINATION COUNCIL Uniform Color Code

-  **RED** - Electrical Power Lines, Cables, Conduit and Lighting Cables
-  **YELLOW** - Gas, Oil, Steam, Petroleum or Gaseous Materials
-  **ORANGE** - Communication, Alarm or Signal Lines, Cables of Conduit
-  **BLUE** - Potable Water
-  **GREEN** - Sewers and Drain Lines
-  **PINK** - Temporary Survey Markings
-  **WHITE** - Proposed Excavation
-  **PURPLE** - Reclaimed Water, Irrigation, Slurry Lines, Radioactive Materials

Outside NYC and Long Island call (800) 962-7962 or visit [www.digsafelynewyork.com](http://www.digsafelynewyork.com)  
In NYC and Long Island call (800) 272-4480 or visit [www.ocuc.net](http://www.ocuc.net)



# HAZARD COMMUNICATION PLAN



## PIAZZA, INC.

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recording or otherwise, without the prior written permission of Lovell Safety Management Company, LLC.  
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organization.*

This program is designed to provide the user with information on establishing an effective Safety Management Program to help prevent costly work related injuries and to support compliance with OSHA workplace safety regulations.

The practice of occupational safety and health and its related regulatory programs are constantly under review and change. Additionally, there are significant differences in professional interpretation of regulatory standards and pertinent occupational safety and health information. In order to prevent costly work related injuries and occupational illnesses with the resulting worker's compensation insurance claims, all employees must be properly trained and held accountable for safety. Employees must understand all known hazards presented in their work environment and be able to respond appropriately to unplanned hazards which may arise. The responsibility for complying with regulatory requirements and staying current with regulatory issues resides with the employer.

This publication is not intended to take the place of legal or professional assistance. If legal advice or other expert assistance is required with regard to a specific issue confronting an employer, then the services of a competent professional should be sought accordingly. No representation can be made or responsibility taken by the publisher regarding the completeness, accuracy, or continued validity of the information in this publication.

This program does not address every item in 29 CFR 1910, nor is it intended to address motor carrier safety regulations, environmental safety regulations, or local codes and ordinances. The manual addresses several areas related to the prevention of workplace injuries and accidents faced by employers engaged in "general industry" operations. It is very important to understand that under Federal Law you are responsible for compliance with all standards and regulations of 29 CFR 1910 which apply to your work areas and operations. All employers are encouraged to obtain and become familiar with, a copy of the OSHA General Industry Safety and Health Standards, 29 CFR 1910, published by both the U.S. Govt. Printing Office and several private printing firms. The OSHA web page is also a very valuable resource: [www.osha.gov](http://www.osha.gov)

**Lovell Safety Management Co., LLC**  
110 William Street, 12<sup>th</sup> Floor, NYC 10038  
Safety Department – 212-709-8899

PIAZZA, INC.

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## 1.0 HAZARD COMMUNICATION PLAN

Organization's Name: PIAZZA, INC.

Headquartered at: 3 West Stevens Ave Hawthorne NY

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The Plan is maintained at: 3 W Stevens Ave Hawthorne NY

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Hazard Communication Coordinator: Joseph Piazza

Title: Safety Coordinator

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Telephone Number: 914 741 4435

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Date Plan Issued:      October 2013

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## 2.0 HAZARD COMMUNICATION POLICY

### Policy

Employees are our organization's most important assets their safety and health our greatest responsibility.

It is the policy of this organization that every employee is entitled to work in a safe and healthful environment.

When employees enter our employ, they have a right to know the hazardous chemicals with which they work or to which they could be exposed, and the measures they can take to avoid injury or illness when working with these chemicals. We provide

information and training in order to reduce the possibility of accidental exposure and to comply with the OSHA Hazard Communication Standard.

### Purpose

The Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) requires that all employers develop and implement a "written hazard communication program". Our program, as put together in our HazCom plan document, is designed to implement the OSHA Hazard Communication Standard requirements in this organization.

OSHA's primary intent in issuing this standard is to ensure that employees will receive as much information as needed concerning the hazards in their workplace. In our organization, this information will be presented to our employees prior to starting work, when changing jobs which change the hazardous substances to which they are exposed, or when new hazards are introduced into their work area.

The purpose of this program is to ensure that:

- All employees are aware of our Hazard Communication Compliance Plan and to ensure that it is available to all employees, their designated representatives, and OSHA.
- All hazardous chemicals used in the workplace are labeled and that a list of chemicals is maintained.
- Safety Data Sheets (SDS) are available for all hazardous chemicals.
- Employees receive information and training so that they are informed of the requirements of the standard and trained about hazards in their workplace.
- All persons involved in non-routine work tasks are informed of the hazards of such tasks.
- Contractors and their employees are informed of hazards before performing work in our facility, that sub-contractors inform us of any hazardous materials brought into our facilities, and that we have procedures in place so that we can become aware of hazards we may encounter on job sites to which we may send employees.

### 3.0 EMPLOYEE RIGHTS UNDER THE OSHA STANDARD

The purpose of the OSHA Hazard Communication Standard is to ensure that you understand the hazards of the chemicals with which you work and know how to safely use those chemicals. Under this standard you are given the following rights:

1. The right to have access to the company's written hazard communication program.

2. The right to request and receive information on the hazardous substances to which you are exposed.
3. The right to be informed and trained about the hazardous chemicals used in your work area and the methods you can take to protect yourself from the hazards of those chemicals.
4. The right to know the methods and means to recognize the presence or release of a hazardous chemical in the work area.
5. The right to file a complaint with OSHA if you believe that you have been discriminated against by exercising your rights under this standard. An employee complaint to OSHA may trigger an OSHA inspection of the facility.

Our company program has been developed in an effort to create as safe a workplace as possible. We ask for your cooperation in order to achieve this mutual objective.

#### 4.0 POLICIES AND PROCEDURES FOR HAZARD DETERMINATION

1. It is our organization's policy to rely on the SDS's we receive with the products from manufacturers, importers or distributors for information concerning the hazardous chemicals with which we work.
2. Should hazard determination be needed because we generate a chemical for which we have no SDS, we will either obtain an SDS from a qualified supplier or have the hazard determination conducted by a qualified outside source.

#### 5.0 POLICIES AND PROCEDURES FOR OUR CHEMICAL INVENTORY LIST (CIL)

1. Our company will maintain an inventory of all hazardous or potentially hazardous chemicals used at any and all of our facilities.
2. A model of the form which will be used can be found on the following page.
3. Our chemical inventory list will be organized in alphabetical order
4. Our chemical inventory list will be maintained as part of the written plan in each area.
5. The Hazard Communication Coordinator will maintain a master chemical inventory list of all hazardous materials found at our facility.
6. Updating our chemical inventory list (CIL) will be done in the following way:

The Hazard Communications Coordinator is responsible for insuring that the Chemical Inventory List(s) is/are complete and up-to-date.

When a new chemical or a new SDS is received,

- a. The receiver will notify the Hazard Communication Coordinator who will put it on the master list and will notify the area supervisor to put it on the local list.
- b. If a chemical is received locally, the area supervisor will put it on his/her list and immediately inform the Hazard Communication Coordinator so he/she can put it on the master list.

Note: The Hazard Communication Coordinator will be aware that, while solid products such as wood pieces, steel beams and welding rods are typically exempt from the standard, they become covered by the standard once they are worked on (cut, welded, etc.). If these actions are to be performed on any materials, The Hazard Communication Coordinator will make sure that they appear on the CIL and that SDSs are secured for them.

## 6.0 POLICIES AND PROCEDURES FOR SAFETY DATA SHEETS

1. Maintaining our company's SDSs is the responsibility of the Hazard Communication Coordinator.
2. Our SDSs are maintained at: Job Site Trailer  

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3. Any employee wishing to see an SDS should contact the Hazard Communication Coordinator. That SDS will be made available to the employee within the work shift unless we have been unable to obtain it from the supplier.

### Obtaining SDSs

1. All purchase orders should include a requirement that an SDS be sent to the Hazard Communication Coordinator.
2. It is the responsibility of the receiver of the material to insure that each hazardous material is delivered with or preceded by an SDS.
3. In the event the first chemical shipment is not preceded or accompanied by an SDS, the receiver will notify the Hazard Communication Coordinator who will notify the supplier/manufacturer by sending a "Safety Data Sheet (SDS) Supplier Request" letter to the supplier of the chemical.

4. A "Safety Data Sheet 2nd Request" letter should be sent to the supplier if an SDS is not received within 15 days.
5. If the SDS is not received within the next 15 days, a "Safety Data Sheet Letter of Complaint" should be forwarded to OSHA requesting assistance in obtaining the SDS. A copy of the OSHA complaint letter should be mailed to the supplier.
6. Copies of these communications will be maintained by the Hazard Communication Coordinator.

#### Internal Distribution of SDSs

When an SDS is received by the Hazard Communication Coordinator, he/she will:

- A. See if an identical one is on file

If yes, discard the new one

If no, and no SDS exists on file for the product:

1. Indicate date received.
2. Complete transmittal form and attach
3. Put copy in central SDS file.
4. Send copies to user(s) for files.

If no, and the new SDS is a revision of a previous SDS

1. Stamp date received.
2. Complete transmittal form highlighting the change(s), and attach.
3. Place the SDS in SDS file with "old" SDS. When all supplies of "old" inventory are exhausted, remove old SDS from file and place it in a storage file.
4. Send copies of new SDS to area supervisor for files. (User should return "old" SDS to the Hazard Communication Coordinator)

- B. If SDS received by the area supervisor, he/she will make a copy for his/her file and send original to the Hazard Communication Coordinator for filing in central file.

- C. Area supervisor will use information from the transmittal form (or SDS) to insure the CIL is up to date.

#### 7.0 HOW TO USE AN SDS

Manufacturers and suppliers are required to provide SDSs to their customers. OSHA requires that the contents of SDSs be based on the results of specific testing procedures designed to determine the toxic and hazardous characteristics of each material.

We use the SDSs to get information about the properties of the chemicals we work with and how these chemicals can be used safely.



The standard SDS as required by OSHA incorporates the global harmonized system format. The SDS includes 16 specific sections as follows:

Section 1 – Identification

Section 2 – Hazard(s) identification

Section 3 – Composition / Information on Ingredients

**Section 4 – First-aid Measures**

**Section 5 – Fire-fighting Measures**

**Section 6 – Accidental Release Measures**

**Section 7 – Handling and Storage**

**Section 8 – Exposure Controls /Personal Protection**

Section 9 – Physical and Chemical Properties

Section 10 – Stability and Reactivity

Section 11 – Toxicological Information

Section 12 – Ecological Information\*

Section 13 – Disposal Consideration\*

Section 14 – Transport Information\*

Section 15 – Regulatory Information\*

Section 16 – Other information including date of preparation of last revision

**Section in bold lettering should always be reviewed employees prior to use.**

\*Sections outside of OSHA's jurisdiction but inclusion of these sections is necessary for a GHS compliant SDS

## 8.O POLICIES AND PROCEDURES FOR CONTAINER WARNING LABELS

1. It is the policy of this company to retain and use the labels affixed by the manufacturer or supplier to the chemical container. These labels must include:

- Product Identification
- Supplier/Manufacturer Identification
- Precautionary Statements
- Symbols called "Hazard Pictograms"
- Signal Words
- Hazard Statements
- Supplementary Information

## SAMPLE LABEL

### PRODUCT IDENTIFIER

CODE \_\_\_\_\_

Product Name \_\_\_\_\_

### SUPPLIER IDENTIFICATION

Company Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Postal Code \_\_\_\_\_ Country \_\_\_\_\_

Emergency Phone Number \_\_\_\_\_

### PRECAUTIONARY STATEMENTS

Keep container tightly closed. Store in cool, well ventilated place that is locked.

Keep away from heat/sparks/open flame. No smoking.

Only use non-sparking tools.

Use explosion-proof electrical equipment.

Take precautionary measure against static discharge.

Ground and bond container and receiving equipment.

Do not breathe vapors.

Wear Protective gloves.

Do not eat, drink or smoke when using this product.

Wash hands thoroughly after handling.

Dispose of in accordance with local, regional, national, international regulations as specified.

**In Case of Fire:** use dry chemical (BC) or Carbon dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.

### First Aid

If exposed call Poison Center.

If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.

### HAZARD PICTOGRAMS



### SIGNAL WORD

**Danger**

### HAZARD STATEMENT

**Highly flammable liquid and vapor.  
May cause liver and kidney damage.**

### SUPPLEMENTAL INFORMATION

#### Directions for use










\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Fill weight: \_\_\_\_\_ Lot Number \_\_\_\_\_

Gross weight: \_\_\_\_\_ Fill Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

### GHS Pictograms and Hazard Classes

		
<ul style="list-style-type: none"> <li>• Oxidizers</li> </ul>	<ul style="list-style-type: none"> <li>• Flammables</li> <li>• Self-reactives</li> <li>• Pyrophorics</li> <li>• Self-heating</li> <li>• Emits flammable gas</li> <li>• Organic peroxides</li> </ul>	<ul style="list-style-type: none"> <li>• Explosives (1.1-1.4)</li> <li>• Self-reactives</li> <li>• Organic peroxides</li> </ul>
		
<ul style="list-style-type: none"> <li>• Acute toxicity (severe)</li> </ul>	<ul style="list-style-type: none"> <li>• Corrosive to metals</li> <li>• Skin corrosion</li> <li>• Serious eye damage</li> </ul>	<ul style="list-style-type: none"> <li>• Gases under pressure</li> </ul>
		
<ul style="list-style-type: none"> <li>• Carcinogenicity</li> <li>• Respiratory sensitization</li> <li>• Toxic to reproduction</li> <li>• Specific target organ toxicity (repeated)</li> <li>• Germ cell mutagenicity</li> <li>• Aspiration hazard</li> </ul>	<ul style="list-style-type: none"> <li>• Aquatic toxicity (acute)</li> <li>• Aquatic toxicity (chronic)</li> </ul>	<ul style="list-style-type: none"> <li>• Acute toxicity (harmful)</li> <li>• Skin/eye irritation</li> <li>• Skin sensitization</li> <li>• Specific target organ toxicity (single)</li> <li>• Hazardous to the ozone layer</li> </ul>

2. It is the responsibility of the receiver of the materials to insure that all hazardous material containers delivered to this workplace have appropriate labels. In the event a container is not labeled, the receiver of the material will notify the Hazard Communication Coordinator who will request a proper label from the manufacturer.
3. When materials are transferred from labeled containers to secondary in-house containers, the in-house containers must be labeled. It is the responsibility of the Hazard Communication Coordinator or his/her designee to create the label and insure that it is affixed to the container.
4. To create the label, the responsible individual will ensure that the following information is contained in the label:
  - Product Identification
  - Supplier/Manufacturer Identification
  - Precautionary Statements
  - Symbols called “Hazard Pictograms”
  - Signal Words
  - Hazard Statements
  - Supplementary Information
5. For processes using in-house stationary containers, such as dip tanks and plating tanks, signs or placards may be used in lieu of labels as long as the signs and placards meet the labeling requirements. Operating procedures, process sheets, batch tickets, and other written materials can be used as substitutes for individual container labels on stationary process equipment. However, these written materials must contain the same information as required on the labels and must be readily accessible to the employees. Pipes and piping systems do not have to be labeled; however, hazard information must be available in the SDS files.
6. The Hazard Communication Coordinator is responsible for reviewing and updating label information when new and significant information is found. This information should be extracted from revised SDSs provided by the manufacturer.

## 9.0 POLICIES AND PROCEDURES FOR NON-ROUTINE WORK TASKS

1. On occasion, it is necessary for employees to perform jobs which they do not perform on a routine basis and that may involve potential exposure to hazardous chemicals (e.g. carbon monoxide).
2. Under such circumstances, it is the responsibility of the supervisor to determine the hazards which are present or may be created by the task. The supervisor is responsible for communicating this information to the employee. The supervisor will also make sure that any special equipment (e.g., portable ventilation system) and/or personal protective equipment is available and used to perform the work safely. This is especially important when employees enter confined space. OSHA standard 1910.146 details the requirements for entry into confined spaces.

3. The supervisor should contact the Hazard Communication Coordinator for assistance if he/she has any difficulty with item 2 above.

#### 10.0 POLICIES AND PROCEDURE FOR CONTRACTOR COORDINATION

1. It is our policy that our employees, regardless of where they work, are entitled to information regarding the chemicals to which they are exposed in their work areas and that our employees are entitled to information regarding the chemicals to which they may be exposed as the result of the work processes of other contractors.
2. The Hazard Communication Coordinator or his/her designee is responsible for the coordination of information between our organization and any other contractors concerning all aspects of this Hazard Communication Program.
3. When the Hazard Communication Coordinator or designee is informed that contractors will be on our site, he/she will advise them in person of: any chemical hazards that may be encountered in the normal course of their work on the site; our labeling system; the protective measures required; the safe handling procedures necessary; and our emergency alarm system(s). In addition, the Hazard Communication Coordinator or designee will notify these individuals of the location and availability of our material safety data sheets.
4. Each contractor bringing chemicals on-site must provide the Hazard Communication Coordinator with the appropriate hazard information on these substances, including labels used and the precautionary measures to be taken in working with those chemicals. The contractors must also inform the Hazard Communication Coordinator or designee the location on our site the contractor will maintain a chemical inventory list and appropriate SDS file.
5. The Hazard Communication Coordinator is also responsible for providing information to any relevant parties about any potentially hazardous substances we may bring on to any job site at which we may work as contractors.

#### 11.0 POLICIES AND PROCEDURES FOR TRAINING

1. This company will use a combination of videotape, written and verbal materials to instruct and inform employees.  
Training will be conducted, as required by the Standard, when:
  - a. A new employee is hired.
  - b. An employee changes jobs to one that exposes him/her to a hazard(s) for which he/she has not been trained.
  - c. A new hazard (not necessarily a new material) is introduced into an employee's workplace or when new information becomes available about a substance already in use in the workplace.
2. All employees having actual or potential exposure to hazardous chemicals will receive training.

3. The training will be conducted by the Hazard Communication Coordinator or work site supervisor. The Hazard Communication Coordinator will monitor the training to insure compliance with our policies. The Hazard Communication Coordinator will maintain documented records regarding all relevant training delivered in this organization.
4. The topics to be covered in our information and training program include:
  - a. The provisions of the Hazard Communication Standard.
  - b. Any operations in employees, work areas where hazardous chemicals are present.\*
  - c. The details of our written hazard communication program including the location and availability of our written program, chemical inventory list(s) and SDS file.\*
  - d. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work area.
  - e. Information about the hazardous properties of chemicals used in the workplace.
  - f. The measures employees can take to protect themselves from any chemical or physical hazards, including information on work practices, emergency procedures and personal protective equipment required by the employer.\*
  - g. An explanation of how employees can obtain and use the appropriate hazard information on the labels and in the SDSs.
  - h. Discussion of our in-house labeling system.
  - i. Discussion of our procedures for non-routine work tasks.

12.0 HAZARD COMMUNICATION TRAINING LOG

Date: \_\_\_\_\_

Site: Center for Science and Engineering Middletown NY

Instructor: Doug Ruby

I have been informed of the requirements of the OSHA Hazard Communication Standard and I have received training from my employer.

Employee Name (Print)	Department	Employee Signature
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

## Chemical Inventory List

### INVENTORY OF HAZARDOUS CHEMICALS

Project Name: School 35 - Yonkers

	<u>Common Name</u>	<u>Manufacturer Common Name</u>	<u>SDS On File Section</u>	<u>Date Obtained*</u>
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

\*Date Obtained section should be used to indicate the date on which the SDS is received. In the event that an SDS is not readily available for a product arriving on site, the superintendent shall contact the manufacturer and request an SDS for that product and indicate in this section the date the call was made.



# Glossary

**Absorption** – The process by which a substance can be readily taken into the body, for example, some chemicals can be absorbed through unbroken skin.

**Acid** – A fundamental category of chemicals characterized by having available reactive hydrogen and requiring an alkali to neutralize them. Acids turn litmus paper red and have pH values of 0 to 6. They may cause severe burns.

**Acute Effect** – Adverse effect which has severe symptoms developing rapidly and coming quickly to a crisis. Compare “Chronic Effect.”

**Acute Toxicity** – Acute effects resulting from a single dose of or exposure to a substance. Ordinarily used to denote effects in experimental animals.

**ACGIH** – American Conference of Governmental Industrial Hygienists is an organization of professional personnel in governmental agencies or educational institutions who are employed in occupation safety and health programs.

**Adenocarcinoma** – A tumor originating in a gland.

**Adenosis** – Any disease of a gland.

**Adhesion** – A union of two surfaces that are normally separate.

**Aerosol** – A fine spray of particles sufficiently small in size to resist settling or sedimentation (for example: smoke or fog).

**Air Line Respirator** – A respirator that is connected to a compressed breathing air source by a hose. The air is delivered continuously or intermittently in a sufficient volume to meet the wearer’s breathing requirements.

**Air Purifying Respirator** – A respirator that uses chemicals to remove specific gases and vapors from the air or that uses a mechanical filter to remove particulate matter. An air purifying respirator must only be used when there is sufficient oxygen to sustain life and the air contaminant level is below the concentration limits of the device.

**Alkali** – A substance capable of combining with hydrogen ions. They are also called bases, and may cause severe burns to the skin. Alkalis turn litmus paper blue and have pH values from 8 to 14.

**Allergic Reaction** – An abnormal physiological response to a chemical or physical stimuli by a sensitive person.

**Alopecia** – loss of hair.

**Amenorrhea** – absence of menstruation.

**Analgesia** – loss of sensitivity to pain.

**Anaphylaxis** – extreme sensitivity resulting from prior contact with a chemical or protein.

**Anemia** – a deficiency of red blood cells.

**Anesthetic** – A chemical that causes a total or partial loss of sensation. Over exposure to anesthetics can cause impaired judgment, dizziness, drowsiness, headache, unconsciousness, and even death. Examples include: alcohol, paint remover, and degreasers.

**Anhydride** – An oxide or compound which when combined with water produces an acid or base.

**Anhydrous** – does not contain water.

**Anosmia** – loss of the sense of smell.

**Anorexia** – loss of appetite.

**Anoxia** – A lack of oxygen from inhaled air – literally without oxygen. See Hypoxia.

**ANSI** – American National Standards Institute is a privately funded, voluntary membership organization that identifies industrial and public needs for national consensus standards and coordinates developments of such standards.

**Antidote** – A remedy to relieve, prevent, or counteract the effects of a poison.

**Appearance** – A description of a substance at normal room temperature and normal atmospheric conditions. Appearance includes the color, size, and consistency of a material.

**API** – American Petroleum Institute is a voluntary membership organization of the petroleum industry.

**Aquatic Toxicity** – The adverse effects to marine life that result from being exposed to a toxic substance.

**Aqueous** – A water-based solution.

**Argyria** – local or generalized impregnation (gray-blue color) of the body tissues with silver.

**Aromatic** – Fragrant or of marked odor. Often applied to a group of hydrocarbons and their derivatives, such as benzene, toluene, xylene.

**Asphyxia** – Unconsciousness due to interference with the oxygen of the blood.

**Asphyxiant** – A vapor of gas that can cause unconsciousness or death by suffocation (lack of oxygen). Most simple asphyxiants are harmful to the body only when they become so concentrated that they reduce oxygen in the air (normally about 21%) to dangerous levels (18% or lower). Asphyxiation is one of the principal potential hazards of working in confined and enclosed spaces.

**Asphyxiation** – A condition that causes asphyxia, suffocation. See also Asphyxiant.

**ASTM** – American Society for Testing and Materials is the world’s Largest source of voluntary consensus standards for materials, products, Systems, and services. ASTM is a resource for sampling and testing methods, health and safety aspects of materials, safe performance guidelines, effects of physical and biological agents and chemicals.

**Asthma** – A disease characterized by recurring attacks of difficult breathing, wheezing, and cough due to spasmodic contraction of the bronchioles.

**Asymptomatic** – showing no symptoms.

**Atoxia** – loss of power of muscle coordination.

**Atm** – Atmosphere, a unit of pressure equal to 760 mmHg (mercury) at sea level.

**Atmosphere Supplying Respirator** – A respirator that provides breathing air from a source other than the surrounding atmosphere. There are two types: airline and self-contained breathing apparatus.

**Atrophy** – A wasting or diminution in the size of a part of the body.

**Auto-Ignition Temperature** – The temperature to which a closed, or nearly closed container must be heated in order that the flammable liquid, when introduced into the container, will ignite spontaneously or burn.

**BAL** – British Anti-Lewisite – a name for the drug dimecaprol – a treatment for toxic inhalations.

**Barrier Cream** – A cream used for use on human skin to protect against injury from contact with specific types of harmful agents.

**Base** – See Alkali.

**BCM** – Blood-clotting mechanism effects.

**Benign** – Not recurrent or not tending to progress.

**Biodegradable** – Capable of being broken down into innocuous products by the action of living things.

**Biohazard** – This is a combination of the words biological and hazard; and is used to describe infectious agents presenting a risk or potential risk to the well-being of man or animals either directly through infection, or indirectly through disruption of the ??

**Biologic Half-Life** – The time required for a given species, organ, or tissue to eliminate half of a substance which it takes in.

**Biopsy** – Removal and examination of tissue from the living body.

**BLD** – Blood effects.

**Boiling Point** – The temperature at which a liquid changes to vapor state at a given pressure. The boiling point is usually expressed in degrees Fahrenheit at sea level pressure (760mmHg, or one atmosphere). For mixtures, the *initial* boiling point or the boiling range may be given. Flammable materials with low boiling points generally present special fire hazards. Some approximate boiling points:

Propane	-44°F
Anhydrous Ammonia	-28°F
Butane	31°F
Gasoline	100°F
Allyl chloride	113°F
Ethylene Glycol	387°F

**BOM or BuMines** – Bureau of Mines, U.S. Department of Interior.

**Bonding** – The interconnecting of two objects by means of a clamp and bare wire. Its purpose is to prevent a static discharge (spark) when transferring a flammable liquid from one container to another. The conductive path is provided by clamps which make contact with the charged object and a low resistance flexible cable which allows the charge to equalize. See Grounding.

**Bradycardia** – A slow heartbeat in which the pulse rate falls below 60. See also Tachycardia.

**Breathing Zone** – The area of the ambient environment in which a person breathes.

**Bronchitis** – Inflammation of the bronchial tubes in the lungs.

**Buffer** – A substance capable in solution of neutralizing both acids and bases and thereby maintaining the original acidity or basicity of the solution.

**Bulk Density** – Mass of powdered or granulated solid material per unit of volume.

**C** – Degrees Centigrade, a temperature scale where water boils at 100°C and freezes at 0°C. °C = 5/9(°F – 32).

**“C” or Ceiling** – The maximum allowable human exposure limit for an airborne substance which is not to be exceeded even momentarily. Also see PEL and TLV.

**ca** – Approximately.

**CAA** – Clean Air Act was enacted by Congress to regulate/reduce air pollution. CAA is administered by the Environmental Protection Agency (EPA).

**Carcinogen** – A substance or agent capable of causing or producing cancer in mammals, including humans. A chemical is considered to be a carcinogen if:

- (a) It has been evaluated by the International Agency for Research on Cancer (IARC) and found to be carcinogenic or a potential carcinogen.

- (b) It is listed as a carcinogen or potential carcinogen in the Annual Report on carcinogens (latest edition) published by the National Toxicology Program (NTP).

- (c) It is regulated by OSHA as a carcinogen.

**Car** – cancer or carcinogen.

**Carcinogenicity** – The ability to produce cancer.

**Carcinoma** – a malignant tumor. A form of cancer.

**CAS** – Chemical Abstracts Service is an organization under the American Chemical Society. CAS abstracts and indexes chemical literature from all over the world in “Chemical Abstracts.” “CAS Numbers” are used to identify specific chemicals or mixtures.

**Catalyst** – A substance which, without changing itself, causes a chemical reaction to proceed faster.

**Cataract** – A loss of transparency of the crystalline lens of the eye or of its capsule.

**Caustic** – The ability of an alkali to cause burns. See Alkali.

**cc** – Cubic centimeter is a volume measurement in the metric system which is equal in capacity to one milliliter (ml). One quart is about 946 cubic centimeters.

**Ceiling Limit** – A concentration that is not to be exceeded. See also “C” or Ceiling.

**Ceiling Value(s)** – A maximum established level which no human exposure should ever exceed.

**Central Nervous System** – The brain and spinal cord. These organs supervise and coordinate the activity of the entire nervous system. Sensory impulses are transmitted into the central nervous system, and motor impulses are transmitted out.

**CERCLA** – Comprehensive Environmental Response, Compensation, and Liability Act of 1980. The Act requires that the Coast Guard National Response Center be notified in the event of a hazardous substance release. The Act also provides for a fund (the Superfund) to be used for the cleanup of abandoned hazardous waste disposal sites.

**Cervix** – The lower end of the uterus extending into the vagina.

**CFR** – Code of Federal Regulations. A collection of the regulations that have been promulgated under U.S. Law.

**Chemical** – Any element, chemical compound or mixture of elements and/or compounds where chemical(s) are distributed.

**Chemical Cartridge Respirator** – A respirator that uses various chemical substances to purify inhaled air of certain gases and vapors. This type of respirator is effective for concentrating no more than ten times the TLV of the contaminant, if the contaminant has warning properties (odor or irritation) below the TLV.

**Chemical Change (Reaction)** – Change of composition in properties due to rearrangement of elements, atoms, or molecules.

**Chemical Compound** – A substance composed of definite proportions by weight of two or more elements, and whose properties differ from those of its elements. Also see Mixture.

**Chemical Family** – A group of individual elements or compounds with a common general name. Example: ketones, alcohols.

**Chemical Name** – The name given to a chemical in the nomenclature developed by the International Union of Pure and Applied Chemistry (IU or the Chemical Abstracts Service (CAS)).

**Chemical Pneumonitis** – Inflammation of the lungs caused by accumulation of fluids due to chemical irritation.

**CHEMTREC** – Chemical Transportation Emergency Center is a national center established by the Chemical Manufacturers Association (CMA) to relay pertinent emergency information concerning specific chemicals on requests from individuals. CHEMTREC has a 24-hour toll-free telephone number \*800-424-9300) to help respond to chemical transportation emergencies.

**Chloracne** – An acne-like eruption from contact with chlorinated naphthalenes and polyphenyls acting on sweat glands.

**Chronic** – Persistent, prolonged, and/or repeated effects which are the result of repeated exposure to low concentrations of a chemical substance over a long period of time. Compare with Acute.

**Chronic Effect** – An adverse effect on a human or animal body, with symptoms which develop slowly over a long period of time or which recur frequently. Compare with Acute.

**Chronic Exposure** – long-term contact with a substance.

**Chronic Toxicity** – Adverse effects resulting from repeated doses or exposures to a substance over a relatively prolonged period of time. Ordinarily used to denote effects in experimental animals.

**Clean Air Act** - See CAA.

**Clean Water Act** – Federal law enacted to regulate/reduce water pollution. CWA is administered by the Environmental Protection Agency (EPA).

**CMA** – Chemical Manufacturers Association. See CHEMTREC.

**CO** – Carbon monoxide. A colorless, odorless, flammable and very toxic gas produced by the incomplete combustion of carbon. It is also a by-product of many chemical processes.

**CO<sub>2</sub>** - Carbon dioxide is a heavy, colorless gas which is produced by the combustion and decomposition of organic substances and as a byproduct of many chemical processes. CO<sub>2</sub> will not burn and is relatively non-toxic (although high concentrations, especially in confined spaces, can create hazardous oxygen deficient environments.)

**COC** – Cleveland Open Cup is a flash point test method.

**Combustible** – A term used by NFPA, DOT, and others to classify certain liquids that will burn, on the basis of flash points. Both NFPA and DOT generally define “combustible liquids” as having a flash point of 100° F (37.8° C) or higher but below 200° F (93.3° C). Also see Flammable. Non-liquid substances such as wood and paper are classified as “ordinary combustibles” by NFPA.

**Combustible Liquid** – Any liquid having a flash point at or above 100° F (37.8° C), but below 200° F (93.3° C), except any mixture having components with flash points of 200° F (93.3° C) or higher, the total volume of which make up 99% or more of the total volume of the mixture.

**Common Name** – Any identification, such as code name, code number, trade name, brand name, or generic name, other than its chemical name, used to identify a chemical.

**Compressed Gas** – (a) A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70° F (21.1° C); or (b) A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130° F (54.4° C) regardless of the pressure at 70° F (21.1° C); or (c) A liquid having a vapor pressure exceeding 40 psi at 100° F (37.8° C) as determined by ASTM D-323-72.

**Conc.** – see Concentration.

**Concentration** – The relative amount of a substance when combined or mixed with other substances. Examples: 2 ppm hydrogen sulfide in air, or a 50% caustic solution.

**Conditions to Avoid** – Conditions encountered during handling or storage which could cause a substance to become unstable.

**Confined Space** – Any area which has limited openings for entry and exit that would make escape difficult in an emergency, has a lack of ventilation, contains known and potential hazards, and is not intended nor designated for continuous human occupancy.

**Conjunctivitis** – Inflammation of the conjunctiva, the delicate membrane that lines the eyelids and cover the eyeballs.

**Contact Dermatitis** – Caused by contact with a primary irritant, a skin irritant at the area of skin contact.

**Container** – Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of SDS or HazCom, pipes or piping systems are not considered to be containers.

**Cornea** – Transparent structure of the external layer of the eyeball.

**Corrosive** – A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the site of the contact. This term shall not refer to action on inanimate surfaces.

**CPSC** – Consumer Products Safety Commission has responsibility for regulating hazardous materials when they appear in consumer goods. For CPSC purposes, hazards are defined in the Hazardous Substances Act and the Poison Prevention Packaging Act of 1970.

**Curetiage** – Cleansing of diseased surface.

**Cutaneous Hazards** – Chemicals which irritate the skin.

**Cutaneous Toxicity** – See Dermal Toxicity.

**CWA** – Clean Water Act was enacted to regulate/reduce water pollution. It is administered by the EPA.

**Cyanosis** – Blueness of the skin, generally caused by lack of oxygen.

**Cyst** – A sac containing a liquid. Most cysts are harmless.

**Cytology** – The scientific study of cells.

**DASHO** – Designated Agency Safety and Health Official is the executive official of a Federal Department or Agency who is responsible for safety and occupational health matters within a Federal Agency, and is so designated or appointed by the head of the agency.

**Decomposition** – Breakdown of a material or substance (by heat, chemical reaction, electrolysis, decay, or other processes) into parts or elements or simpler compounds.

**Density** – The mass (weight) per unit volume of a substance. For example, lead is much more dense than aluminum.

**Depressant** – A substance that reduces a bodily functional activity or an instinctive desire, such as appetite.

**Dermal** – Relating to the skin.

**Dermal Toxicity** – Adverse effects resulting from the skin exposure to a substance. Ordinarily used to denote effects in the experimental animals.

**Dermatitis** – Inflammation of the skin. Also see Irritant, Sensitizer, and Contact Dermatitis.

**DHHS** – U.S. Department of Health and Human Services (replaced U.S. Department of Health, Education and Welfare.) NIOSH and the Public Health Services (PHS) are part of DHHS.

**Dike** – A barrier constructed to control or confine hazardous substances and prevent them from entering sewers, ditches, streams, or other flowing waters.

**Dilution Ventilation** – Air flow designed to dilute contaminants to acceptable levels. Also see General Ventilation or Exhaust.

**DOL** – U.S. Department of Labor. OSHA and MSHA are part of DOL.

**Dose** – The term used to express the amount of energy or substance absorbed in a unit volume or an organ or individual dose rate is the dose delivered per unit of time.

**DOT** – U.S. Department of Transportation regulates transportation of chemicals and other substances.

**Dry Chemical** – A powdered fire extinguishing agent usually composed of sodium bicarbonate, potassium bicarbonate, etc.

**Dysfunction** – Any abnormality or impairment of an organ.

**Dysmenorrhea** – painful menstruation.

**Dysplastic** – An abnormality of development.

**Dyspnea** – labored or difficult breathing, shortness of breath.

**Ectopic Pregnancy** – The fertilized ovum becomes implanted outside of the uterus.

**Eczema** – A skin disease or disorder; one specific type of dermatitis.

**Edema** – An abnormal accumulation of clear watery fluids in the tissues.

**Element** – A substance composed entirely of one kind of atom. Elements are designated by chemical symbols.

**Emphysema** – A lung disease in which the presence of air in the connective tissues of the lungs causes swelling or inflammation.

**Endocrine Glands** – Glands that regulate body activity by secreting hormones.

**Endometrium** – The mucous membrane lining the uterus.

**Environmental Toxicity** – Information obtained as a result of conducting environmental testing designed to study the effects on aquatic and plant life.

**EPA** – U.S. Environmental Protection Agency.

**Epidemiology** – Science concerned with the study of disease in a general population. Determination of the incidence (rate of occurrence) and distribution of a particular disease (as by age, sex, or occupation) which may provide information about the cause of the disease.

**Epitoxis** – Nosebleed; hemorrhage from the nose.

**Epithelium** – The thin membrane covering internal and external surfaces of the body.

**Estrogen** – Principal female sex hormone.

**Evaporation Rate** – The rate at which a material will vaporize (evaporate) when compared to the known rate of vaporization of a standard material. The evaporation rate can be useful in evaluating the health and fire hazards of a material. The designated standard material is usually normal butyl acetate (NBUAC or n-BuAc) with a vaporization rate designated to 1.0. Vaporization rates of other solvents or materials are then classified as:

FAST evaporating if greater than 3.0. Examples: Methyl Ethyl Ketone (MEK) = 3.8, Acetone = 5.6, Hexane = 8.3.

MEDIUM evaporating if 0.8 to 3.0. Examples: 190 proof (95%) Ethyl Alcohol = 1.4, VM & P Naphtha = 1.4, MIBK = 1.6.

SLOW evaporating if less than 0.8. Examples: Xylene = 0.6, Isobutyl Alcohol = 0.6, Normal Butyl Alcohol = 0.4, Water = 0.3, Mineral Spirits = 0.1.

**Explosive** – A chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

**Exposure or Exposed** – State of being open and vulnerable to a hazardous chemical in the course of employment by inhalation, ingestion, skin contact, absorption, or any other course; includes potential (accidental or possible) exposure.

**Extinguishing Media** – The firefighting substance to be used to control a material in the event of a fire. It is usually named by its generic name, such as fog, foam, water, etc.

**Eye Protection** – Recommended safety glasses, chemical splash goggles, face shields, etc. to be utilized when handling a hazardous material.

**F** – Fahrenheit is a scale for measuring temperature. On the Fahrenheit scale, water boils at 212° and freezes at 32°. °F = 9/5 (°C) +32.

**f/cc** – Fibers per cubic centimeter of air.

**FACOSH** – Federal Advisory Council for Occupational Safety and Health is a joint management-labor council that advises the Secretary of Labor on matters relating to the occupational safety and health of federal employees.

**FDA** – U.S. Food and Drug Administration.

**Fetal** – pertaining to the fetus.

**Fetus** – The developing young in the uterus from the seventh week of gestation until birth.

**FFSHC** – Field Federal Safety and Health Councils are organized throughout the country to improve federal safety and health programs at the field level and within a geographic location.

**FHCP** – Federal Hazard Communication Program.

**Fibrosis** – An abnormal thickening of fibrous connective tissue, usually in the lungs.

**FIFRA** – Federal Insecticide, Fungicide and Rodenticide Act requires that certain useful poisons, such as chemical pesticides, sold to the public contain labels that carry health hazard warnings to protect users. It is administered by EPA.

**First Aid** – Emergency measures to be taken when a person is suffering from overexposure to a hazardous material, before regular medical help can be obtained.

**Flammable** – A chemical that includes one of the following categories:

- (a) "Aerosol Flammable." An aerosol that yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening.
- (b) "Gas, Flammable." (1) a gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of 13 percent by volume or less; or (2) a gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than 12 percent by volume, regardless of the lower limit;
- (c) "Liquid, Flammable." Any liquid having a flashpoint below 100°F, except any mixture having components with flashpoints of 100°F or higher, the total of which make up 99 percent or more of the total volume of the mixture.
- (d) "Solid, Flammable." A solid, other than a blasting agent or explosives that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A solid is a flammable solid if it ignites and burns with a self-sustained flame at a rate greater than one tenth of an inch per second along its major axis.

**Flashback** – Occurs when flame from a torch burns back into the tip, the torch, or the hose. It is often accompanied by a hissing or squealing sound with a smoky or sharp-pointed flame.

**Flashpoint** – The minimum temperature at which a liquid gives off a vapor in sufficient concentration to ignite when tested by any of the following methods:

- (a) Tagliabue Closed Tester
- (b) Pensky-Martens Closed Tester
- (c) Setaflash Closed Tester.

**Foreseeable Emergency** – Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace or environment.

**Formula** – The scientific expression of the chemical composition of a material (e.g. water is H<sub>2</sub>O, Sulfuric Acid is H<sub>2</sub>SO<sub>4</sub>, Sulfur Dioxide is SO<sub>2</sub>).

**Fume** – Smoke, vapor or gas, especially when irritating or offensive.

**Fume Fever** – An acute condition caused by a brief high exposure to the freshly generated fumes of metal such as lead or magnesium.

**Gangrene** – Death of tissue combined with putrefaction.

**Gastroenteritis** – Inflammation of the stomach and intestines.

**g** – Gram is a metric unit of weight. One ounce U.S. is about 28.4 grams.

**General Exhaust** – A system for exhausting air containing contaminants from a general work area. Also see Local Exhaust.

**Generic Name** – A designation or identification used to identify a chemical by other than its chemical name (e.g. code name, code number, trade name, and brand name.)

**Genetic** – Pertaining to or carried by genes. Hereditary.

**Gestation** – The development of the fetus from conception to birth.

**g/kg** – Grams per kilogram is an expression of dose used in oral and dermal toxicology testing to denote grams of a substance dosed per kilogram of animal body weight. Also see kg (kilogram).

**Grounding** – The procedure used to carry an electrical charge to ground through a conductive path. A typical ground may be connected directly to a conductive water pipe or to a grounding bus and grounding rod. See Bonding.

**Gynecology** – The study of reproductive organs in women.

**Hand Protection** – Specific type of gloves or other hand protection required to prevent harmful exposure to hazardous materials.

**Hazardous Chemical** – Any chemical whose presence or use is a physical hazard or a health hazard.

**Hazardous Material** – A material that is characterized by one or more of the following (1) has a flashpoint below 140° F, closed cup, or subject to spontaneous heating; (2) has a threshold limit value below 500 ppm for gases and vapors, below 500 mg/m for fumes, and below 25 mppcf for dusts; (3) single oral does LD50 or below 500 mg/kg of body weight; (4) is subject to polymerization which results in the release of large amounts of energy; (5) is a strong oxidizing or reducing agent; (6) causes first degree burns to skin in short time exposure, or is systematically toxic on contact with the skin; and/or (7) in the course of normal operations may produce dusts, gases, fumes, vapors, mists, or smoke which have one or more of the above characteristics.

**Hazard Warning** – Words, pictures, symbols, or combination thereof presented on a label or other appropriate form to inform of the presence of various materials or hazards.

**HCS** – Hazard Communication Standard is an OSHA regulation.

**Health Hazard** – A chemical for which there is significant evidence, based on at least one study conducted in accordance with established scientific principles, that acute or chronic health effects may occur in exposed employees. The term

“health hazard” includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatoxins, nephrotoxins, neurotoxins, agents which act on the hemopoietic system, and agents which damage the lungs, skin, eyes, or mucous membranes.

**Hematology** – The study of blood.

**Hematoma** – A blood clot under the surface of the skin.

**Hematopoietic System** – The blood forming mechanism of the human body.

**Hematuria** – The presence of blood in the urine.

**Hemoglobin** – An iron-containing conjugated protein or respiratory pigment occurring in the red blood cells of vertebrates.

**Hepatotoxin** – A substance that causes injury to the liver.

**Highly Toxic** – A chemical falling within any of the following categories:  
(a) A chemical with a median lethal dose (LD50) of 50 milligrams or less per kilogram of body weight when administered orally to albino rats weighing between 200 and 300 grams each.  
(b) A chemical with a median lethal dose (LD50) of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours (or less if death occurs within 24 hours) with the bare skin of albino rabbits weighing between 2 and 3 kilograms each.  
(c) A chemical that has a median lethal concentration (LC50) in air of 200 ppm by volume or less of gas or vapor, or 2 milligrams per liter or less of mist, fume, or dust, when administered by continuous inhalation for one hour (or less if death occurs within one hour) to albino rats weighing between 200 and 300 grams each.

**HMS** – Hazardous Material Information System is an SDS file maintained by the Department of Defense and contains MSDSs and transportation data for products purchased by DOD and GSA.

**Hormones** – Act as chemical messengers to body organs.

**Hydrocarbons** – Chemicals composed solely of carbon and hydrogen, which are the basic building blocks of all organic chemicals.

**Hygroscopic** – Readily absorbs moisture from the air.

**Hyperplasia** – Increase in volume of a tissue or organ caused by the growth of new cells.

**Hypoxia** – Insufficient oxygen, especially as applied to body cells.

**IARC** – International Agency for Research on Cancer.

**Ignitable** – Capable of being set afire.

**Immiscible** – Liquids which will not mix with each other but will form 2 separate layers or will result in cloudiness or turbidity.

**Impervious** – A material that does not allow another substance to pass through or penetrate it.

**Incompatible** – Materials that could cause dangerous reactions by direct contact with one another.

**Inflammation** – A morbid series of reactions produced in the tissues by an irritant. It is marked by an afflux of blood with exudation of plasma and leukocytes.

**Ingestion** – Taking in by mouth.

**Inhale/Inhalation** – Breathing in of a substance in the form of a gas, vapor, fume, mist, or dust.

**Inhibitor** – A chemical added to another substance to prevent an unwanted chemical change.

**Inorganic** – A term used to designate compounds that generally do not contain carbon. Source matter other than vegetable or animal. Examples are sulfuric acid and salt.

**Insoluble** – Incapable of being dissolved in liquid.

**Irodocyclitis** – Inflammation of both iris and ciliary body of the eye.

**Irritant** – A chemical, which is not corrosive, but which causes a reversible inflammatory effect on living tissue by chemical action at the site of contact.

**Irritating** – An irritating material, as defined by DOT, is a liquid or solid substance which, upon contact with fire or when exposed to air, gives off dangerous or intensely irritating fumes (not including poisonous materials).

**Ischemia** – Local and temporary anemia due to the obstruction of the circulation in a part of the body.

**kg** – Kilogram is a metric unit of weight, about 2.2 U.S. pounds.

**L** – Liter is a metric unit of capacity or volume. A U.S. quart is about 9/10 of a liter.

**Label** – Notice attached to a container, bearing information concerning its contents.

**Lacrimation** – Secretion and discharge of tears.

**Latent Period** – The period of time between exposure and the first manifestation of damage.

**Lavage** – A washing of a hollow organ, such as the stomach.

**LC** – Lethal Concentration is the concentration of a substance being tested that will kill.

**LCL** – Lethal Concentration Low, lowest concentration of a gas or vapor capable of killing a specified species over a specified time.

**LC50** – The concentration of a material in air that will kill 50 percent of a group of test animals with a single exposure (usually 1 to 4 hours). The LC50 is expressed as part of material per million parts of air, by volume (ppm) for gases and vapors, or as micrograms of material per liter of air (g/l) or milligrams of material per cubic meter of air (mg/m) for dusts and mists, as well as for gases and vapors.

**LD** – Lethal Dose is the quantity of a substance being tested that will kill.

**LDL** – Lethal Dose Low, lowest administered dose of a material capable of killing a specified test species.

**LD50** – A single dose of material expected to kill 50 percent of a group of test animals. The LD dose is usually expressed as milligrams or grams of material per kilogram of animal body weight (mg/kg or g/kg). The material may be administered by mouth or applied to the skin.

**Lower explosive limit (LEL)** – The lower limit of flammability of a gas or vapor at ordinary ambient temperatures expressed in percent of the gas or vapor in air by volume. This limit is assumed constant for temperatures up to 120°C (250°F). Above this, it should be decreased by a factor of 0.7 because explosibility increases with higher temperatures.

**Malignant** – As applied to a tumor. Cancerous and capable of undergoing metastasis, or invasion of surrounding tissue.

**Metastasis** – Transfer of the causal agent (cell or microorganism) of a disease from a primary focus to a distant one through the blood or lymphatic vessels. Also, spread of malignancy from site of primary cancer to secondary sites.

**Meter** – A metric unit of length, equal to about 39 inches.

**Micron (micrometer, m)** – A unit of length equal to one millionth of a meter, approximately 1/25,000 of an inch.

**Milligram (mg)** – A unit of weight in the metric system. One thousand milligrams equals one gram.

**Milligrams per cubic meter (mg/m<sup>3</sup>)** – Unit used to measure air concentrations of dusts, gases, mists, and fumes.

**Milliliter (mL)** – A metric unit used to measure volume. One milliliter equals one cubic centimeter.

**Millimeter of mercury (mmHg)** – The unit of pressure equal to the pressure exerted by a column of liquid mercury one millimeter high at a standard temperature.

**Mists** – Suspended liquid droplets generated by condensation from the gaseous to the liquid state or by breaking up a liquid into a dispersed state, such as by splashing, foaming, or atomizing. Mist is formed when a finely divided liquid is suspended in air.

**SDS** – Material Safety Data Sheet.

**MSHA** – Mine Safety and Health Administration, U.S. Department of Labor.

**Mucous membranes** – Lining of the hollow organs of the body, notably the nose, mouth, stomach, intestines, bronchial tubes, and urinary tract.

**NFPA** – The National Fire Protection Association is a voluntary membership organization whose aim is to promote and improve fire protection and prevention. The NFPA publishes 16 volumes of codes known as the National Fire Codes.

**NIOSH** – The National Institute for Occupational Safety and Health is a federal agency. It conducts research on health and safety concerns, tests and certifies respirators, and trains occupational health and safety professionals.

**NTP** – National Toxicology Program. The NTP publishes an Annual Report on carcinogens.

**Nuisance dust** – Have a long history of little adverse effect on the lungs and do not produce significant organic disease or toxic effect when exposures are kept under reasonable control.

**OSHA** – U.S. Occupational Safety and Health Administration, U.S. Department of Labor.

**Oxidizer** – A substance that gives up oxygen readily. Presence of an oxidizer increases the fire hazard.

**Oxygen deficiency** – That concentration of oxygen by volume below which atmosphere supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

**Oxygen-enriched atmosphere** – An atmosphere containing more than 23.5 percent oxygen by volume.

**Particulate matter** – A suspension of fine solid or liquid particles in air, such as dust, fog, fume, mist, smoke or sprays. Particulate matter suspended in air is commonly known as an aerosol.

**PEL** – Permissible exposure limit. An exposure limit that is published and enforced by OSHA as a legal standard.

**Personal protective equipment (PPE)** – Devices worn by the worker to protect against hazards in the environment. Respirators, gloves, and hearing protectors are examples.

**PH** – Means used to express the degree of acidity or alkalinity of a solution with neutrality indicated as seven.

**Polymerization** - A chemical reaction in which two or more small molecules (monomers) combine to form larger molecules (polymers) that contain repeating structural units of the original molecules. A hazardous polymerization is the above reaction, with an uncontrolled release of energy.

**ppm** - Parts per million parts of air by volume of vapor or gas or other contaminant. Used to measure air concentrations of vapors and gases.

**psi** - Pounds per square inch (for SDS purposes) is the pressure a material exerts on the walls of a confining vessel or enclosure. For technical accuracy, pressure must be expressed as psig (pounds per square inch gauge) or psia (pounds per square absolute; that is, gauge pressure plus sea level atmospheric pressure, or psig plus approximately 14.7 pounds per square inch).

**RCRA** - Resource Conservation and Recovery Act of 1976. (U.S.EPA)

**Reactivity (chemical)** - A substance's susceptibility to undergo a chemical reaction or change that may result in dangerous side effects, such as an explosion, burning, and corrosive or toxic emissions.

**Respirable size particulates** - Particulates in the size range that permits them to penetrate deep into the lungs upon inhalation.

**Respirator (approved)** - A device which has met the requirements of 30 CFR Part 11 and is designed to protect the wearer from inhalation of harmful atmospheres and has been approved by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA).

**Respiratory system** - Consists of (in descending order) - the nose, mouth, nasal passages, nasal pharynx, pharynx, larynx, trachea, bronchi, bronchioles, air sacs (alveoli) of the lungs, and muscles of respiration.

**Route of entry** - The path by which chemicals can enter the body. There are three main routes of entry: inhalation, ingestion, and skin absorption.

**SARA** - Superfund Amendments and Reauthorization Act of 1986. (U.S.EPA)

**SCBA** - Self-contained breathing apparatus.

**Sensitizer** - A substance which on first exposure causes little or no reaction but which on repeated exposure may cause a marked response not necessarily limited to the contact site. Skin sensitization is the most common form of sensitization in the industrial setting.

**Short-term exposure limit (STEL)** - ACGIH-recommended exposure limit. Maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures.

**"Skin"** - A notation (sometimes used with PEL or TLV exposure data) which indicates that the stated substance may be absorbed by the skin, mucous membranes, and eyes -- either airborne or by direct contact -- and that this additional exposure must be considered part of the total exposure to avoid exceeding the PEL or TLV for that substance.

**Solubility in water** - A term expressing the percentage of a material (by weight) that will dissolve in water at ambient temperature. Solubility information can be useful in determining spill cleanup methods and re-extinguishing agents and methods for a material.

**Solvent** - A substance, usually a liquid, in which other substances are dissolved. The most common solvent is water.

**Sorbent** - (1) A material that removes toxic gases and vapors from air inhaled through a canister or cartridge. (2) Material used to collect gases and vapors during air-sampling.

**Specific gravity** - The ratio of the mass of a unit volume of a substance to the mass of the same volume of a standard substance at a standard temperature. Water at 4°C (39.2°F) is the standard usually referred to for liquids; for gases, dry air (at the same temperature and pressure as the gas) is often taken as the standard substance. See Density.

**Stability** - An expression of the ability of a material to remain unchanged. For SDS purposes, a material is stable if it remains in the same form under expected and reasonable conditions of storage or use. Conditions which may cause instability (dangerous change) are stated. Examples are temperatures above 150°F, shock from dropping.

**Synergism** - Cooperative action of substances whose total effect is greater than the sum of their separate effects.

**Systemic** - Spread throughout the body, affecting all body systems and organs, not localized in one spot or area.

**Threshold** - The lowest dose or exposure to a chemical at which a specific effect is observed.

**Time-weighted average concentration (TWA)** - Refers to concentrations of airborne toxic materials which have been weighted for a certain time duration, usually 8 hours.

**TLV. Threshold Limit Value** - A time-weighted average concentration under which most people can work consistently for 8 hours a day, day after day, with no harmful effects. A table of these values and accompanying precautions is published annually by the American Conference of Governmental Industrial Hygienists.

**Toxicity** - A relative property of a chemical agent and refers to a harmful effect on some biologic mechanism and the conditions under which this effect occurs.

**Upper explosive limit (UEL)** - The highest concentration (expressed in percent vapor or gas in the air by volume) of a substance that will burn or explode when an ignition source is present.

**USDA** - U.S. Department of Agriculture.

**Vapor** - The gaseous form of a solid or liquid substance as it evaporates.

**Vapor Density** - The weight of a vapor or gas compared to the weight of an equal volume of air is an expression of the density of the vapor or gas. Materials lighter than air have vapor densities less than 1.0, and will rise. Materials heavier than air have a vapor density of more than 1.0, and will concentrate in low places.

**Vapor Pressure** - The pressure exerted by a saturated vapor above its own liquid in a closed container.

**Vermiculite** - An expanded mica (hydrated magnesium-aluminum-iron-silicate) used as sorbent for spill control and clean-up.

**Vertigo** - A feeling of revolving in space; dizziness, giddiness.

**Viscosity** - Resistance to flow exhibited by a fluid.

**Volatility** - A measure of how quickly a substance forms a vapor at ordinary temperatures.

**Water Disposal Methods** - Proper disposal methods for contaminated material, recovered liquids or solids, and their containers.

**Water-Reactive** - A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

**Work Area** - A room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.

**Workplace** - An establishment at one geographical location containing one or more work areas.

**Zinc Fume Fever** - A condition brought on by inhalation of zinc oxide fume characterized by flulike symptoms with a metallic taste in the mouth, coughing, weakness, fatigue, muscular pain, and nausea, followed by fever and chills. The onset of symptoms occurs four to twelve hours after exposure.

## **21. Respiratory Protection Program**

### **Purpose**

The primary objective of this program is to protect employees from inhalation and ingestion of harmful levels of air contaminants.

### **Policy**

Employees shall not be exposed to air contaminants which exceed the limits detailed in OSHA Regulation CFR 1910.1000. When there is a probability of exposure to air contaminants exceeding these limits, proper respiratory protection shall be required.

### **Scope**

This policy applies to all personnel in the performance of their jobs with PIAZZA.

### **Procedures for Selecting Respiratory Protection**

#### **1. Determination of Need for Respiratory Protection**

- a) The foreman of any operation involving the release, or possible release, of airborne contaminants such as dusts, gases, fumes, mists, etc. should contact the Job Superintendent or management for advice on precautions to be taken.
- b) The Job Superintendent shall evaluate the hazard and determine if exposure to contaminants can be eliminated by environmental or engineering controls. Example: Substitution of a less hazardous procedure or material, use of general and local ventilation, enclosing or isolating the operation(s), or employee rotation.
- c) When effective engineering controls have reduced exposures to the lowest possible level and the air quality still exceeds a PEL (Permissible Exposure Limit), the job superintendent will make a decision on the need for respirators based on Material Safety Data Sheets, industrial hygiene monitoring, medical experience, or other pertinent information.



## **2. Operations Requiring Respiratory Protection**

- a) All employees performing jobs which are designated mandatory respirator jobs shall be informed of this requirement. This shall be done through:
  - Specifying the correct respirator in the Job Specifications report or other such written procedures for the Job and/or Project Safety meetings.
  - Postings at the worksite or signs in the area where the job exists.

## **3. Selection and Procurement of Respirators**

- a) Respirators shall be selected according to the hazard(s) to which workers are exposed, keeping in mind the physical and chemical properties of the air contaminant(s) and concentration(s) likely to be encountered.
- b) Prior to donning a respirator, PIAZZA employees are required to be medically evaluated and fit-tested. After successfully passing the medical examination and the fit-test, respirators will be provided by PIAZZA and will be permanently assigned to employees that require their use routinely. Respirators for operations involving short-term use will be temporarily assigned to employees and returned to the facility upon completion of the task, where they will be cleaned and properly stored for future use. Replacement air purifying respirators will be issued when needed.
- c) The respirators utilized by PIAZZA are NIOSH-certified Air Purifying Respirators which remove particulate or gaseous contaminants by passing ambient air through the air-purifying filter, cartridge, or canister. Air purifying respirators must not be used in atmospheres containing less than 19.5% oxygen by volume.
- d) In cases where air purifying respirators are not utilized due to the presence of a hazardous atmosphere, contaminant hazards have not been identified, or employee exposure and protection needed has not been identified or reasonably estimated, the atmosphere shall be considered to be IDLH (Immediately Dangerous to Life and Health). In these circumstances, a full facepiece pressure demand Self Containing Breathing Apparatus (SCBA) or a combination full facepiece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply will be utilized.

NOTE: Respiratory protection can be achieved through good work practices and the use of air purifying half-face or full-face respirators provided that respirator limitations are not exceeded. Use of a Self Containing Breathing Apparatus or a Supplied Air Respirator typically does not apply to construction activities. In cases where the use of one of these respirators is required, the employee(s) who will be required to don the respirator will receive the necessary medical evaluation, fit-testing, and associated training prior to wearing the SCBA or SAR.

## **4. Respirator Approval**

- a) Only National Institute for Occupational Safety and Health (NIOSH)- and Mine Safety and Health Administration (MSHA)-approved (tested and certified) respirators should be used. Respirators shall be used only for the substances for which they are designed.

## **5. Medical Approval**

- a) Employees will not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work while wearing a respirator. Persons who will be assigned to the mandatory use of respirators will have their medical history reviewed by a Medical Department before starting employment. The medical status of those required to use respirators should be viewed periodically thereafter. Based on the overall health of the individual, a doctor shall determine if the employee is to be restricted from wearing respiratory protective equipment. If a restriction is applied, supervision is notified and this fact is indicated on the employee's medical records.
- b) Employees required to wear any respirator will be required to fill out a medical questionnaire (see Appendix C to this Chapter) that will be sent to the physician after it is completed. The physician will review the questionnaire and determine whether a medical evaluation is needed. The employee will then be given an opportunity to discuss the questionnaire and the examination results with the physician.
- c) Employees who voluntarily wear filtering facepieces (dust masks) and are not exposed to a PEL (Permissible Exposure Limit) will not be required to be medically evaluated. Employees who voluntarily wear any other type of respirator will be required to be medically evaluated.

## **6. Training**

- a) Employees required to use a respirator shall be trained at least annually by the respiratory protection program administrator ([NAME]) for their respective office. Additional training will be provided when needed. This training must be documented and shall include:
  - Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effects of the respirator. (A copy of how to perform a positive and negative pressure check will be given to the employee.)
  - What the limitations and capabilities of the respirator and the air purifying filters, cartridges, and canisters are.
  - How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.

- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator. (A copy of respirator cleaning procedures will be given to the employee.)
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- Procedures for proper use of respirators in routine and reasonably foreseeable emergency situations.
- Procedures to ensure adequate air quality.
- Instructions to employees who voluntarily use filtering facepieces (dust masks) when not required to. (A copy of information pertaining to respirator use when not required will be given to the employee.) (See Appendix D to this Chapter.)
- Instructions from respirator manufacturer.

## **Fit Testing**

### **1. Qualitative Fit Test**

- a) Prior to initial use of any tight-fitting respirator, each employee will be fit tested with the same make, model, style, and size of the respirator they will be using. Fit testing will be done annually or when changes in the employee's physical condition could affect respirator use. This is done to ensure that each employee is able to obtain a good facepiece-to-face seal. The fit test will be performed by the respiratory program administrator following protocol established under Appendix A. to 1910.134: Fit Testing Procedures. (See Appendix A to this Chapter.)
- b) Documentation of fit tests performed will be maintained at Piazza, Inc.'s main office. The records will contain information in accordance with the record-keeping requirements set forth in 1910.134(m)

## **2. Positive and Negative Pressure Tests**

- a) Respirator users shall be trained in how to perform positive and negative pressure tests and should use them each time the respirator is donned as a means of quickly checking respirator fit. (See Appendix B-1 to this Chapter.)
- b) Positive Pressure Test: This test is performed by closing off the respirator exhalation valve using the palm of the hand and exhaling gently into the facepiece. The fit is considered satisfactory if slight positive pressure can be built up inside the facepiece without any evidence of outward leakage.
- c) Negative Pressure Test: In this test, the user closes off the air inlet of the respirator by covering it so that it cannot pass air; inhales gently so that the facepiece collapses slightly; and holds breath for about 10 seconds. If the facepiece remains slightly collapsed and no inward leakage is detected, a suitable fit exists.

## **3. Inspecting, Cleaning, Storing, and Maintaining Respirators**

- a) Employees must inspect their respirator each day it is used for proper function, including checking inhalation and exhalation valves, facepiece, and wear and condition of head straps. Rubber elastomer parts shall be inspected for pliability and signs of deterioration.
- b) Filter, cartridge, or canister life must not be exceeded. Gas and vapor cartridges must be equipped with an ESLI (end of service life indicator) certified by NIOSH. When this type of cartridge is not available, they must be replaced before the end of their service life. This will be determined by the superintendent on site.
- c) Respirators permanently assigned must be thoroughly cleaned with a sanitizing solution by the employee after each use. Respirators issued for temporary use will be cleaned when they are returned. Respirator cleaning procedures will follow the manufacturer's guidelines or the following protocol as per Appendix B-2 to 1910.134 will be utilized. (See Appendix B-2 to this Chapter.)
- d) Clean respirators should be stored either in a clean bag, a big coffee can, or in a clean storage cabinet. Respirators must be stored properly to prevent deformation of the facepiece and exhalation valve. To prevent damage, respirators should not be stored in toolboxes unless they are in carrying cases or cartons. Also protect respirators from dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals.
- e) A selection of replacement parts, cartridges, and filters is available from your supervisor. Any repairs or replacement of parts must be done in accordance with the manufacturer's specifications and done by a trained person using NIOSH-approved parts designed for the respirator.

- f) When repairs are made on respirators, NIOSH-approved repair parts must be used which are designed for that specific respirator. Interchanging between different models will void the respirator's certification and may cause dangerous air leaks or equipment failure.

#### **4. Program Evaluation**

- a) Random inspections should be conducted regularly by the supervisor to ensure that respirators are properly selected, used, cleaned and maintained. Deficiencies will be noted and corrective measures taken. Failure to wear a respirator when required will result in disciplinary action as per Piazza, Inc.'s Disciplinary Program.

# **Appendix A**

## *Fit Testing Procedures*

**Fit Testing Procedures  
(Mandatory)  
Appendix A to § 1910.134**

Part I. OSHA-Accepted Fit Test Protocols

A. Fit Testing Procedures—General Requirements

The employer shall conduct fit testing using the following procedures. The requirements in this appendix apply to all OSHA-accepted fit test methods, both QLFT and QNFT.

1. The test subject shall be allowed to pick the most acceptable respirator from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.
2. Prior to the selection process, the test subject shall be shown how to put on a respirator, how it should be positioned on the face, how to set strap tension and how to determine an acceptable fit. A mirror shall be available to assist the subject in evaluating the fit and positioning of the respirator. This instruction may not constitute the subject's formal training on respirator use, because it is only a review.
3. The test subject shall be informed that he/she is being asked to select the respirator that provides the most acceptable fit. Each respirator represents a different size and shape, and if fitted and used properly, will provide adequate protection.
4. The test subject shall be instructed to hold each chosen facepiece up to the face and eliminate those that obviously do not give an acceptable fit.
5. The more acceptable facepieces are noted in case the one selected proves unacceptable; the most comfortable mask is donned and worn at least five minutes to assess comfort. Assistance in assessing comfort can be given by discussing the points in the following item A.6. If the test subject is not familiar with using a particular respirator, the test subject shall be directed to don the mask several times and to adjust the straps each time to become adept at setting proper tension on the straps.
6. Assessment of comfort shall include a review of the following points with the test subject and allowing the test subject adequate time to determine the comfort of the respirator:
  - (a) Position of the mask on the nose
  - (b) Room for eye protection
  - (c) Room to talk
  - (d) Position of mask on face and cheeks
7. The following criteria shall be used to help determine the adequacy of the respirator fit:
  - (a) Chin properly placed;
  - (b) Adequate strap tension, not overly tightened;
  - (c) Fit across nose bridge;

- (d) Respirator of proper size to span distance from nose to chin;
- (e) Tendency of respirator to slip;
- (f) Self-observation in mirror to evaluate fit and respirator position.

8. The test subject shall conduct a user seal check, either the negative and positive pressure seal checks described in Appendix B-1 of this section or those recommended by the respirator manufacturer which provide equivalent protection to the procedures in Appendix B-1. Before conducting the negative and positive pressure checks, the subject shall be told to seat the mask on the face by moving the head from side-to-side and up and down slowly while taking in a few slow deep breaths. Another facepiece shall be selected and re-tested if the test subject fails the user seal check tests.

9. The test shall not be conducted if there is any hair growth between the skin and the facepiece sealing surface, such as stubble beard growth, beard, mustache or sideburns which cross the respirator sealing surface. Any type of apparel which interferes with a satisfactory fit shall be altered or removed.

10. If a test subject exhibits difficulty in breathing during the tests, she or he shall be referred to a physician or other licensed health care professional, as appropriate, to determine whether the test subject can wear a respirator while performing her or his duties.

11. If the employee finds the fit of the respirator unacceptable, the test subject shall be given the opportunity to select a different respirator and to be re-tested.

12. Exercise regimen. Prior to the commencement of the fit test, the test subject shall be given a description of the fit test and the test subject's responsibilities during the test procedure. The description of the process shall include a description of the test exercises that the subject will be performing. The respirator to be tested shall be worn for at least 5 minutes before the start of the fit test.

13. The fit test shall be performed while the test subject is wearing any applicable safety equipment that may be worn during actual respirator use which could interfere with respirator fit.

14. Test Exercises.

(a) The following test exercises are to be performed for all fit testing methods prescribed in this appendix, except for the CNP method. A separate fit testing exercise regimen is contained in the CNP protocol. The test subject shall perform exercises, in the test environment, in the following manner:

(1) Normal breathing. In a normal standing position, without talking, the subject shall breathe normally.

(2) Deep breathing. In a normal standing position, the subject shall breathe slowly and deeply, taking caution so as not to hyperventilate.

(3) Turning head side to side. Standing in place, the subject shall slowly turn his/her head from side to side between the extreme positions on each side. The head shall be held at each extreme momentarily so the subject can inhale at each side.



(4) Moving head up and down. Standing in place, the subject shall slowly move his/her head up and down. The subject shall be instructed to inhale in the up position (i.e., when looking toward the ceiling).

(5) Talking. The subject shall talk out loud slowly and loud enough so as to be heard clearly by the test conductor. The subject can read from a prepared text such as the Rainbow Passage, count backward from 100, or recite a memorized poem or song.

#### Rainbow Passage

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and its two ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds it. When a man looks for something beyond reach, his friends say he is looking for the pot of gold at the end of the rainbow.

(6) Grimace. The test subject shall grimace by smiling or frowning. (This applies only to QNFT testing; it is not performed for QLFT)

(7) Bending over. The test subject shall bend at the waist as if he/she were to touch his/her toes. Jogging in place shall be substituted for this exercise in those test environments such as shroud type QNFT or QLFT units that do not permit bending over at the waist.

(8) Normal breathing. Same as exercise (1).

(b) Each test exercise shall be performed for one minute except for the grimace exercise which shall be performed for 15 seconds. The test subject shall be questioned by the test conductor regarding the comfort of the respirator upon completion of the protocol. If it has become unacceptable, another model of respirator shall be tried. The respirator shall not be adjusted once the fit test exercises begin. Any adjustment voids the test, and the fit test must be repeated.

### **Bitrex™ (Denatonium Benzoate) Solution Aerosol Qualitative Fit Test Protocol**

The Bitrex™ (Denatonium benzoate) solution aerosol QLFT protocol uses the published saccharin test protocol because that protocol is widely accepted. Bitrex is routinely used as a taste aversion agent in household liquids which children should not be drinking and is endorsed by the American Medical Association, the National Safety Council, and the American Association of Poison Control Centers. The entire screening and testing procedure shall be explained to the test subject prior to the conduct of the screening test.

(a) Taste Threshold Screening. The Bitrex taste threshold screening, performed without wearing a respirator, is intended to determine whether the individual being tested can detect the taste of Bitrex.

(1) During threshold screening as well as during fit testing, subjects shall wear an enclosure about the head and shoulders that is approximately 12 inches (30.5 cm) in diameter by 14 inches (35.6 cm) tall. The front portion of the enclosure shall be clear from the respirator and allow free movement of the head when a respirator is worn. An enclosure substantially similar to the 3M hood assembly, parts #14 and #15 combined, is adequate.

(2) The test enclosure shall have a  $\frac{3}{4}$  inch (1.9 cm) hole in front of the test subject's nose and mouth area to accommodate the nebulizer nozzle.

(3) The test subject shall don the test enclosure. Throughout the threshold screening test, the test subject shall breathe through his or her slightly open mouth with tongue extended. The subject is instructed to report when he/she detects a bitter taste.

(4) Using a DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent, the test conductor shall spray the Threshold Check Solution into the enclosure. This Nebulizer shall be clearly marked to distinguish it from the fit test solution nebulizer.

(5) The Threshold Check Solution is prepared by adding 13.5 milligrams of Bitrex to 100 ml of 5% salt (NaCl) solution in distilled water.

(6) To produce the aerosol, the nebulizer bulb is firmly squeezed so that the bulb collapses completely, and is then released and allowed to fully expand.

(7) An initial ten squeezes are repeated rapidly and then the test subject is asked whether the Bitrex can be tasted. If the test subject reports tasting the bitter taste during the ten squeezes, the screening test is completed. The taste threshold is noted as ten regardless of the number of squeezes actually completed.

(8) If the first response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the second ten squeezes, the screening test is completed. The taste threshold is noted as twenty regardless of the number of squeezes actually completed.

(9) If the second response is negative, ten more squeezes are repeated rapidly and the test subject is again asked whether the Bitrex is tasted. If the test subject reports tasting the bitter taste during the third set of ten squeezes, the screening test is completed. The taste threshold is noted as thirty regardless of the number of squeezes actually completed.

(10) The test conductor will take note of the number of squeezes required to solicit a taste response.

(11) If the Bitrex is not tasted after 30 squeezes (step 10), the test subject is unable to taste Bitrex and may not perform the Bitrex fit test.

(12) If a taste response is elicited, the test subject shall be asked to take note of the taste for reference in the fit test.

(13) Correct use of the nebulizer means that approximately 1 ml of liquid is used at a time in the nebulizer body.

(14) The nebulizer shall be thoroughly rinsed in water, shaken to dry, and refilled at least each morning and afternoon or at least every four hours.

(b) Bitrex Solution Aerosol Fit Test Procedure.

(1) The test subject may not eat, drink (except plain water), smoke, or chew gum for 15 minutes before the test.

(2) The fit test uses the same enclosure as that described in 4. (a) above.

- (3) The test subject shall don the enclosure while wearing the respirator selected according to section I. A. of this appendix. The respirator shall be properly adjusted and equipped with any type particulate filter(s).
- (4) A second DeVilbiss Model 40 Inhalation Medication Nebulizer or equivalent is used to spray the fit test solution into the enclosure. This nebulizer shall be clearly marked to distinguish it from the screening test solution nebulizer.
- (5) The fit test solution is prepared by adding 337.5 mg of Bitrex to 200 ml of a 5% salt (NaCl) solution in warm water.
- (6) As before, the test subject shall breathe through his or her slightly open mouth with tongue extended, and be instructed to report if he/she tastes the bitter taste of Bitrex.
- (7) The nebulizer is inserted into the hole in the front of the enclosure and an initial concentration of the fit test solution is sprayed into the enclosure using the same number of squeezes (either 10, 20 or 30 squeezes) based on the number of squeezes required to elicit a taste response as noted during the screening test.
- (8) After generating the aerosol, the test subject shall be instructed to perform the exercises in section I. A. 14. of this appendix.
- (9) Every 30 seconds the aerosol concentration shall be replenished using one half the number of squeezes used initially (e.g., 5, 10 or 15).
- (10) The test subject shall indicate to the test conductor if at any time during the fit test the taste of Bitrex is detected. If the test subject does not report tasting the Bitrex, the test is passed.
- (11) If the taste of Bitrex is detected, the fit is deemed unsatisfactory and the test is failed. A different respirator shall be tried and the entire test procedure is repeated (taste threshold screening and fit testing).

# **Appendix B-1**

*User Seal Check Procedures*

**User Seal Check Procedures  
(Mandatory)  
Appendix B-1 to § 1910.134**

The individual who uses a tight-fitting respirator is to perform a user seal check to ensure that an adequate seal is achieved each time the respirator is put on. Either the positive and negative pressure checks listed in this appendix, or the respirator manufacturer's recommended user seal check method shall be used. User seal checks are not substitutes for qualitative or quantitative fit tests.

**I. Facepiece Positive and/or Negative Pressure Checks**

A. Positive pressure check. Close off the exhalation valve and exhale gently into the facepiece. The face fit is considered satisfactory if a slight positive pressure can be built up inside the facepiece without any evidence of outward leakage of air at the seal. For most respirators this method of leak testing requires the wearer to first remove the exhalation valve cover before closing off the exhalation valve and then carefully replacing it after the test.

B. Negative pressure check. Close off the inlet opening of the canister or cartridge(s) by covering with the palm of the hand(s) or by replacing the filter seal(s), inhale gently so that the facepiece collapses slightly, and hold the breath for ten seconds. The design of the inlet opening of some cartridges cannot be effectively covered with the palm of the hand. The test can be performed by covering the inlet opening of the cartridge with a thin latex or nitrile glove. If the facepiece remains in its slightly collapsed condition and no inward leakage of air is detected, the tightness of the respirator is considered satisfactory.

**II. Manufacturer's Recommended User Seal Check Procedures**

The respirator manufacturer's recommended procedures for performing a user seal check may be used instead of the positive and/or negative pressure check procedures provided that the employer demonstrates that the manufacturer's procedures are equally effective.

# Appendix B-2

## *Respirator Cleaning Procedures*

**Respirator Cleaning Procedures**Appendix B-2 to § 1910.134  
(Mandatory)

These procedures are provided for employer use when cleaning respirators. They are general in nature, and the employer as an alternative may use the cleaning recommendations provided by the manufacturer of the respirators used by their employees, provided such procedures are as effective as those listed here in Appendix B-2. Equivalent effectiveness simply means that the procedures used must accomplish the objectives set forth in Appendix B-2, i.e., must ensure that the respirator is properly cleaned and disinfected in a manner that prevents damage to the respirator and does not cause harm to the user.

**I. Procedures for Cleaning Respirators**

A. Remove filters, cartridges, or canisters. Disassemble facepieces by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.

B. Wash components in warm (43° C [110° F] maximum) water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.

C. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain.

D. When the cleaner used does not contain a disinfecting agent, respirator components should be immersed for two minutes in one of the following:

1. Hypochlorite solution (50 ppm of chlorine) made by adding approximately one tablespoon of laundry bleach to one gallon of water at 43° C (110° F); or,
2. Aqueous solution of iodine (50 ppm iodine) made by adding approximately 0.8 milliliters of tincture of iodine (6–8 grams ammonium and/or potassium iodide/100 cc of 45% alcohol) to one liter of water at 43° C (110° F); or,
3. Other commercially available cleansers of equivalent disinfectant quality when used as directed, if their use is recommended or approved by the respirator manufacturer.

E. Rinse components thoroughly in clean, warm (43° C [110° F] maximum), preferably running water. Drain. The importance of thorough rinsing cannot be overemphasized. Detergents or disinfectants that dry on facepieces may result in dermatitis. In addition, some disinfectants may cause deterioration of rubber or corrosion of metal parts if not completely removed.

F. Components should be hand-dried with a clean lint-free cloth or air-dried.

G. Reassemble facepiece, replacing filters, cartridges, and canisters where necessary.

H. Test the respirator to ensure that all components work properly.

# **Appendix C**

*OSHA Respirator Medical Evaluation Questionnaire*



# OSHA Respirator Medical Evaluation Questionnaire

(Mandatory)

## Appendix C to § 1910.134

**To the employer:** Answers to questions in Section 1, and to question 9 in Section 2 of Part A, do not require a medical examination.

**To the employee:** Can you read (circle one): Yes/No

Your employer must allow you to answer this questionnaire during normal working hours, or at a time and place that is convenient to you. To maintain your confidentiality, your employer or supervisor must not look at or review your answers, and your employer must tell you how to deliver or send this questionnaire to the health care professional who will review it.

**Part A. Section 1. (Mandatory) The following information must be provided by every employee who has been selected to use any type of respirator (please print).**

Company \_\_\_\_\_

1. Your name: \_\_\_\_\_
2. Today's date: \_\_\_\_\_
3. Your age (to nearest year): \_\_\_\_
4. Sex (circle one): Male/Female
5. Your height: \_\_\_\_ ft. \_\_\_\_ in.
6. Your weight: \_\_\_\_ lbs.
7. Your job title: \_\_\_\_\_
8. A phone number where you can be reached by the health care professional who reviews this questionnaire (include the Area Code): \_\_\_\_\_
9. The best time to phone you at this number: \_\_\_\_\_
10. Has your employer told you how to contact the health care professional who will review this questionnaire (circle one): \_\_\_\_\_ Yes/No
11. Check the type of respirator you will use (you can check more than one category):
  - a. \_\_\_ N, R, or P disposable respirator (filter-mask, non-cartridge type only).
  - b. \_\_\_ Other type (for example, half- or full-facepiece type, powered-air purifying, supplied-air, self-contained breathing apparatus).
12. Have you worn a respirator (circle one): \_\_\_\_\_ Yes/No  
If "yes," what type(s): \_\_\_\_\_

**Part A. Section 2. (Mandatory) Questions 1 through 9 below must be answered by every employee who has been selected to use any type of respirator (please circle "yes" or "no").**

1. Do you currently smoke tobacco, or have you smoked tobacco in the last month: \_\_\_\_\_ Yes/No
2. Have you ever had any of the following conditions?
  - a. Seizures (fits): \_\_\_\_\_ Yes/No
  - b. Diabetes (sugar disease): \_\_\_\_\_ Yes/No
  - c. Allergic reactions that interfere with your breathing: \_\_\_\_\_ Yes/No
  - d. Claustrophobia (fear of closed-in places): \_\_\_\_\_ Yes/No
  - e. Trouble smelling odors: \_\_\_\_\_ Yes/No
3. Have you ever had any of the following pulmonary or lung problems?
  - a. Asbestosis: \_\_\_\_\_ Yes/No
  - b. Asthma: \_\_\_\_\_ Yes/No
  - c. Chronic bronchitis: \_\_\_\_\_ Yes/No
  - d. Emphysema: \_\_\_\_\_ Yes/No
  - e. Pneumonia: \_\_\_\_\_ Yes/No
  - f. Tuberculosis: \_\_\_\_\_ Yes/No
  - g. Silicosis: \_\_\_\_\_ Yes/No
  - h. Pneumothorax (collapsed lung): \_\_\_\_\_ Yes/No
  - i. Lung cancer: \_\_\_\_\_ Yes/No

- j. Broken ribs: Yes/No
- k. Any chest injuries or surgeries: Yes/No
- l. Any other lung problem that you've been told about: Yes/No
4. Do you currently have any of the following symptoms of pulmonary or lung illness?
- a. Shortness of breath: Yes/No
- b. Shortness of breath when walking fast on level ground or walking up a slight hill or incline: Yes/No
- c. Shortness of breath when walking with other people at an ordinary pace on level ground: Yes/No
- d. Have to stop for breath when walking at your own pace on level ground: Yes/No
- e. Shortness of breath when washing or dressing yourself: Yes/No
- f. Shortness of breath that interferes with your job: Yes/No
- g. Coughing that produces phlegm (thick sputum): Yes/No
- h. Coughing that wakes you early in the morning: Yes/No
- i. Coughing that occurs mostly when you are lying down: Yes/No
- j. Coughing up blood in the last month: Yes/No
- k. Wheezing: Yes/No
- l. Wheezing that interferes with your job: Yes/No
- m. Chest pain when you breathe deeply: Yes/No
- n. Any other symptoms that you think may be related to lung problems: Yes/No
5. Have you ever had any of the following cardiovascular or heart problems?
- a. Heart attack: Yes/No
- b. Stroke: Yes/No
- c. Angina: Yes/No
- d. Heart failure: Yes/No
- e. Swelling in your legs or feet (not caused by walking): Yes/No
- f. Heart arrhythmia (heart beating irregularly): Yes/No
- g. High blood pressure: Yes/No
- h. Any other heart problem that you've been told about: Yes/No
6. Have you ever had any of the following cardiovascular or heart symptoms?
- a. Frequent pain or tightness in your chest: Yes/No
- b. Pain or tightness in your chest during physical activity: Yes/No
- c. Pain or tightness in your chest that interferes with your job: Yes/No
- d. In the past two years, have you noticed your heart skipping or missing a beat: Yes/No
- e. Heartburn or indigestion that is not related to eating: Yes/No
- f. Any other symptoms that you think may be related to heart or circulation problems: Yes/No
7. Do you currently take medication for any of the following problems?
- a. Breathing or lung problems: Yes/No
- b. Heart trouble: Yes/No
- c. Blood pressure: Yes/No
- d. Seizures (fits): Yes/No
8. If you've used a respirator, have you ever had any of the following problems? (If you've never used a respirator, check the following space and go to question 9:) \_\_\_\_
- a. Eye irritation: Yes/No
- b. Skin allergies or rashes: Yes/No
- c. Anxiety: Yes/No
- d. General weakness or fatigue: Yes/No
- e. Any other problem that interferes with your use of a respirator: Yes/No
9. Would you like to talk to the health care professional who will review this questionnaire about your answers to this questionnaire: Yes/No

**Questions 10 to 15 below must be answered by every employee who has been selected to use either a full-facepiece respirator or a self-contained breathing apparatus (SCBA). For**

**employees who have been selected to use other types of respirators, answering these questions is voluntary.**

10. Have you ever lost vision in either eye (temporarily or permanently): Yes/No
11. Do you currently have any of the following vision problems?
- a. Wear contact lenses: Yes/No
  - b. Wear glasses: Yes/No
  - c. Color blind: Yes/No
  - d. Any other eye or vision problem: Yes/No
12. Have you ever had an injury to your ears, including a broken ear drum: Yes/No
13. Do you currently have any of the following hearing problems?
- a. Difficulty hearing: Yes/No
  - b. Wear a hearing aid: Yes/No
  - c. Any other hearing or ear problem: Yes/No
14. Have you ever had a back injury: Yes/No
15. Do you currently have any of the following musculoskeletal problems?
- a. Weakness in any of your arms, hands, legs, or feet: Yes/No
  - b. Back pain: Yes/No
  - c. Difficulty fully moving your arms and legs: Yes/No
  - d. Pain or stiffness when you lean forward or backward at the waist: Yes/No
  - e. Difficulty fully moving your head up or down: Yes/No
  - f. Difficulty fully moving your head side to side: Yes/No
  - g. Difficulty bending at your knees: Yes/No
  - h. Difficulty squatting to the ground: Yes/No
  - i. Climbing a flight of stairs or a ladder carrying more than 25 lbs: Yes/No
  - j. Any other muscle or skeletal problem that interferes with using a respirator: Yes/No

**Part B Any of the following questions, and other questions not listed, may be added to the questionnaire at the discretion of the health care professional who will review the questionnaire.**

1. In your present job, are you working at high altitudes (over 5,000 feet) or in a place that has lower than normal amounts of oxygen: Yes/No
- If "yes," do you have feelings of dizziness, shortness of breath, pounding in your chest, or other symptoms when you're working under these conditions: Yes/No
2. At work or at home, have you ever been exposed to hazardous solvents, hazardous airborne chemicals (e.g., gases, fumes, or dust), or have you come into skin contact with hazardous chemicals: Yes/No
- If "yes," name the chemicals if you know them: \_\_\_\_\_
3. Have you ever worked with any of the materials, or under any of the conditions, listed below:
- a. Asbestos: Yes/No
  - b. Silica (e.g., in sandblasting): Yes/No
  - c. Tungsten/cobalt (e.g., grinding or welding this material): Yes/No
  - d. Beryllium: Yes/No
  - e. Aluminum: Yes/No
  - f. Coal (for example, mining): Yes/No
  - g. Iron: Yes/No
  - h. Tin: Yes/No
  - i. Dusty environments: Yes/No
  - j. Any other hazardous exposures: Yes/No
- If "yes," describe these exposures: \_\_\_\_\_
4. List any second jobs or side businesses you have: \_\_\_\_\_
5. List your previous occupations: \_\_\_\_\_
6. List your current and previous hobbies: \_\_\_\_\_

7. Have you been in the military services? Yes/No  
 If "yes," were you exposed to biological or chemical agents (either in training or combat): Yes/No
8. Have you ever worked on a HAZMAT team? Yes/No
9. Other than medications for breathing and lung problems, heart trouble, blood pressure, and seizures mentioned earlier in this questionnaire, are you taking any other medications for any reason (including over-the-counter medications): Yes/No  
 If "yes," name the medications if you know them: \_\_\_\_\_
10. Will you be using any of the following items with your respirator(s)? Yes/No
- a. HEPA Filters: Yes/No  
 b. Canisters (for example, gas masks): Yes/No  
 c. Cartridges: Yes/No
11. How often are you expected to use the respirator(s) (circle "yes" or "no" for all answers that apply to you)?:
- a. Escape only (no rescue): Yes/No  
 b. Emergency rescue only: Yes/No  
 c. Less than 5 hours per week: Yes/No  
 d. Less than 2 hours per day: Yes/No  
 e. 2 to 4 hours per day: Yes/No  
 f. Over 4 hours per day: Yes/No
12. During the period you are using the respirator(s), is your work effort:
- a. Light (less than 200 kcal per hour): Yes/No  
 If "yes," how long does this period last during the average shift: \_\_\_ hrs. \_\_\_ mins.  
 Examples of a light work effort are sitting while writing, typing, drafting, or performing light assembly work; or standing while operating a drill press (1–3 lbs.) or controlling machines.
- b. Moderate (200 to 350 kcal per hour): Yes/No  
 If "yes," how long does this period last during the average shift: \_\_\_ hrs. \_\_\_ mins.  
 Examples of moderate work effort are sitting while nailing or filing; driving a truck or bus in urban traffic; standing while drilling, nailing, performing assembly work, or transferring a moderate load (about 35 lbs.) at trunk level; walking on a level surface about 2 mph or down a 5-degree grade about 3 mph; or pushing a wheelbarrow with a heavy load (about 100 lbs.) on a level surface.
- c. Heavy (above 350 kcal per hour): Yes/No  
 If "yes," how long does this period last during the average shift: \_\_\_ hrs. \_\_\_ mins.  
 Examples of heavy work are lifting a heavy load (about 50 lbs.) from the floor to your waist or shoulder; working on a loading dock; shoveling; standing while bricklaying or chipping castings; walking up an 8-degree grade about 2 mph; climbing stairs with a heavy load (about 50 lbs.).
13. Will you be wearing protective clothing and/or equipment (other than the respirator) when you're using your respirator: Yes/No  
 If "yes," describe this protective clothing and/or equipment: \_\_\_\_\_
- 
14. Will you be working under hot conditions (temperature exceeding 77° F): Yes/No
15. Will you be working under humid conditions: Yes/No
16. Describe the work you'll be doing while you're using your respirator(s): \_\_\_\_\_
- 
17. Describe any special or hazardous conditions you might encounter when you're using your respirator(s) (for example, confined spaces, life-threatening gases): \_\_\_\_\_
- 
18. Provide the following information, if you know it, for each toxic substance that you'll be exposed to when you're using your respirator(s):
- Name of the first toxic substance: \_\_\_\_\_  
 Estimated maximum exposure level per shift: \_\_\_\_\_  
 Duration of exposure per shift: \_\_\_\_\_  
 Name of the second toxic substance: \_\_\_\_\_  
 Estimated maximum exposure level per shift: \_\_\_\_\_

Duration of exposure per shift: \_\_\_\_\_

Name of the third toxic substance: \_\_\_\_\_

Estimated maximum exposure level per shift: \_\_\_\_\_

Duration of exposure per shift: \_\_\_\_\_

The name of any other toxic substances that you'll be exposed to while using your respirator:

19. Describe any special responsibilities you'll have while using your respirator(s) that may affect the safety and well-being of others (for example, rescue, security): \_\_\_\_\_

\_\_\_\_\_

# **Appendix D**

*Information for Employees Using Respirators  
When Not Required Under the Standard*

## **Information for Employees Using Respirators When Not Required Under the Standard**

### Appendix D to § 1910.134 (Non-Mandatory)

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard. You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

## **22. Confined Space Program**

### **Purpose**

To provide maximum protection for employees assigned to enter and work in confined spaces.

### **Definition**

A confined space is any space having the following characteristics:

- Is large enough and so configured that an individual can bodily enter and perform assigned work; and
- Has limited or restricted means of entry or exit; and
- Is not designed for continuous employee occupancy.

#### **Confined spaces may include but are not limited to:**

Boilers	Manholes	Tank Cars
Pits	Vaults	Wells
Tunnels	Sewers	Cisterns
Furnaces	Diked Areas	Digesters
Silos	Septic Tanks	Pumping Stations
Storage Bins	Hoppers	Vessels
Process Vessels		

### **Hazards**

#### **1. Hazards Of Confined Spaces**

- a) Hazardous atmospheres
  - Oxygen deficiency or oxygen enrichment
  - Combustible/flammable/explosive gases and vapors
  - Toxic gases or vapors
  - Combustible dust
- b) Engulfment hazards
- c) Entrapment or configuration hazards
- d) Mechanical hazards
- e) Other hazards
  - Corrosive chemicals
  - Electrical
  - Access with ladders
  - Lighting (poor visibility)
  - Temperature extremes
  - Falling/tripping/insecure footing
  - Falling objects
  - Weather conditions



## **2. How Confined Space Hazards Occur**

- a) Confined space hazards occur as a result of both natural and man-made sources.
- b) Sources of confined space hazards include but are not limited to:
  - Chemical reactions from products stored in vessels.
  - Oxidation/reduction reactions (i.e., rusting of metals)
  - Decomposition of organic matter
  - Cleaning reagents (solvents, acids)
  - Welding, spray painting, grinding, brazing, sandblasting
  - Spaces purged with an inert gas
  - Fire and explosion hazards from organic hydrocarbon based substances
  - Ignition sources from static electricity, hot work operations, electrical equipment
  - Lack of proper training
  - Loose materials stored in tank (grain, sawdust, etc.)
  - Pyrophoric chemicals

## **Identification of Confined Spaces**

### **1. Existing Facilities**

If work is to be performed in an existing facility, the host employer shall have the responsibility of identifying confined spaces within that facility. Prior to beginning work, the Superintendent shall contact the host employer to determine the location of all confined spaces within the work area. If confined spaces are present in the facility, the host employer will inform PIAZZA of any known hazards the host employer has experienced within the confined spaces and of any precautions that have been instituted by the host employer to protect employees in or near the permit space. Upon receipt of information from the host employer, the permit space program will be adapted to address the specific hazards associated with each space.

Where it is necessary for employees of PIAZZA and the host employer to work simultaneously in a space, the host employer will be responsible for the development and implementation of procedures to coordinate entry operations. Employees of PIAZZA will follow the procedures of the host employer in cooperating with their efforts to coordinate entry operations if both parties will have personnel working in the space.

All information pertaining to confined spaces should be provided by the host employer to PIAZZA in writing.

At the conclusion of activities within a confined space, personnel should be prepared to brief the host employer on any hazards encountered or created while working in the confined space.

## **2. New Construction**

Piazza's jobsite superintendent will be responsible for identifying confined spaces. Spaces that fall within the definition of a confined space shall be treated as such and operations will follow the entry procedures outlined below.

### **Entry Procedures**

No person shall enter a confined space without first being instructed as to the nature of the hazards involved, the necessary precautions to be taken, and in the use of protective and emergency equipment required. The following procedures must be followed to provide for the safety of all personnel working within a confined space.

#### **1. Authorization**

All persons assigned to enter a confined space must first obtain instruction from their Superintendent and a Confined Space Entry Permit Form. The permit is to be entirely completed and reviewed and signed by the Superintendent to authorize entry before any work in a confined space begins. The duration of the permit shall not exceed the time required to complete the task. Should the job last longer than one shift, a new permit must be issued at the beginning of each shift. The permit's duration can be stated in terms of a specific task to be performed; for example, the removal and installation of a relief valve. The permit must be posted outside the confined space to inform others that an employee is working inside. All permits must be filed in the jobsite office upon their expiration. Permits should be maintained for a period of one year to allow for an annual review of this Confined Space Entry Program.

#### **2. Atmospheric Testing**

The atmosphere in the confined space must be tested prior to entry and continuously monitored while the confined space is occupied. Only personnel trained in the use of air-monitoring equipment and its limitations will be permitted to perform pre-entry testing. Air-monitoring equipment must be calibrated prior to each use unless otherwise specified by its manufacturer. Before entry into the confined space, the atmosphere must test within the acceptable ranges as outlined below. It is important to remember that due to the intrinsic limitations of air monitoring devices, testing must be performed in the order listed below.

**NOTE:** Confined space entrants or their authorized representative, shall be provided an opportunity to observe calibration, pre-entry or periodic testing results.

Order	Substance	Acceptable Level
1.	Oxygen	19.5% - 23.5%
2.	Explosive gas or vapor	<10% LFL
3.	Explosive dust	<LFL (5 ft. visibility)
4.	Carbon monoxide (CO)	50 ppm
5.	Hydrogen sulfide	10 ppm

**1% = 10,000ppm (Parts Per Million)**

All readings should be recorded on the entry permit. If any values fall outside the acceptable range, appropriate corrective actions should be taken. Where additional substances may exist, the appropriate tubes and testing equipment should be used to assure airborne concentrations are within the acceptable range. This range, referred to as the PEL or TWA, can usually be found on the SDS for the material generating the airborne substance.

Where testing reveals an unsafe atmosphere, appropriate equipment must be used to purge and ventilate the space. If readings cannot be brought into acceptable levels then the confined space entry supervisor shall notify the main office as to the site conditions. Confined spaces in which the air quality is unsafe, despite purging and ventilation efforts, may require the use of a self-contained breathing apparatus (SCBA) and other specialized equipment. PIAZZA employees are prohibited from using such equipment unless they have received the necessary training and are authorized to use it by the main office.

In the event the audible alarm or flashing lights on the monitor are activated while working in a confined space, the entrant must exit the confined space immediately.

**NOTE:** If work is performed in a confined space in which a flammable atmosphere exists, employees must use spark-proof hand tools and explosion-proof equipment. PIAZZA employees are only permitted to work in such conditions if the entry supervisor has utilized all means to get the air quality in the confined space within acceptable levels and has received clearance with the main office.

### **3. Completion of Entry Permit**

Entry permits must be completed prior to entering a confined space. The confined space entry permit provided with Piazza confined space program must be completed in its entirety and must be signed by the entry supervisor before any PIAZZA employee is permitted to enter the space. The confined space entrant shall be given the opportunity to review the permit prior to their entry and may request that additional monitoring be performed if they feel the evaluation of the space may not be accurate. When possible, observations necessary to complete the entry permit should be made from outside the confined space. In circumstances where this is not possible, the main office shall be notified as to the site conditions.

The following are procedures that must be completed and logged onto the permit prior to confined space entry:

- a) Before working in the confined space, flange off all incoming and outgoing pipes and lockout all valves and electrical equipment. Lockout and tag all valves in accordance with the lockout-tagout procedure.
- b) All mechanical equipment must also be tagged out and/or blocked to prevent accidental startup of equipment.
- c) Once an entrance cover is removed, the opening must be promptly guarded by a railing, temporary cover, temporary fences, or other temporary barriers to prevent individuals from falling into a space and to protect the entrant from falling materials.
- d) A means of communication between the entrant and the attendant must be established. Communication may be by voice, radio, visual, or rope.
- e) Appropriate personal protective equipment must be selected to protect the entrant from any hazards inside the space.
- f) Appropriate rescue equipment must be provided for use in emergency situations.
- g) Names and numbers of emergency response services must be provided.
- h) An adequate lighting source must be provided which is appropriate for conditions inside the space.

**NOTE:** Canceled entry permits shall be retained for at least one year to facilitate the review of the confined space permit program. Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the confined space program and entry permit can be made.

#### **4. Duties of Authorized Entrants**

- a) Review entry permits to assure calibrations, monitoring results and engineering controls implemented are acceptable and request a re-evaluation if needed.
- b) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of exposure.
- c) Properly use the equipment provided. (Harness, air monitors, ventilation, communication, etc.)
- d) Communicate with the attendant as necessary to enable the attendant to monitor the entrant's status and alert entrant of the need to evacuate.
- e) Alert the attendant of any warning sign or symptom of exposure to a dangerous situation or prohibited condition.
- f) Exit from the permit space as quickly as possible if the attendant or entry supervisor gives the order; if a warning sign or symptom of exposure to a dangerous situation or prohibited condition exists; or if an evacuation alarm is activated.

#### **5. Duties of Attendants**

- a) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of exposure.
- b) Be aware of possible behavioral effects of hazard exposure in authorized entrants.
- c) Maintain an accurate account of all authorized entrants in the permit space.
- d) Remain outside the permit space during entry operations until relieved by another attendant.

- e) Communicate with authorized entrant to monitor their status and to alert the entrant of need to evacuate.
- f) Order an evacuation of the space if:
  - A prohibited condition is detected
  - A behavioral effect or hazard exposure is detected in the entrant
  - A situation outside the space could endanger the entrant
  - Attendant duties cannot be effectively and safely performed
- g) Summon rescue and other emergency services if entrant may need assistance to escape from the permit space hazards.
- h) Prevent unauthorized persons from approaching or entering a permit space while entry is underway.
- i) Perform no other duties that may interfere with primary duty of protecting the authorized entrant.
- j) Perform non-entry rescues as per Piazza, Inc.'s confined space program. (i.e. Using retrieval systems)

## **6. Duties of Entry Supervisor**

- a) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms and consequences of exposure.
- b) Verify that the appropriate entries have been made on the permit prior to endorsing the permit and allowing entry to begin.
- c) Terminate entry and cancel the permit when the entry operations covered by the permit are completed or a condition that is not allowed under the entry permit arises in or near the permit space.
- d) Verify that rescue services are available and that the means for summoning them are operable.
- e) Remove unauthorized individuals who enter or attempt to enter the permit space during entry operations.
- f) Determine if entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

## **7. Emergency Rescue Procedures**

Under no circumstances do we expect personnel to enter a permit space where hazards have not been eliminated or effectively controlled. Additionally, we understand that unexpected situations might arise that prevent entrants from self-rescue. In response, the following rescue and emergency action plan has been developed and will be strictly enforced. Non-entry rescue shall be the first and primary option for emergency rescue.

***Vertical Confined Spaces*** – When entering a vertical confined space, a retrieval system will be utilized to rescue employees. The system will be operated by the attendant responsible for the confined space and the entry supervisor will confirm that the necessary rescue equipment is in place and that employees are trained in their use. A tripod with a winch will be situated at the permit opening. The authorized entrant shall wear a full body harness with the winch snap hook securely fastened to the D-ring located on the entrant's back between the shoulders. The use of the retrieval system will be the primary means of rescue however, off-site rescue entry services will be in place as a safety precaution. The entry supervisor is responsible for notifying third party rescue services to discuss the

permit required work that needs to be performed and to conduct a site walk-through with the rescue service to assure they are capable of performing such a rescue in a timely manner.

***Horizontal Confined Space*** – During horizontal confined space entry, PIAZZA will rely solely on off-site rescue entry services. The entry supervisor is responsible for notifying third party rescue services to discuss the permit required work that needs to be performed and to conduct a site walk-through with the rescue service to assure they are capable of performing such a rescue in a timely manner.

**NOTE:** Each member of the rescue service team shall practice making a permit required space rescue at least every 12 months. Each member of the rescue service team shall be trained in basic first aid and cardiopulmonary resuscitation (CPR). At least one member of the rescue service team holding current certification in first aid and CPR shall be available.

## **8. Smoking**

Smoking is prohibited inside of, and within twenty (20) feet of the confined space.

## **9. Welding Within a Confined Space**

If welding is to be performed in confined spaces that did or does now contain combustibles, all residues including dry scale or sediment must be removed. If it is not possible to remove all combustible materials, they must be covered by a noncombustible blanket.

The following specific procedures are required when welding is performed in a confined space:

- a) Welding electrodes must be removed from their holders during suspension of work (e.g., during lunch or overnight). The welding machine must be disconnected from its power source.
- b) Mechanical ventilation must be provided.
- c) Compressed gas cylinders and welding machines must be left outside the confined space.
- d) Portable equipment on wheels must be secured to prevent accidental movement.
- e) Gas welding and cutting equipment, such as hoses, connections, torches, etc., must be inspected and tested to ensure their integrity.
- f) Means must be available for the quick removal of a welder in the event of an emergency. A full body harness must be used whenever their use will facilitate rescue.
- g) An attendant with a pre-planned rescue procedure must be stationed outside the space.
- h) Torch valves must be closed and the fuel gas and oxygen supply positively shut off at some point outside the space when the torch is not being used for substantial amount of time. Additionally, the torch and hose must also be removed from the confined space where practicable.
- i) Warning signs should be posted warning of hot metal after welding is completed.

- j) Welders and helpers must use appropriate respiratory protection when ventilation controls are insufficient.
- k) Never use oxygen to ventilate a confined space.

## **10. Multi-Employer Permit Space Entry Operations**

Where employees of PIAZZA and those of another employer are required to work simultaneously within a confined space, efforts will be made to cooperate with the operations of other employers so employees are not endangered by the operations of another employer.

## **11. Fire Protection**

At least one 20 lb. ABC multi-purpose fire extinguisher must be available for instant use in a confined space containing flammable gases or vapors.

## **12. Training**

Every individual involved in confined space entry will receive initial and annual refresher training. The training will be specific for the duties the employee will perform and the procedures and practices necessary to protect them from the dangers of the permit space.

### **All personnel involved in confined space entry will receive training in:**

- a) Types of confined space hazards.
- b) Components of the confined space program.
- c) Components of the entry permit system.
- d) Safe confined space welding practices.
- e) The need for prompt guarding of the entrance opening.
- f) Atmospheric testing equipment including its use, calibration, and maintenance.
- g) Atmospheric testing protocol:
  - Oxygen, combustibles, toxics
  - Pre-entry, frequent or continuous testing
  - Check all levels of the space
- h) Methods for the control or elimination of any atmospheric hazards:
  - Draining and rinsing
  - Purging and cleaning
  - Continuous forced air ventilation

- i) Procedures employees must follow if they detect a hazard.
- j) The evaluation process to be used for reentry if hazards are detected.
- k) Train employees on the use of entry equipment.
- l) Personal protective equipment required:
  - Full body harness
  - Respiratory protection
  - Eye and face equipment
  - Protective clothing



## Confined Space Entry Permit

Date and Time: \_\_\_\_\_ Project Name: \_\_\_\_\_

Permit Expiration Time: \_\_\_\_\_

Permit Space Location and Description: \_\_\_\_\_

Purpose of Entry: \_\_\_\_\_

\_\_\_\_\_

### Pre-Entry Checklist

**NOTE: The entire form must be completed prior to entry into the confined space.**

1. Atmospheric testing: To be conducted in following order.

A.	Order	Substance	Acceptable Level	Readings	Acceptable
	1.	Oxygen (O <sub>2</sub> )	19.5% - 23.5%		Yes No
	2.	Explosive Gas or Vapor	< 10% LFL		Yes No
	3.	Explosive Dust	< LFL (5ft visibility)		Yes No
	4.	Carbon Monoxide	< 50 ppm		Yes No
	5.	Hydrogen Monoxide	< 10 ppm		Yes No
	6.	Other			Yes No
	7.	Other			Yes No

B. Continuous forced air ventilation in place where required? NA Yes No

C. Are explosion-proof tools and equipment required? NA Yes No

D. Is a 20 lb. ABC extinguisher present where required? NA Yes No

2. Control of Hazardous Energy

A. Are all lines to vessel locked out - broken - capped - or blanked? NA Yes No

B. Are all switches and valves locked or tagged out? NA Yes No

C. Is all mechanical equipment locked out or tagged to prevent accidental startup? NA Yes No

3. Is opening to confined space adequately protected? NA Yes No

4. Is a means of communication established between entrant and attendant? NA Yes No

5. Is entrant equipped with appropriate personal protective equipment? NA Yes No

6. Is each entrant equipped with a harness and lifeline for emergency rescue operations? NA Yes No

7. Are the names and numbers of emergency rescue services readily available? NA Yes No

8. Is an adequate lighting source, safe for conditions in the space, provided? NA Yes No

9. Will welding operations be performed within the space? NA Yes No

⇒ If "yes," a Confined Space Hot Work Permit must be completed.

10. Have all personnel received the appropriate training for their duties? NA Yes No

**IF NO IS MARKED FOR ANY ITEM, ENTRY OPERATIONS MAY NOT PROCEED.**

Superintendent Entry Authorization: \_\_\_\_\_

Signature of Attendant: \_\_\_\_\_

Signature of Entrants: \_\_\_\_\_

## **23. Lockout Tagout Program**

### **RESPONSIBILITIES**

The company president or a person of equivalent responsibility will be responsible for implementation of the program.

The supervisor will function as the Lockout/Tagout Coordinator. He will be responsible for ensuring that the mechanics follow the lockout /tagout procedures.

### **PROCEDURE**

The following is the sequence of the lockout or tagout procedure to be followed. Only when the energy sources are not lockable can a tag alone be used.

#### **1. Shut down**

- a) Notify all affected employees that a lockout or tagout sequence is in commencing, the reasons for the lockout and the expected time of completion. The authorized employee must be familiar with the types, magnitudes and origins of the energy sources involved. He/she must also have an understanding of the way the device or system operates and the hazards thereof.
- b) If the machine, equipment or system is operating, shut it down with the normal stopping procedure (stop button, speed control, valve, etc.). Allow machine or device to spool down, come to complete rest or cool off, if applicable.
- c) Locate and operate the appropriate energy isolating devices so that the equipment is disconnected from its energy source(s). Dissipate or restrain stored energy by blocking, bleeding down, chocking, etc.
- d) Apply lockout or tagout device to the applicable energy isolating devices. Apply only assigned locks and tags. No employee shall work on a machine or system while not locked out, each authorized employee involved is required to be protected by a lock or tag. Tags and locks shall indicate the authorized employee who applied it, the date it was applied and the duration of the job (if applicable).
- e) After applying locks and/or tags, conduct an area inspection to ensure that no employees are exposed to the hazardous energy. When the authorized employee has conducted the inspection and is satisfied that it is safe to do so, attempt to operate the machine. The authorized employee should also attempt to defeat the lockout or tagout. The machine or system shall remain in a zero mechanical state until each authorized employee removes his/her lock.
- f) With the above conditions satisfied, the equipment/system may now be considered locked or tagged out of service and the authorized employees who have implemented the lockout may conduct the servicing, repair or maintenance required.

## **2. Restart**

- a) After the servicing, maintenance or repair is complete and the machine or system is ready to be put back in service, the area around and in the machine or system must be inspected for debris, tools, parts or employees. This shall be done while the machine or system is still locked or tagged out. This inspection is to be performed by the authorized employee who applied the lockout.
- b) With the area clear of all non-essentials, tools, employees, etc., inform the affected employees that the lockout or tagout is to be removed. Remove the lockout or tagout device(s) from the energy isolating device(s).
- c) While observing the machine or system, move the energy isolating device(s) into the operational position, reenergizing the machine or system.
- d) With the machine or system energized, inspect for proper, safe operation. If applicable, run through a cycle or otherwise operate the equipment or system to ensure that it has been repaired or serviced properly and that it is safe to return to service.

*NOTE: Please add specific procedures for each piece of equipment in your laundry operation, including but not limited to iron/folding machines, washers, sorting machines and steam irons.*

## **GROUP LOCK AND TAGOUTS**

When a device or system is to be locked or tagged out two or more people must follow group lockout procedures. The procedure is essentially the same as single person lockouts with a few deviations. Each authorized employee involved in the lockout must apply his or her own, personal lock to every energy source that is to be locked out. Employees cannot work on other employees lockouts or tagouts. The group lockout and tagout must be run in such a manner so as to ensure that no locked out energy source can be reenergized without every authorized employee involved having to remove his/her lock.

During a group lockout or tagout a person in charge of the entire lockout is to be identified. This 'lockout/ tagout coordinator will be an involved authorized employee and be responsible for the safe implementation of the group lockout. Duties include:

- a) Ensuring each involved authorized employee is protected by his or her own lock.
- b) Ensuring that all employees involved are aware of and are safe during, lock removal.
- c) Conducting a pre-energizing inspection or coordinating with observers to ensure that no one is in a hazardous position or area during re-energization.

## **TRANSFER OF LOCKOUT OR TAGOUT**

When a lockout or tagout has to be transferred from one shift to another or one worker to another, a specific policy must be followed to ensure that a machine or device does not become energized in an unsafe condition. The authorized employee who initiated the lockout retains full responsibility for it until, he/she removes his/her lock and another authorized employee's lock is applied. No employee is to remove a lock or tag for someone, or allow their tag or lock to be removed by someone else.

## **SUPERVISORY LOCK REMOVAL**

At times, supervisors may need to remove a subordinate's lock or tag. These times may include, but are not limited to shift changes, employee absenteeism, and employee dismissal. This should be avoided whenever it is possible to do so; however, when it is not, the following steps must be rigidly adhered to minimize the risk of injury due to unintended startup or release of energy:

- a) The work area must be completely and carefully inspected by the supervisor who intends to remove the lock or tag in order to determine that the employee is not present.
- b) A reasonable effort must be made to contact the employee. This includes paging him/her, calling the employees home, plant wide announcements, etc.
- c) The machine or system must be inspected to determine if it is safe to unlock briefly. Also the state of repair must be ascertained, this information can be found in the LO/TO log, the maintenance log or the work order.
- d) After the above requirements are met, the lock or tag can be removed and the supervisor's (or designee's) lock or tag applied. Supervisors must record this process on the appropriate form and keep it on record.

*NOTE: The above process should not be conducted unnecessarily. If at all possible, the machine or system should remain locked out until the authorized employee who locked it returns.*

## **EQUIPMENT**

Employees will have provided to them all the lockout/ tagout equipment required to safely conduct their work. Locks and tags issued to specific employees will be identifiable as that employee's and are to be used for lockout/ tagout purposes only. Employees shall not exchange or lend their locks or tags to anyone. Each lock will have two keys, one issued to the employee with the lock, the other placed in a locked cabinet. Access to this cabinet will be restricted to supervisors and safety personnel, both of whom will need to be present to gain access. No one supervisor or safety personnel should be able to gain access without another company authorized employee.

## **TRAINING**

All authorized employees will receive effective initial training and yearly update training there after. This training will cover all aspects of lockout and tagout, will be certified and records kept on attendance.

Affected and other personnel will receive a lesser degree of training and yearly updates there after. This training will cover the limited aspects of lockout and tagout that these employees need, it too will be certified and records kept on attendance.

## **ENFORCEMENT**

This lockout/ tagout policy, like all safety policies, will be enforced in the same manner as other employee rules. The enforcement and disciplinary steps regarding company rule infractions are detailed in the Technipoly employee policy manual. A summary of these steps are as follows:

1<sup>st</sup> safety rule infraction: The supervisor issues a verbal warning and reviews the proper safety procedure with the offending employee.

2<sup>nd</sup> related safety rule infraction: The worker is issued a written warning by his or her supervisor, a copy of which is placed in the personnel file of the employee.

3<sup>rd</sup> related safety rule infraction: The worker can be suspended or dismissed.

*NOTE: These steps shall apply only to those safety rules and policies that the employee has been trained or received information on.*

**Control of Hazardous Energy (Lockout Tagout) 29 CFR 1910.147  
HAZARD ANALYSIS CHECKLIST**

Page 1 of 2

**SECTION I**

**Equipment Description** \_\_\_\_\_ **Date** \_\_\_\_\_  
**Client:** \_\_\_\_\_  
**Manufacturer's Name:** \_\_\_\_\_  
**Model Name:** \_\_\_\_\_ **Model #:** \_\_\_\_\_  
**Serial #:** \_\_\_\_\_  
**Location:** \_\_\_\_\_  
**Description of Operation:** \_\_\_\_\_  
 \_\_\_\_\_

**SECTION II (CIRCLE YES OR NO)**

- a) Is equipment cord & plug connected? Yes No  
 b) If yes, when disconnected are all energy sources dissipated? Yes No  
 If answer is no to questions a & b complete Section IV.

**SECTION III**

- a) Is equipment "hard wired" to a single 110/220 volt disconnect switch? Yes No  
 b) If yes, when disconnect switch is opened, locked and tagged are all energy sources dissipated? Yes No  
 If answer is no to questions a & b complete Section IV

Sources (Located within equipment)	*Type/ Magnitude	Method of Dissipation (Explain Below)	Control Devices		
			Tag	Lock	Other
Electrical Yes No					
Location					
Location					
Mechanical Yes No					
Location					
Location					
Hydraulic Yes No					
Location					
Location					
Pneumatics Yes No					
Location					
Location					
Chemicals Yes No					
Location					
Location					

**SECTION IV ENERGY DESCRIPTION & CONTROL**

*\*e.g., voltage, PSI, Temperature, Chemical Name*

SECTION IV (continued) ENERGY DESCRIPTION & CONTROL

Sources (Located within equipment)	*Type/ Magnitude	Method of Dissipation (Explain Below)	Control Devices		
			Tag	Lock	Other
<b>Thermal</b> <i>Yes No</i> Indicate: <i>a) Extreme Heat</i> <i>b) Extreme Cold</i>					
Location					
Location					
<b>Gasses</b> <i>Yes No</i>					
Location					
Location					
<b>Radiation</b> <i>Yes No</i> Indicate: <i>a) Heat Rays</i> <i>b) Light Rays</i> <i>c) Other _____</i>					
Location					
Location					
<b>Potential</b> <i>Yes No</i> Indicate: <i>a) Suspended Loads</i> <i>b) Compressed Springs</i> <i>c) Accumulators</i>					
Location					
Location					
<b>Kinetic</b> <i>Yes No</i> Indicate: <i>a) _____</i> <i>b) _____</i>					
Location					
Location					
<b>Others</b> <i>Yes No</i> Indicate: <i>a) _____</i> <i>b) _____</i>					
Location					
Location					

*\*e.g., voltage, PSI, Temperature, Chemical Name*

Accompanied By: (print) \_\_\_\_\_

Conducted By: \_\_\_\_\_

PRINT NAME

SIGNATURE

## **24. Hot Work**

### **PURPOSE**

To establish the requirements for safe welding, cutting, soldering, heating, etc.

### **RESPONSIBILITIES**

The job foreman is responsible for all aspects of the hot work program. The foreman must review requirements with subcontractors prior to performing any "HOT WORK" operation. In some circumstances, a "HOT WORK" permit may be required prior to the start of work.

### **PROCEDURE**

#### **1) General**

- a) All combustible materials must be removed or protected by a welding blanket from the place where the flame or arc is to be:
  - i) 15 feet horizontally
  - ii) 45 feet below
  - iii) 10 feet above
- b) No arc or flame operation is permitted in an area where painting is being done or where combustible dusts or flammable liquids are present.
- c) A fire watch with proper extinguishers must be posted during all flame or electric arc work and for 30 minutes after such work. A fire watch must also be posted for 25 minutes after use of temporary heaters.
- d) Mechanical ventilation and/or respirators must be provided when welding, cutting or heating:
  - i) Hazardous materials such as stainless steel, cyanides, zinc, cadmium, heavy metals, etc.
  - ii) In confined spaces.

#### **2) Oxy-acetylene torches**

- a) Fuel gas and oxygen hoses must be easily distinguishable and connections cannot be interchangeable.
- b) All connections must be clean and free of grease or oil.
- c) Flash Arrestors must be installed at the mixing tube of all torches.
- d) Hoses shall not be laid across traffic areas.
- e) All gas cylinders must be secured in an upright position. When in storage the protective cap must be on the cylinder.



### 3) **Propane torches**

- a) Hoses shall not be laid across traffic areas.
- b) All gas cylinders must be secured in an upright position. When in storage the protective cap must be on the cylinders and the cylinders protected against mechanical damage. Propane cylinders must not be stored indoors.

### 4) **Electric arc welders**

- a) All arc welding must be protected by non-combustible shields or curtains to prevent people from viewing the arc.
- b) When electrode holders are left unattended, the electrodes must be removed and the holders placed or protected so that they cannot make contact with each other, conductive objects or people.
- c) All welding cable must be insulated completely. Any splices or repairs must have insulation with a resistance equal to or greater than the original insulation.

### 5) **Propane fired heaters**

- a) The propane fuel tank must be located at least 20 feet from the burner.
- b) Hoses shall not be laid across traffic areas.
- c) All gas cylinders must be secured in an upright position. When in storage the protective cap must be on the cylinders and the cylinders protected against mechanical damage. Propane cylinders must not be stored indoors.

### 6) **Liquid fueled heaters**

- a) All liquid fuels must have a flashpoint of 100° F or more. Refer to the fuel Material Safety Data Sheet (SDS) for flash point information.
- b) Refueling shall only be done after the heater has been off for 15 minutes or more and a funnel must be used.
- c) Fuel storage must be located well away from any heat source and protected from mechanical damage.

## **25. Lead Management Program**

### **PURPOSE**

To protect employees from harmful exposure to lead while performing construction activities

### **RESPONSIBILITIES**

It is the responsibility of management, project managers, and foremen to ensure that proper measures are taken to address lead exposure at a PIAZZA Construction project. If demolition activities are performed, a lead survey must be done prior to the start of demolition to determine if lead is present. If lead is present, a lead exposure assessment must be conducted during demolition activities to confirm proper personal protective equipment is provided and to clarify what other applicable standards must be met. The survey and assessment must comply with the standards and actions outlined by OSHA.

Prior to the start of any project, Piazza's Safety Director must be notified so the appropriate steps can be taken to identify the presence of lead. It is important to understand that significant lead exposures can arise from removing paint from surfaces previously coated with lead-containing paint, such as in bridge repair, residential renovation and demolition.

Operations that generate lead dust and fumes also include the following:

1. flame-torch cutting, welding and grinding of lead painted surfaces in repair, reconstruction, dismantling and demolition work
2. abrasive blasting of bridges and other steel structures containing lead-based paints
3. using torches, heat guns and sanding machines during abatement of lead-based paint

Operations that involve exposure to lead containing products include:

1. spray painting bridges and other structures with lead-based paints and primers
2. using solder in plumbing and electrical work

In building construction, lead is frequently used for roofing, tank lining, electrical conduits, plumbing and painting.

On projects where lead is identified at the action level of 30ug/m<sup>3</sup> or above, employees will be prohibited from smoking or eating in those work areas. Please note that whenever lead is present at a project, even in low concentrations, employees should practice good hygiene habits to avoid breathing or ingesting lead. Any employee must contact the safety director if he or she suspects exposure to lead.

### **Lead absorption and the effects on the human body**

Lead can be absorbed into the body by inhalation (breathing) and ingestion (eating). Very small amounts of lead that may be unintentionally ingested via eating, drinking or smoking on the job can be harmful.

Lead exposure is very harmful. It can affect the brain, leading to seizures, comas and death. Lead poisoning can occur at high exposure concentrations (acute) or at low exposure concentrations over a long period of time (chronic) and can cause either temporary or permanent damage.

Lead is a cumulative poison. It accumulates in the blood, bones and organs, including the kidneys, brain and liver. It stays in the bones for decades. It may be slowly released over time to cause toxic effects. Increased blood lead levels usually means there has been some recent exposure. Early effects of lead poisoning are not specific and resemble "flu-like" illnesses. Worker awareness and training are important so that employees can recognize the symptoms of exposure and get medical attention.

## **Lead Exposure Limits**

The OSHA standard establishes maximum limits of exposure to lead for all workers covered, including a permissible exposure limit and action level.

### Permissible Exposure Limit (PEL):

The PEL sets a maximum worker exposure to lead. No employee may be exposed to lead in airborne concentrations greater than 50 ug/m<sup>3</sup> averaged over an eight-hour period.

### Action level:

An action level is the level at which an employer must begin certain compliance activities outlined in the standard. The action level, regardless of respirator use, for the lead in construction standard is an airborne concentration of 30 ug/m<sup>3</sup> calculated as an eight-hour TWA.

The only way to determine airborne concentrations of lead is to perform air monitoring. Piazza, Inc.'s policy requires employees involved in the lead assessment to have blood work done to determine their baseline lead and ZPP levels. This must be done prior to the assessment. When the exposure assessment is conducted, interim personal protective equipment must be provided based on the operation performed during the assessment.

In some circumstances, potential lead hazards may be abated by a specialty contractor experienced in this area.

Under no circumstances shall work be performed in areas that have not been identified as "Lead Free".

# **Regulated Materials**

## **Asbestos**

PIAZZA will not make use of, make contact with, or work in an area containing state or federally regulated materials such as Asbestos. In the event Asbestos Containing Materials (ACM) are suspected of being present in a work area, all work will stop immediately and a supervisor will be notified. The supervisor will notify the owner or contractor for whom PIAZZA is performing work for confirmation and/or inspection of the area. Work will resume only after PIAZZA is notified in writing that the suspect material has been declared safe or, if the suspect material is found to be hazardous, the material has been removed and the area declared safe for entry and the resumption of work.

## **Lead In Construction**

Prior to beginning demolition of any structure, or portions of any structure, constructed prior to 1980, testing shall be conducted to determine the presence of lead. Refer to PiazzaInc.'s Lead Management Program for guidelines.

## **Pre-Planning**

PIAZZA estimating staff should verify whether lead, asbestos, or other hazardous materials are present prior to bidding on any project involving demolition of buildings, structures, or portions thereof.

## **26. Vehicle Safety**

### **Purpose**

To establish the company requirements for safe vehicle use.

### **Responsibilities**

1. Management will supervise compliance of vehicle safety.
2. All drivers must comply with these Company procedures in addition to those of New York State vehicle and traffic law.
3. Pedestrians are to use sidewalks and marked cross-walks where available and observe all traffic control devices.
4. Safety department is to complete accident reports and corrective action reports for all accidents occurring on company property and/or involving an employee while he/she is working.

### **Procedure**

1. Each person must have a valid state driver's license to operate a company vehicle. All employees are required to report to the company if their license is suspended or revoked.
2. Seat belts must be used at all times by all drivers and passengers. Passengers may not ride except in proper seats with seat belts.
3. All traffic regulations (including parking) must be observed at all times including customer rules and flagmen directions.
4. All loads must be properly secured at all times and for all trips of any length. All doors must be closed and latched before a vehicle is moved.
5. Driving while using prescription drugs that may impair ability is not permitted.
6. Evidence of illegal drugs or alcohol may cause dismissal whether the employee is driving or not.
7. All vehicles must be inspected daily by the driver for:
  - a. Proper operation of the vehicle lights,
  - b. Proper operation of windshield wipers and washers,
  - c. Condition of the tires,
  - d. Proper operation of the brakes, and

e. General appearance

8. No vehicle is to be operated in reverse until the driver has made certain that no people or obstructions are in the path of travel. The driver must look in the direction of travel and sound the horn or other sound producing alarm while operating in reverse.
9. DO NOT transport passengers in cargo section of vehicles unless the cargo space is empty. Such vehicles used to transport employees shall have seats firmly secured and adequate for the number of people to be carried.
10. All accidents are to be reported in accordance with the company policy.

## **27. Powered Industrial Truck Operation**

**Purpose:** To ensure equipment operators have the knowledge and skills needed to operate a powered industrial truck safely.

**Definition:** Powered Industrial Truck- A mobile , power-driven vehicle used to carry, push, pull, lift, stack and tier material.

### **Classes of Powered Industrial Trucks**

Class 1 - Electric motor, sit-down rider, counterbalanced trucks (solid, pneumatic tires).

Class 2 - Electric motor, narrow aisle trucks (solid tires).

Class 3 - Electric motor hand trucks or hand/rider trucks (solid tires).

Class 4 - Internal combustion engine trucks (solid tires).

Class 5 - Internal combustion engine trucks (pneumatic tires).

Class 6 - Electric and internal combustion engine tractors (solid, pneumatic tires).

Class 7 - Rough terrain forklift trucks (pneumatic tires).

As of December 1, 1999, operators of power industrial trucks must be certified by their employer that they have successfully completed training in the use of the equipment being utilized. Training shall consist of a combination of formal instruction (lecture, discussion, interactive learning, written material), practical training (demonstrations performed by the trainer and practical exercises performed by the trainee), and evaluation of the operator's performance in the workplace. All training will be conducted by person(s) who have the knowledge, training, and experience to train powered industrial truck operators and evaluate their competence.

### **Training Program Content**

Powered industrial truck operators shall receive initial training in the following topics unless they are not applicable to the safe operation of the truck in the workplace.

#### **Truck Related Topics to be Covered During Training:**

- 1) Differences between a powered industrial truck and an automobile.
- 2) Operating instructions, warnings, and precautions for the type of truck the operator will operate.
- 3) Truck controls and instrumentation: where they are located, what they do, and how they work.
- 4) Engine and motor operation.
- 5) Steering and maneuvering
- 6) Visibility, including restrictions due to loading.
- 7) Fork and attachment adaptation, operation, and use limitations.
- 8) Vehicle capacity and stability
- 9) Vehicle inspections and maintenance that must be performed by the operator.
- 10) Refueling and/or charging and recharging of batteries.
- 11) Operating limitations.
- 12) Operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate.

### **Workplace topics to be covered during training:**

- 1) Surface conditions where the vehicle will be operated.
- 2) Composition of loads to be carried and load stability.
- 3) Load manipulation, stacking, and unstacking.
- 4) Pedestrian traffic in areas where the vehicle will be operated.
- 5) Narrow aisles and other restricted places where the vehicle will be operated.
- 6) Hazardous locations where the vehicle will be operated.
- 7) Ramps and other sloped surfaces that could affect the vehicle's stability.
- 8) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust.
- 9) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

### **Training Frequency**

Training shall be provided prior to an employee operating a powered industrial truck and shall, at a minimum, be conducted at least every three years. Refresher training in relevant topics shall be provided to the operator when:

- The operator is observed to operate the vehicle in an unsafe manner.
- The operator has been involved in an accident or a near-miss incident.
- The operator has received an evaluation that reveals that the operator is not operating the powered industrial truck safely.
- The operator is assigned to drive a different type of powered industrial truck.
- A condition in the workplace changes in a manner that could affect the safe operation of the powered industrial truck.

**NOTE:** If an operator has previously received training, and such training is appropriate to the powered industrial truck and working conditions encountered, additional training in that topic is not required if the operator has been evaluated and found competent to operate the truck safely.

### **Certification**

PIAZZA shall certify that each operator has been trained and evaluated. The certification shall include the name of the operator, the date of the training, the date of the evaluation, and the identity of the person(s) performing the training evaluation. A copy of the training material used to train PIAZZA employees shall be maintained at the main office



## **28. Hearing Conservation**

### **Purpose**

To establish procedures and methods that will be utilized by all PIAZZA employees who are exposed to noise levels that exceed the Time Weighted Average (TWA) of 85 decibels or more.

### **General**

Exposure to high noise levels can cause hearing loss or impairment. There is no cure for noise-induced hearing loss, making prevention of excessive noise exposure the only way to avoid hearing damage. Earplugs are available at each site for employees to use to help reduce exposure. Other forms of hearing protection, such as ear muffs, are available if activities being performed require protection with a higher Noise Reduction Rate (NRR).

### **Control Methods**

When employees are required to work with or near tools or equipment that produce sounds that exceed permissible amounts, engineering controls shall be utilized. If the use of the engineering controls fails to reduce the sound to permissible levels, then hearing protection equipment shall be used to reduce noise exposure to acceptable levels.

### **Hearing Protection**

There are many different types of hearing protection which provide different protection factors. Manufacturers of hearing protection designate protection factors in terms of NRR, Noise Reduction Rate. The higher the NRR, the better the protection. These values are based on the hearing protection fitting the user perfectly. Obviously, the hearing protection will not always provide a perfect fit for all users, so the NRR may be lower.

Consideration must be taken for what type of work will be performed while wearing hearing protection. For instance, if work is being performed near vehicle traffic and hearing protection is being used, the wearer may not hear a warning signal from a piece of machinery. When conditions warrant hearing protection but the use of this protection creates an additional hazard, measures must be taken to address this hazard.

Performing activities such as jackhammering, pile driving, and operating certain tools or equipment can expose an employee to higher decibel levels than are permitted over an eight-hour time period. If these activities are only performed for a short duration, the Time Weight Average (TWA) may not exceed permissible exposure limits but hearing protection use is encouraged provided its use does not create an additional hazard. A chart demonstrating limits for employee exposure to noise is provided at the end of the Hearing Conservation Program.

## HEARING CONSERVATION PROGRAM

1. All employees exposed to an eight-hour time-weighted average of 85 decibels or greater shall be provided with and be required to wear hearing protection. Employees exposed to lower decibels are encouraged to utilize hearing protection if its use does not create additional hazards.
2. Hearing protection shall be available on each jobsite for employee use. The foreman shall ensure that hearing protection is being worn by employees exposed to a eight-hour Time Weighted Average (TWA) of 85dB or greater.
3. All employees shall be provided with training in the use and care of hearing protection equipment as well as their limitations.
4. Employees who fail to wear hearing protection when its use is required will be disciplined as per Piazza, Inc.'s Disciplinary Program.
5. Employees who are required to regularly wear hearing protection to prevent an exposure to a TWA of 85dB or greater will be tested annually for hearing loss.

### Training

All employees exposed to noise at or above an eight-hour TWA of 85 decibels shall participate in a fitting training program provided by the employer. The training shall discuss the effects of noise on hearing and how through the use of hearing protection noise levels can be reduced. Additionally, the advantages and disadvantages of various types of hearing protection will be discussed as well as the use and care of often-used protectors.

### Limits For Employee Exposure To Noise

Sound Level	Hours Of Exposure Per Day
83	21
85	16
87	12
90	8
92	6
95	4
97	3
100	2
102	1.5
105	1
110	0.5
115	0.25

## **29. Spill and Release Prevention**

### **Purpose**

To establish the company requirements for prevention of spills and releases to the environment.

### **Responsibility**

The job foreman is responsible for controlling spills and releases. The foreman must insure hazardous materials are stored properly on site.

### **Procedure**

1. Keep Material Safety Data Sheets for all materials brought to the jobsite. Subcontractors are responsible for maintaining up to date Material Safety Data Sheets for the products being used on-site. Subcontractors must submit a copy of their Material Safety Data Sheets to PIAZZA for filing at the jobsite trailer.
2. Develop a spill and release control plan that covers the hazardous materials on the jobsite, the storage requirements, the use methods, precautionary information, the appropriate regulations, the regulatory agency and the notification contact at the regulatory agency.
3. Bring only one day's supply of hazardous materials to the jobsite.
4. Keep all containers of liquids labeled properly and in impervious secondary containment.
5. Store hazardous material away from sewers, drains, and pits. If hazardous material must be located near sewers, drains, and pits, measures must be taken to prevent the product from entering these areas in the event a spill occurs.
6. Inspect secondary containment areas on a daily basis.
7. Remove all hazardous waste materials from the jobsite daily.
8. If a spill or release occurs, notify the main office, the customer, and the appropriate authorities immediately.

# Spill Prevention and Response Plan

## Number Three Wind Farm • Lewis County, New York • Case 16-F-0328

### 1 Introduction

Number Three Wind LLC (NTW) proposes installation of the Number Three Wind Farm (the Project) in Lewis County, New York. The Project will consist of up to 43 wind turbine generators and associated improvements, including buried electric cables, pad-mount transformers, access roads, an electrical substation, overhead electric lines, permanent meteorological towers, and an operations and maintenance building.

This plan describes the risk of releases or spills of hazardous or regulated materials during construction of the Project, and it specifies procedures to be used to prevent and respond to such spills.

### 2 Description of Risks

#### 2.1 General Spill Risks

A spill is the discharge of hazardous or regulated substances into the environment.

Potential hazards created by a spill vary for humans, vegetation, water resources, fish and wildlife and depend on nature of the material, the amount spilled, the location of the release, weather conditions, and the time of year.

The most common spills are small and easily contained. Spills of fuel and lubricants during construction can occur from fueling, hydraulic hose breaks, mechanical damage or vandalism.

#### 2.2 Materials Used For Wind Farm Construction

Wind farm construction does not involve major quantities of hazardous or regulated materials, nor does it produce large quantities of hazardous or regulated waste. The hazardous and regulated materials on-site during wind farm construction include:

- Materials used for concrete construction activities such as concrete admixture chemicals, surface active agents, plasticisers and mineral oil for form release;
- Chemicals use by construction equipment, including fuels, anti-freeze coolants, lubricating oils, and hydraulic oils;
- Insulating oil in substation and pad-mount transformers;

### 3 Spill Prevention

Proper management, handling, and storage of the limited amount of hazardous or regulated materials to be used onsite will minimize the risk of a spill and mitigate potential effects to construction personnel and the environment if a spill does occur.

#### 3.1 On-site Person in Charge

Construction Site Manager, name and phone number to be determined.

#### 3.2 Best Practices Regarding Use of Construction Equipment

- Store and maintain equipment in a designated area.

- Use secondary containment (drain pan) to catch spills when removing or changing fluids.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Perform fueling in designated fueling areas.
- Do not “top-off” tanks
- Keep spill kits readily accessible
- Check incoming vehicles for leaking oil and fluids.
- Transfer used fluids and oil filters to waste or recycling drums.
- Inspect equipment routinely for leaks and spills.
- Repair equipment immediately, if necessary.
- Implement a preventative maintenance schedule for equipment and vehicles.

### **3.3 Best Practices Regarding Use and Storage of Regulated and Hazardous Wastes**

NTW does not anticipate the Project will generate hazardous waste. Nonetheless, best practices to manage hazardous and regulated wastes are:

- Use entire volume before disposing of the container.
- Retain the original product label or MSDS.
- Recycle any useful material (used oil)
- Segregate wastes by waste type.
- Minimize the quantity of hazardous waste generated onsite and maintain storage quantities, times and disposal in compliance with USEPA regulations.
- Arrange for disposal of hazardous waste at an approved waste facility.
- Train employees in proper hazardous/regulated material and waste management.

### **3.4 Spill Kits**

Spill-containment and cleanup kits appropriate for the materials used throughout the construction phase should be well-marked, accessible and maintained onsite at the on-site Project construction office.

A spill kit should include: Poly containment pail, oil absorbent pads, oil absorbent socks, heavy duty disposal bags, nitril gloves, all-purpose absorbent (such as sawdust or kitty litter), shovels, plugs and clamps to control a line breaks.

### **3.5 Training**

Personnel working on the construction of the Project, its ancillary components and associated roadways will be briefed upon arrival to the Project site as to the nature of possible spill hazards, as well as the location, content, and usage of spill kits.

## **4 Spill Response**

### **4.1 Equipment Staging and Maintenance Area**

Leaks from fuel tanks, an equipment seal, or an hydraulic line should be contained with a spill pad placed beneath the source.

### **4.2 Fueling Area**

A spill during fueling operations will be contained within a spill pan for small container handling, or portable secondary containment berms in the storage areas. The transfer of fuel into portable equipment will be performed using a funnel and/or hand pump, and a spill pad used to absorb any incidental spills/drips. If a drum is noted to be leaking, the drum will be repaired with a patch kit. A spill response kit will be located near the fueling area for easy access.

### **4.3 Spills on to Soil**

If a spill occurs onto soil, follow these procedures:

1. Stop operations
2. Identify the product - check container design, warning labels, markings, etc.
3. Prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion.
4. Stop the flow at the source - reduce or terminate the motion of product without endangering anyone.
5. Assess the extent of the spill.
6. Report the spill to Construction Site Manager and Environmental Monitor and provide basic information such as location of spill and amount.
7. Complete "Spill Response Form" (Attachment A) and give copy to Construction Site Manager and Environmental Monitor (or Designee). All completed Spill Response Forms will be kept at a main construction site office.
8. The petroleum spill does not need to be reported to the NYSDEC if the following are met:
  - The quantity is less than 5 gallons; and
  - The spill is contained and under the control of the spiller; and
  - The spill has not and will not reach the State's water or land; and
  - The spill is cleaned up within 2 hours of discovery.

If the spill DOES NOT meet the above the criteria, the spill must be reported to:

- NYSDEC at 1-800-457-7362, or
- USEPA National Response Center at 1-800-424-8802.

A spill is considered to have not impacted land if it occurs on a paved surface such as asphalt or concrete. A spill in a dirt or gravel parking lot is considered to have impacted land and is reportable if it does not meet the above requirements.

9. Report the spill to other federal and local authorities, if required.

### **4.4 Spills into Water**

If a spill occurs into water, follow these procedures:

1. Notify Construction Site Manager
2. Notify Environmental Monitor
3. Notify NYSDEC

4. Notify a spill response contractor, if necessary.
5. Stop the source of the spill immediately.
6. Shut down all equipment and ignition sources in the area.
7. Install boom and absorbent to contain the spill.
8. Clean up absorbent and waste materials and dispose at an approved waste disposal facility.
9. Decontaminate the area, equipment and surfaces that have contacted the spilled material.

**4.5 Disposal**

Transport wastes via truck to an appropriate disposal facility.

**5 Emergency Contact Information**

NYS Spill Hotline	1-800-457-7362
DEC Region 6, Lowville Office	(315) 376-3521
Fire Department	911
USEPA National Response Center	1-800-424-8802

## Attachment A

### Spill Response Form

**Instructions:** Complete for any type of petroleum product or hazardous materials/waste spill or incident. Provide a copy of this report to management.

**1 Person Reporting Spill or Incident:**

Name		Address	
Organization			
Title			
Telephone			
Fax		Signature	

**2 Type of Spill:**

Common Name of Spilled Substance	
Quantity Spilled (Estimate)	
Concentration (Estimate)	
Date of Spill	___/___/___

**3 Location of Spill: (If no spill, describe incident)**

Weather Conditions	
Temperature	
Wind Direction and Velocity	
Precipitation	
Other	

Time Spill Started	__ AM	__ PM	Time Spill Ended:	__ AM	__ PM
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Potential for groundwater contamination?    Yes    No    (circle one)

<b>SPILL TO LAND</b>	<b>SPILL TO WATER BODY</b>
Name of Site:	Name of Water Body:
Street Address:	Location of Discharge with Reference to Fixed Point:
City/Town:	Description of Area from which spilled material may reach:
County:	



SPILL REPORTED TO:	
Name:	Name:
Organization:	Organization:
Date/Time:	Date/Time:
Name:	Name:
Organization:	Organization:
Date/Time:	Date/Time:

**4. Actions taken:**

To contain spill or impact of incident:

To clean up spill or recover from incident:

To remove cleanup material:

To prevent reoccurrence:

**5. Person responsible for managing termination/ closure of incident or spill:**

Name: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

## **30. General Waste Management Program**

### PURPOSE

Piazza Inc's Waste Management Program is intended to provide guidance and outline the requirements necessary for an effective waste management process at our construction sites.

### RESPONSIBILITY

It is the responsibility of the site foreman to ensure that Piazza's Waste Management Program is implemented properly.

### WASTE DETERMINATION

Prior to beginning work at the construction site, it is the foreman's responsibility to arrange for the appropriate waste containers to be on site and to arrange for the proper disposal of waste or scrap material.

### STORAGE REQUIREMENTS

Piazza must ensure that related wastes are stored and maintained in an organized manner to encourage proper disposal and minimize risks to our employees and subcontractors. Proper waste receptacles must be provided for trash and materials that may be reused or recycled during a project. Receptacles must be covered if they are located outdoors.

### RECYCLING

Piazza encourages recycling at both the office and at job sites. Waste material should be recycled whenever possible. Recycling bins should be clearly labeled for use – i.e., paper, bottles/cans, etc. Boxes should be flattened.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

The foreman is responsible for determining the type of PPE that should be onsite, including gloves, hand sanitizers, eye and face protection, etc.

## WASTE CLASSIFICATION

- Special waste: This includes asbestos, clinical waste and tires.
- Liquid waste
- Hazardous waste: Including explosives, gases, flammable solids and waste that has been contaminated with lead, coal tar, and other hazardous materials
- Restricted solid waste: Has a level of contamination lower than hazardous waste but higher than general solid waste
- General solid waste: This includes food scraps, manure, and other materials that decay, smell or attract vermin
- General solid waste: This is waste that doesn't fit into any of the above categories

## EDUCATION AND TRAINING

Employees will be instructed on managing waste generated at the work site and on the proper handling, storage and disposal methods. This will include general instructions on the disposal of non-hazardous waste, trash or scrap materials. If the waste generated is classified as hazardous, then employees will be trained to ensure of proper disposal and compliance with regulations. Visit the US EPA website at [RCRA Orientation Manual: Table of Contents and Foreword \(epa.gov\)](#) for more information.



# Waste Management Policy

## Policy

Piazza is very focused on reducing the amount of waste generated during our day to day operations and using materials that are less detrimental to the environment. All of our employees have been provided with information regarding waste minimization during the various phases of production. Our supervisors/managers will be the main point persons when it comes to onsite waste management and reduction.

We have identified the following waste products that would be generated during the various phases of production and approximate amount of waste generated. Our raw materials inventories and deliveries will be adjusted continuously to minimize the amount of potential waste.

Example:

<u>Project Phase</u>	<u>Material</u>	<u>Amount</u>
Phase 1	Lumber	2 Tons/2 Cubic Yards

Waste Management Options:

All waste is stored and disposed of responsibly and records will be kept of all waste disposed of, reused or transferred waste.

- Potential waste materials that can be reused at a different phase of production will be neatly stored onsite so as not to create any potential hazardous conditions.
- Materials that are slated for disposal will be placed in the appropriated recycling containers for offsite hauling.

Where and How Waste Will Be Disposed:

All of our waste designated for offsite disposal or recycling will be will be handled by the below named waste disposal/recycling contractor:

Waste Disposal Contractor:

Organizing On-site Materials & Waste Handling:

The onsite supervisor/manager for Piazza will be responsible for ordering materials and managing the waste generated to ensure that waste quantities are kept to a minimum. Piazza will work with clients and our purchasing department to maximize the use of post-consumer

recycled products onsite and avoid over ordering of materials. Records will be maintained of the types of materials used and their composition with regards to post-consumer product content. Records will also be maintained of waste quantities generated and disposed of.

#### Communicating the Plan and Providing Training:

Piazza will ensure that our philosophy of minimizing waste, reusing materials, and choosing recycled materials is clearly understood by our employees, subcontractors, clients and vendors.

All our employees and subcontractors will receive onsite informational training regarding the content of our waste management plan. The plan will also be communicated to clients and vendors through meetings and informational materials.

#### Measuring the waste generated and monitoring:

The supervisor/manager will monitor and measure the amount of waste generated onsite and make adjustments to materials inventory and ordering as needed. The supervisor will also assess periodically the waste volume generated against initial project estimates. If waste generated exceeds initial estimates by more than 20%, the supervisor will meet with the production manager to discuss the matter further and determine what lead to the excess waste volume and how it can be better managed.

## **31. Project Safety Plan**

The Project Safety Plan is meant to supplement PIAZZA's existing safety program by identifying all real and potential hazards of a project and providing specific plans to deal with those hazards.

Pre-planning is an important step toward achieving a zero-injury project. This document is designed to walk you through the pre-planning process. The written end product of pre-planning activities will be the Project Safety Plan (PSP). The PSP should be a brief outline of the hazardous conditions associated with your project and the controls you intend to implement to remove those hazards, or to prepare for the work to be performed under the condition.

As questions develop, rely on your experience, OSHA Standards, PIAZZA's Corporate Safety Program, owner's representatives, engineers, insurance and trade association representatives, and consultants for assistance.

Subcontractors are encouraged to participate in the pre-planning process. Through coordination between trades, an effective Project Safety Plan can be developed. Where project activity can or will affect a client's operations, an owner's representative should also be encouraged to participate.

### **Responsibilities**

The job foreman is responsible for developing a project safety plan whenever the complexity of the project warrants it, when the owner requests it, or when there is a legal requirement for one.

### **Procedure**

1. Through inspection of the site, review of the project plans, inquiries to the customer, and other investigation obtain appropriate information about potential hazards and available resources. Record data discovered during the inspection. This should include the following information:
  - a) Materials which will be present in or near the work area
    - i) Locations
      - a) For demolition activities inspect pipes, ductwork, soil, residue from exhaust vents, etc.
    - ii) Quantities
    - iii) Copies of Material Safety Data Sheets
    - iv) Contamination which exists or may exist in or near the work area.
    - v) Locations of regulated materials which may be contacted or disturbed during the work.
  - b) Sources of ionizing radiation (x-ray machines and radioactive sources)
  - c) Any equipment which will be operating or may start automatically (such as robots, conveyors, manipulators, exhaust systems, air handling units, compressors, etc.).
  - d) Ambient noise levels
  - e) Provide a listing of Emergency Procedures and emergency service names, locations, and telephones for hazards involving
    - i) Medical
    - ii) Fire
    - iii) Spills or Releases
    - iv) Utilities
    - v) Facility and Equipment Damage

- f) Sources of Technical Information
    - i) Safety
    - ii) Environmental Engineering
    - iii) Security
  - g) Special access controls and security requirements.
2. Proposed Operations: Review the proposed scope of work and operations to identify the hazards that are inherent to the project and those that may be created or compounded by adjacent customer operations, facilities, or processes. Specifically identify hazards associated with the following:
    - a) Materials to be used
    - b) Elevated work
    - c) Excavations
    - d) Traffic and pedestrian control
    - e) Confined spaces
    - f) Noise levels
    - g) Dust/contamination
    - h) Utility disruptions
    - i) Production disruption
    - j) Product movement
    - k) Employee discomfort
    - l) Lockouts
    - m) Poor lighting
    - n) Cutting, welding, open flame work
    - o) Internal combustion engines being used
    - p) Cranes and hoists
  3. Review all of the information regarding the materials the customer will have at or near the worksite, the materials that we will use and any contamination, which may be present.
    - a) Determine whether an incompatibility exists among the various materials and, if so, develop a protective measure to prevent contact between the incompatible materials.
    - b) Determine the respirator protection to be used, if any is needed. Make sure all respiratory protection requirements are met.
    - c) Determine whether measurements of employee exposure to airborne contaminants will be required.
      - i) Work that will require the measurements
      - ii) Contaminants
      - iii) The time and duration of each measurement
      - iv) The person who will take the measurements.
  4. Determine what hearing protection, if any, is needed.
  5. Determine what other personal protective equipment is needed (such as gloves, hard hats, harnesses, lanyards, etc.)
  6. Determine whether special permits, licenses or qualifications will be required.
  7. Through review of the above and the personnel training records, determine what training will be necessary.
  8. Determine who is responsible for housekeeping, cleaning methods and cleanliness to be maintained.
  9. Provide information regarding exit evacuation plans, routes and methods.
  10. Write a plan incorporating all of the determinations and requirements developed above and issue it as an addendum to the company safety program applicable to this project. In the plan, describe what actions are needed to meet the requirements identified above, when they are to be done, and who is responsible for doing them. Provide a detailed schedule of



the work including project name, location, description, and contact names, phone numbers and pager numbers of both company and contractor responsible personnel. Distribute this plan to all company and contractor employees who will be affected by the project.

32. Emergency Evacuation Plan

*EMERGENCY  
EVACUATION  
PLAN*

CONSTRUCTION SAFETY POLICY



POLICY

The policy of Piazza is that every employee’s primary responsibility is to safely evacuate the worksite in case of an emergency, such as fire, chemical spills, release and leaks. No employee is expected to contain any form of emergency. This is the responsibility of trained professionals.

We recognize that employees may have received training in the use of portable fire extinguishers and some may have First Aid/CPR training.

If an employee chooses to use the skills they have they should always remember their own safety is the top priority.

PURPOSE

To establish a method of systematic, safe and orderly evacuation of an area, construction site or building of its occupants in case of fire or other emergency, in the least possible time to a safe area or by the nearest safe means of egress; also the use of such available fire appliance (including sounding of alarms) as may have been provided for the controlling or extinguishing of fire and the safeguarding of human life. Maintaining unobstructed egress is crucial given the changing physical environment on construction sites. As such, our plan will be reevaluated at periodic intervals to ensure that safe egress is maintained at all times. Supervisors will be responsible for ensuring that exit doors, pathways, and stairwells are never blocked or obstructed during construction activities.

OBJECTIVE

To provide proper education as a part of continuing employees indoctrination and through a continuing written program for all employees to assure the prompt reporting of fire, the response to fire alarms as designated and the immediate initiation of fire safety procedures to safeguard life and contain fire until the arrival of the fire department.

EMERGENCY PHONE NUMBERS

<b>Fire Department</b>	<b>911</b>
<b>Police Department</b>	<b>911</b>
<b>First Aid Squad</b>	<b>911</b>
<b>Health Department</b>	
<b>Poison Control Center</b>	<b>800-962-1253</b>
<b>CHEMTREC</b>	<b>800-424-9300</b>
<b>DEP</b>	
<b>Utility Emergency Dispatch</b>	
<b>Fire Safety Coordinator</b>	<b>Home:</b>
	<b>Beeper:</b>
	<b>Home:</b>
	<b>Beeper:</b>
	<b>Home:</b>
	<b>Home:</b>
<b>Electrical:</b>	<b>Home:</b>
<b>Weather Station</b>	

### INITIAL NOTIFICATION PROCEDURES

1. Employee observes an emergency eg. Fire, medical, spill etc.
2. If a supervisor is *immediately* available notify him/her.
3. The supervisor, or the employee if a supervisor is not present, should go to the nearest internal phone and call 0, the building manger's office or 911.
4. The building manger identifies the problem, asks for the location, and then uses the internal fire alarm system or PA system to initiate an evacuation if needed.
5. He/she notifies the proper emergency response team and immediately leaves the building if an evacuation was initiated.
6. In the event of an emergency not requiring an evacuation (eg. Medical) the building manger will notify the proper emergency response personnel (first aid squad).
7. For weekend and off-shift operation, the supervisor on duty will take full responsibility for this plan.

YOUR COMPANY NAME EMERGENCY EVACUATION TEAM MEMBERS

Day Shift

Emergency Coordinator

Warden

Deputy Warden

Searchers

Male  
Female

Night Shift

Emergency Coordinator

Warden

Deputy Warden

Searchers

Male  
Female

### EMERGENCY COORDINATOR RESPONSIBILITIES

1. Select qualified individuals for Emergency Response Team Members.
2. Be familiar with Piazza Inc Emergency Response Plan.
3. Organize, train and supervise Emergency Response Team Members.
4. Assure fire and evacuation drills are conducted.
5. In the event of a fire, report to the Security Command Post to supervise, coordinate and insure:
  - a. That the fire department has been notified of any fire or fire alarm.
  - b. That evacuation procedures are followed.
  - c. That all wardens have completed their jobs and that all staff are accounted for.
6. Assure that fire protection systems are inspected and maintained.
7. Update Emergency Response Plan as required.

### WARDEN RESPONSIBILITIES

1. Ensure that evacuation is done calmly and efficiently.
2. Function as liaison to emergency response personnel.
3. Listen carefully to all PA announcements.
4. If instructed by PA announcement, exit the building and go to the assigned assembly area.
5. Take the plant map with you when you leave the building.
6. Once you are at your assigned assembly area, deputies will provide you with a list of missing employees.
7. Wardens should provide this list of missing employees to emergency response personnel eg. Fire, Police.

*NOTE: It is the responsibility of each warden to train deputies to act as wardens in the event of his/her absence, and deputies should decide the order of reassignment of duties to avoid confusion that may result from the absence of one or more team members.*

### DEPUTY RESPONSIBILITIES

1. When PA announcement is heard, take your roster and proceed to your designed emergency exit.
2. Remain at emergency exit and assist with the evacuation by reminding staff to: remain calm, hold on to banister, do not run, etc.

3. Exit building and proceed to your assigned assembly area.
4. Once you are at your assigned area, keep people calm, take a roll call and compare to your roster.
5. If your companion deputy is out that day, take a roll call for their area as well. Ring twice, if you get no answer, assume you must contact their searcher for a complete roll call.
6. Compile one list of missing employees and hand to Warden.

*Note: Be prepared to assume the responsibility of Warden in the event that the Warden is absent*

#### SEARCHER RESPONSIBILITIES

1. Each searcher has been assigned to a designated area.
2. Know your area! Make sure you know where all offices, conference and storerooms are. Don't forget bathrooms.
3. When alarm announcement sounds, call other searchers to make sure they are present.
4. Guide employees to your nearest emergency exit.
5. Do not go back for anyone or anything!!!!

#### ASSEMBLY LOCATIONS

PRIMARY:

SECONDARY:

If the primary location is unattainable the Warden should designate another location immediately nearby.  
A suggested location would be:

No one is to leave the area unless told to do so by the warden!!!!!!

#### BUILDING/SITE EVACUATION MAPS

A floor plan, representative of the majority of the floor designs of the entire building, shall show all Exits and routes of egress for all building occupants. These floor plans shall be available throughout the building at Exits and Elevator lobbies, at the main entrance and in this Response Plan.

## **33. Crane Safety Policy**

### **Purpose**

Many types of cranes, hoists, and rigging devices are used at Piazza Inc. for lifting and moving materials. Piazza Inc.'s policy is to maintain a safe workplace for its employees; therefore, it cannot be overemphasized that only qualified and certified/licensed individuals shall operate these devices. The safety rules and guidance in this policy and subsequent procedures apply to all operations at Piazza Inc. that involve the use of cranes and hoists installed in or attached to buildings and to all Piazza Inc. employees, supplemental labor, and subcontractor personnel who use such devices. Piazza Inc. will ensure that all crane operations will be in compliance with OSHA's Crane Standard, State and local regulations.

### **Responsibilities**

#### **Supervisors are responsible for:**

- Ensuring that employees under their supervision receive the required training and are certified and licensed to operate the cranes and hoists in their areas.
- Providing training for prospective crane and hoist operators. This training must be conducted by a qualified, designated instructor who is a licensed crane and hoist operator and a full-time Piazza Inc. employee.
- Evaluating crane and hoist trainees using the Crane Safety Checklist and submitting the Qualification Request Form to the Safety Office to obtain the operator's license.
- Ensuring that hoisting equipment is inspected and tested monthly by a responsible individual and that rigging equipment is inspected annually.

#### **Crane and Hoist Operators are responsible for:**

- Operating hoisting equipment safely.
- Conducting functional tests prior to using the equipment.
- Selecting and using rigging equipment appropriately.
- Having a valid operator's license on their person while operating cranes or hoists.
- Participating in the medical certification program, as required.

#### **Engineering/Maintenance/Operations Department is responsible for:**

- Performing annual maintenance and inspection of all Piazza Inc. cranes and hoists that are not covered by a program with maintenance responsibility.
- Conducting periodic and special load tests of cranes and hoists.
- Maintaining written records of inspections and tests, and providing copies of all inspections and test results to facility managers and building coordinators who have cranes and hoists on file.
- Inspecting and load testing cranes and hoists following modification or extensive repairs (e.g., a replaced cable or hook, or structural modification).
- Scheduling a non-destructive test and inspection for crane and hoist hooks at the time of the periodic load test, and testing and inspecting before use new replacement hooks and other hooks suspected of having been overloaded. The evaluation, inspection, and testing may



include, but are not limited to visual, dye penetrant, and magnetic particle techniques referenced in ASME B30.10 (Hooks, Inspection and Testing).

- Maintaining all manuals for cranes and hoists in a central file for reference.

### **Safe Operating Requirements**

All workers who use any Piazza Inc. crane or hoist shall have an operator's license and/or proper qualification/certification in accordance with the OSHA Crane Standard and other State and local requirements. The company issues licenses for authorized employees who have been specifically trained in crane and hoist operations and equipment safety.

### **Crane and Hoist Operators**

Crane operators shall be certified in safe crane operations by the Piazza Inc. audited company certification program, accredited testing organization, and/or a State or local licensing requirement that meets the requirements outlined in the OSHA Crane Standard.

### **Signal Persons**

Signal persons will be trained by Piazza Inc. or a qualified third party in the standard signaling requirements prior to engaging in any crane signaling required under the OSHA Crane Standard unless voice communications equipment (telephone, radio, or equivalent) is used. Signal persons must have training certification (wallet card) present at the job site.

Signals shall be discernible or audible at all times. Some special operations may require addition to or modification of the basic signals. For all such cases, these special signals shall be agreed upon and thoroughly understood by both the person giving the signals and the operator, and shall not be in conflict with the standard signals.

## **GENERAL REQUIREMENTS**

Fatalities and serious injuries can occur if cranes are not inspected and used properly. Many fatalities can occur when the crane boom, load line or load contacts power lines and shorts electricity to ground. Other incidents happen when workers are struck by the load, are caught inside the swing radius or fail to assemble/disassemble the crane properly. Due to the hazards mentioned the following precautions must be taken:

- Crane operators qualified by training or experience shall be allowed to operate equipment and machinery by one of the following methods:
- Certification by an accredited crane operator testing organization
- Qualification by an audited employer program
- Qualification by the U.S. military
- Licensing by a government entity
- Only qualified and experienced employees should be used as spotters and crane signalers
- A pre-lift meeting shall take place before any lift begins, and the meeting shall be documented.
- Cranes are to be operated only by qualified and trained personnel.
- A designated competent person must inspect the crane and all crane controls before use. A competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- Be sure the crane is on a firm/stable surface and level.
- During assembly/disassembly do not unlock or remove pins unless sections are blocked and secure (stable).
- Fully extend outriggers and barricade accessible areas inside the crane's swing radius.
- Watch for overhead electric power lines and maintain at least a 20-foot safe working clearance from the lines.
- Inspect all rigging prior to use; do not wrap hoist lines around the load.
- Be sure to use the correct load chart for the crane's current configuration and setup, the load weight and lift path.
- Do not exceed the Working Load Limit (WLL) or load chart capacity while making lifts.
- Raise load a few inches, hold, verify capacity/balance, and test brake system before delivering load.
- Do not move loads over workers.
- Be sure to follow signals and manufacturer instructions while operating cranes.

## **GROUND CONDITIONS**

The designated competent person will ensure that appropriate ground preparations have been provided before crane operations begin.

## ASSEMBLY / DISASSEMBLY

- When assembling or disassembling equipment or attachments, affected workers will comply with all applicable manufacturer’s prohibitions.
- All crane assembly and disassembly will be directed by the designated competent person and the designated qualified person. Qualified person means a person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project

## POWER LINES

- The work zone shall be identified by demarcating boundaries such as flag and range limiting devices, or defining the work zone as 360 degrees around the equipment up to the maximum working radius. The hazard assessment must determine if any part of the equipment could get closer than 20 feet to a power line.
- If any part of the equipment will get closer than 20 feet from a power line pushing up to 1,000 kV during assembly, disassembly, or equipment operations, the line will be de-energized and visibly grounded at the worksite OR the appropriate table at 29 CFR 1926 Subpart CC will be used to determine the minimum safe distance based on the line’s actual voltage).
- When working near power lines pushing over 1,000 kV, the minimum clearance distance will be established by the utility owner/operator or a registered professional engineer who is a qualified person with respect to electrical power transmission and distribution. The designated qualified person will verify and obtain documentation regarding the established safe distance.
- When traveling under or near power lines with no load, the boom, mast, and boom mast support system will be lowered sufficiently to meet the specified safe distance clearance requirements.

Table A — Minimum Clearance Distances	
Voltage (nominal, kV, alternating	Minimum clearance distance (feet)
up to 50	10
over 50 to 200	15
over 200 to 350	20
over 350 to 500	25
over 500 to 750	35
over 750 to 1000	45
over 1,000	(as established by the utility owner/operator or registered professional engineer who is a qualified person with respect to electrical power transmission and distribution).

## **INSPECTIONS**

- Modified and/or repaired equipment will be inspected by the designated qualified person after the modifications and/or repairs have been completed, but before initial use.
- Upon completion of assembly, the equipment will be inspected by the designated qualified person to assure that it is configured in accordance with manufacturer's equipment criteria.
- Prior to each shift, the designated competent person will perform a visual inspection of the equipment that will be used.
- Once each month, all of the equipment that is in service will be inspected by the designated qualified person in accordance with the crane inspection criteria established at 29 CFR 1926 Subpart CC.
- Once each year, the designated qualified person will conduct a comprehensive inspection of all equipment that is in service in accordance with the crane inspection criteria established at 29 CFR 1926 Subpart CC.
- Safety devices are required to be on all equipment and must be in proper working order before operations begin. If any of the devices are not in proper working order the equipment must be taken out of service and operations must not resume until the device is working properly again.
- Examples of safety devices may include: crane level indicator, boom stops, jib stops, foot pedal brake locks, horns, etc.
- When the equipment is used frequently enough that there is a reasonable possibility of damage or excessive wear, affected Piazza Inc. workers will stop using the equipment and take it out of service until it passes inspection by the designated qualified person based on the inspection criteria established at 29 CFR 1926 Subpart CC.
- Equipment that has been idle for three (3) months or more must pass inspection by the designated qualified person based on the inspection criteria established at 29 CFR 1926 Subpart CC before it can be used.

## **QUALIFICATIONS OF MAINTENANCE AND REPAIR EMPLOYEES**

Maintenance, inspection and repair personnel are allowed to operate the equipment only under the supervision of the designated qualified person. Modifications or additions that may affect the capacity or safe operation of the equipment must not be made without written approval from the manufacturer or approval from a registered professional engineer.

## **WIRE ROPE INSPECTIONS**

- Prior to each shift, the designated competent person will perform a visual inspection of any wire rope that is intended for use during the subsequent shift.
- Once each month, all of the wire rope that is in service will be inspected by the designated qualified person in accordance with the wire rope inspection criteria established at 29 CFR 1926 Subpart CC.
- Once each year, the designated qualified person will conduct comprehensive inspections of all wire rope that is in service in accordance with the wire rope inspection criteria established at 29 CFR 1926 Subpart CC.

## **WIRE ROPE SELECTION AND INSTALLATIONS**

- The designated competent person will ensure that original equipment wire rope is selected and installed in accordance with the requirements established at 29 CFR 1926 Subpart CC.
- The designated competent person will ensure that selection of replacement wire rope is in accordance with the recommendations of the wire rope manufacturer, the equipment manufacturer, or the designated qualified person.

## **OPERATIONAL AIDS**

All manufacturer procedures applicable to the operational functions of equipment, including its use with attachments, must be complied with. The operator shall have access to procedures applicable to the operation of the equipment. Procedures include rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions and operator's manual. The designated competent person will ensure that the following operational aids, when applicable, are present on all equipment:

- Boom hoist limiting device;
- Luffing jib limiting devices;
- Boom angle or radius indicator;
- Jib angle indicator;
- Boom length indicator;
- Load weighing and similar devices.

All affected Piazza Inc. workers will comply with all manufacturer procedures applicable to the operational functions of equipment, including its use with attachments.

## **AUTHORITY TO STOP OPERATIONS**

Whenever there is a concern about safety, the designated equipment operator has the authority to stop and refuse to handle loads until the designated competent person has determined that the safety concern has been resolved.

## **ORDINARY LIFT PLANNING**

The designated leader shall ensure that the following pre-lift planning issues are addressed, as applicable, prior to the lift (a written plan beyond normal site work planning and control documents is not required, though may be desirable for more complex lifts). A Piazza Inc. Pre-Lift Checklist may be used as documentation that a pre-lift meeting and pre-lift plan is in place. Also, for construction lifts involving multiple mobile cranes or temporarily installed overhead cranes, a written lift plan is required (refer 29CFR 1926.1432).

- Identify the item to be moved, its intrinsic characteristics (e.g., load integrity, loose materials, liquids), weight, dimensions, its center of gravity, its ability to support imposed lifting forces (both the load and any lift points), and whether it contains any hazardous or toxic materials.
- Validate the loads path and clearances.
- Identify lifting equipment and rigging to be used by type and rated capacity.
- Prepare rigging sketches, as necessary.
- Evaluate the work area for conditions impacting crane setup operations (e.g., weather, soil bearing capacity, underground utilities, clearances to power lines and other structures).
- Identify any special or site-specific operating procedures and special instructions.

## **CRITICAL LIFTS**

Any time a critical lift takes place, all safety concerns must be addressed and controls in place to eliminate identified hazards. Permits, if required, must be completed and approved per customer procedures.

### **Critical Lift Determination**

- A designated person shall classify each lift into one of the categories (ordinary, critical, personnel or pre-engineered production) prior to planning the lift. A lift shall be classified critical if any of the following conditions are met:
- If loss of control of the item being lifted would likely result in the declaration of an emergency as defined by the facility's emergency plan or construction site emergency plan.

- The load item is unique and, if damaged, would be irreplaceable or not repairable and is vital to a system, facility or project operation.
- The cost to replace or repair the load item, or the delay in operations of having the load item damaged would have a negative impact on facility, organizational, or budgets to the extent that it would affect program commitments.
- If mishandling or dropping of the load would cause any of the above noted consequences to nearby installations or facilities.
- For steel erection, a lift shall be designated as a critical lift if:
  1. The lift exceeds 75 percent of the rated capacity of the crane or derrick
  - OR
  2. The lift requires the use of more than one crane or derrick. (§1926.751)

Further site-specific criteria may be developed to supplement those cited above and may include criteria imposed by site or project safety basis requirements as well as lifting loads which require exceptional care in handling because of size, weight, close-tolerance installation or high susceptibility to damage as well as lifts using multiple pieces of lifting equipment.

Though lifting personnel may meet the above criteria, personnel lifts shall not be considered critical lifts and shall be conducted in accordance with 29 CFR 1926.1431 and ASME B30.23.

## **CRITICAL LIFT REQUIREMENTS**

Ensure that the requirements are met for ordinary lifts specified in each section of this standard for each particular equipment category. The operating organization shall appoint a Lift Supervisor for critical lifts. The Lift Supervisor shall be present at the lift site during the entire lifting operation. The Lift Supervisor shall:

Have the necessary knowledge and experience of the specific type of equipment and assigned lifting operations.

Understand the site rules and procedures addressing:

- Administrative requirements for lifting operations.
- Personnel assignments and responsibilities commensurate with job requirements.
- Selection of proper slings, rigging hardware, and lifting equipment.
- Recognition and control of hazardous or unsafe conditions.
- Job efficiency and safety.
- Critical-lift determination and documentation.

The Lift Supervisor shall ensure that a documented pre-job plan or procedure is prepared by qualified person(s) that defines the operation and includes the following:

Identify the item to be moved, its intrinsic characteristics (e.g., load integrity, loose materials, liquids), weight, dimensions, its center of gravity, its ability to support imposed lifting forces (both the load and any lift points), and whether it contains any hazardous or toxic materials.

Identification of operating equipment to be used by type and rated capacity (e.g., mobile crane, overhead crane, forklift).

Rigging sketches and/or descriptions

Operating procedures and special instructions to operators including rigging precautions and safety measures to be followed as applicable.

All rigging equipment used in critical lifts (i.e., slings, below-the-hook lifting devices, and rigging hardware) shall be proof load tested in accordance with applicable ASME standards.

Experienced operators who have been trained and qualified to operate the specific equipment to be used shall be assigned to make the lift.

Only designated, qualified signalers shall give signals to the operator. However, the operator shall obey a STOP signal at all times, no matter who gives the signal.

The procedure and rigging sketches shall be reviewed and approved by a qualified person, the responsible manager (or designee) and the responsible oversight organization (such as the safety or engineering departments) before the lift is made. Subsequent revisions shall be approved per site specific procedures.

A pre-lift meeting involving participating personnel shall be conducted prior to making a critical lift. The critical lift plan/procedure shall be reviewed and questions shall be resolved.

Prior to executing a critical lift, a qualified person shall verify that the as-installed rigging matches the configuration in the approved lifting plan.

If required by the critical lift procedure, a practice lift shall be done before the critical lift. Conditions for a practice lift should closely simulate actual conditions involving: weight, rigging selection and configuration, load movement path, and other relevant factors. Practice lifts should be done by the same crew using the same lifting equipment that will be used in the lift.

Although individual plans are generally prepared for critical lifts, multi-use plans may be employed to accomplish recurrent critical lifts. For example, a multi-use plan may be used to lift an item or series of similar items that are handled repeatedly in the same manner. However, if the lifting equipment or rigging must change to accomplish the lift, the critical lift plan must be revised and approved accordingly.

## **SIGNAL PERSON QUALIFICATIONS**



- The designated competent person will obtain documentation from a third-party qualified evaluator showing that the signal person meets the qualification requirements before that signal person gives any signals to operators.
- The designated competent person will ensure that the signaler qualification documentation is always available at the jobsite. The documentation will specify each type of signaling the signal person is qualified to perform.
- Workers who do not meet the qualification requirements are not permitted to work as signal persons. This includes those who have signal person qualification credentials, but whose actions indicate that they are not performing signaling as required.

## **SIGNALING**

A qualified signal person will be used in each of the following situations:

- When the point of operation is not in full view of the operator;
- When the view in the direction of travel is obstructed when the equipment is traveling; and/or
- When site-specific safety concerns are an issue because either the operator or the person handling the load determines that it is necessary

Signals to the operator will be given by standard hand signals, unless, the signals cannot be seen by the operator.

All directions given to the operator by the signal person will be given from the operator's direction perspective.

When standard hand signals can't be used safely, radios will be used for communication.

When radios are used, the operator and the signal person chosen for the project will be able to effectively communicate in the same language.

The devices used to transmit signals will be tested on site before beginning operations to ensure that the signal transmission is effective, clear and reliable.

Signal transmission will be performed through a dedicated channel, except where the crane is being operated on or adjacent to railroad tracks, and the actions of the equipment operator need to be coordinated with the movement of other equipment or trains on the same or adjacent tracks.

All operators will use a hands-free system to receive signals and communicate with the signal person.

Before beginning operations, the operator and signal person will contact one other and agree on the voice signals to will be used. Once the voice signals are agreed upon, further meetings are not needed unless: a worker is added or substituted, there is confusion about the voice signals, or a voice signal is to be changed.

Each voice signal will contain the following three elements, given in the following order.

1. Function (such as hoist, boom, etc.) direction;
2. Distance and/or speed; and
3. Function stop command.

If the ability to transmit signals is interrupted during operations, the designated equipment operator will safely stop all operations until the ability to transmit is re-established and proper signals can be given and understood.

If the designated equipment operator becomes aware of a safety problem and needs to communicate with the designated signal person, the designated equipment operator will safely stop all operations. Operations will not resume until both parties agree that the problem has been resolved.

Only the designated signal person may give signals to the operator, except in the case of an emergency.

Any worker may give the emergency stop signal if an emergency occurs. The designated equipment operator will safely stop all operations any time the emergency stop signal is given.

Before lift operations begin, the designated competent person will post a hand signal chart on the equipment or in a conspicuous place close to hoisting operations.

#### THE SIGNALER MUST ALWAYS:

- Be in clear view of the crane operator.
- Have a clear view of the load at all times.
- Keep people outside the load travel path.
- Ensure the load does not pass above people.
- Keep the crane away from power lines.
- Watch for other potential hazards during the lift.
- There should be only one designated signaler at a time. More than one will only confuse the operator.
- Wear a bright vest, or different colored hard hat that will help the operator identify who is currently in charge of signaling.
- Communication between the crane operator and the signal person shall be maintained continuously during all crane movements.
- If at any time communication is disrupted, the operator shall stop all crane movements until communication is restored.
- If there are any concerns regarding the signal or needs to communicate with the signal person, the operator shall stop all crane movement.
- Crane movement shall not resume until the operator and the signal person agree the issue has been resolved.
- If it is desired to give instructions other than those provided by the established signal system, the crane movements shall be stopped.

## **BASICS WHEN USING RADIO COMMANDS:**

- Discuss the lift plan with the operator and agree on signals to be used.
- All directions shall be given from the operator's direction perspective.
- Use a secure frequency, free of distracting chatter.
- Use specific names not just titles. (i.e. "Jim" or "Tom Smith" as opposed to just "operator").
- Command names should be same as the hand signal names, (i.e. "Use whip line", "Boom down", "Boom Up", etc.).
- Each series of voice signals shall contain three elements stated in the following order:
  - Function and direction
  - Distance and/or speed
  - Function stop (i.e. "swing right 15 feet, 10 feet, 5 feet, 2 feet, swing stop)
- Once lift has begun, the signaler should never break communication with the operator. This is referred to as "constant communication".
- Never un-key the mic while the load is moving. The signaler should repeat the command to let the operator know everything is alright: (i.e. "slowly down, slow, slow....").
- If the signaler breaks communications (un-keys mic), the operator should stop immediately.

## **RIGGER QUALIFICATIONS**

- The designated competent person will ensure that any worker being considered for designation as a qualified rigger has the knowledge, experience and expertise to serve in that capacity.
- The designated competent person will ensure that the documentation used to help determine that a worker is a designated qualified rigger is always available at the jobsite. The documentation will specify the types of rigging that the rigger is qualified to perform.
- Workers who do not meet the qualification requirements are not permitted to work as qualified riggers, including those who have qualified rigger credentials, but whose actions indicate that they are not performing rigging operations as required.

## **FALL PROTECTION**

The designated competent person will ensure that adequate fall prevention and/or protection is provided any time a worker is exposed to a fall of 6 feet or more to a lower level or to an object below.

## **WORK AREA CONTROL**

The designated competent person will take measures to protect Piazza Inc. workers from reasonably foreseeable risks of being struck by and/or pinched or crushed by the equipment's rotating superstructure.

All affected Piazza Inc. workers will be trained to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure.

The designated competent person will ensure that control lines, warning lines, railings or similar barriers are erected to mark the boundaries of the hazardous areas, unless it is infeasible to do so.

Where it is infeasible to erect barricades, the hazard area will be marked by a combination of warning signs (such as "Danger-Swing/Crush Zone") and high visibility markings on the equipment. The designated competent person will ensure that all affected Piazza Inc. workers are trained with regard to what these markings signify.

Before any worker goes to a location in the hazard area that is out of the view of the operator, the worker will ensure that the operator is informed that he is going to that location.

## **KEEPING CLEAR OF THE LOAD**

Where available, affected workers will use hoisting routes that minimize their exposure to hoisted loads.

- While a suspended load is not moving, only the following Piazza Inc. workers will be allowed in the fall zone.
- Workers engaged in hooking, unhooking or guiding a load; and
- Workers engaged in the initial attachment of the load to a component or structure.

When affected Piazza Inc. workers must be in the fall zone the following will apply:

- The materials being hoisted will be rigged to prevent unintentional displacement;
- Hooks with self-closing latches or their equivalent will be used; and
- The rigging will be done only by the designated qualified rigger.
- Only workers receiving the load are allowed in the fall zone when the load is being landed.

During tilt up or tilt down operations, the following will apply:

- No worker may be directly under the load; and
- Only workers who are essential to the operation can be in the fall zone, but may never be

directly under the load. A worker is considered to be an “essential worker” only when it is infeasible for that worker to perform the operation from outside the fall zone and he is physically guiding the load, closely monitoring and giving instructions regarding the loads movement, or must detach the load or initially attach the load to another component or structure.

## **FREE-FALL AND CONTROLLED LOAD LOWERING**

Use of equipment in which the boom is designed to free fall is prohibited when:

- A worker is in the fall zone of the boom or load;
- The load or boom is directly over a power line or other hazardous area;
- The load is over a shaft in which workers are present;
- The load is over a cofferdam in which workers are present; or
- Lifting operations are taking place in a refinery or a tank farm.

Where the use of equipment with a boom that is designed to free fall is prohibited, the boom hoist will have a secondary mechanism or device designed to prevent the boom from falling in the event the primary system fails.

Hydraulic telescoping booms will have an integrally mounted holding device to prevent the boom from retracting in the event of hydraulic failure.

When a worker is directly under the load being hoisted, or when the load is directly over a power line or any other hazardous areas, controlled load lowering is required and free fall of the loadline is prohibited.

## **HOISTING PERSONNEL - PERSONNEL PLATFORMS**

Lifting equipment will not be used to hoist workers.

Personnel platforms will be used only as a last resort. All other avenues of elevated work should be explored and eliminated before working from a personnel platform.

The number of employees occupying the personnel platform shall not exceed the manufacturer’s load rating specification.

Personnel platforms shall be used only for employees and their tools necessary to do their work, and shall not be used to hoist materials and/or equipment.

Materials and tools for use during a personnel lift shall be secured to prevent displacement.

Materials and tools for use during a personnel lift shall be evenly distributed within the confines of the platform while the platform is suspended.

Employees shall keep all parts of the body inside the platform during raising, lowering, and positioning. This provision does not apply to an occupant of the platform performing the duties of a signal person.

Before employees exit or enter a hoisted personnel platform that is not landed, the platform shall be secured to the structure where the work is to be performed, unless securing to the structure creates an unsafe situation.

Hoisting of employees shall be promptly discontinued upon indication of any dangerous weather conditions or other impending danger.

## **OVERHEAD JIB AND GANTRY CRANES**

Overhead jib and gantry cranes will be installed per manufacturer's directions.

Daily visual inspections before use will include:

- All functional operating mechanisms
- Operation of limit switch and associated components
- Hoist braking system for proper operation
- Deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems
- Hooks with deformation or cracks
- Hoist chains
- Cracks in welds or base structure
- Overhead cranes will be inspected monthly and documented by a competent person.
- Complete annual inspections will be performed by a qualified crane company.
- Any overhead jib or gantry crane/hoist that does not pass inspection will be immediately tagged out of service and reported to the appropriate supervisor.
- Repairs will be made by a qualified person.
- Before performing any maintenance or electrical maintenance on the equipment, de-energize the main switch supplying power to the equipment. Follow all pertaining lockout tagout procedures.
- Hoist operators shall read the operation manuals and heed all instruction and warning labels. They will be required to be familiar with the hoist and hoist controls before being authorized to operate the hoist or lifting system.

## **TRAINING**

The employer must train each operator and crew member assigned to work with the equipment on all of the following:

- Procedures to be followed in the event of electrical contact with a power line.
- Information regarding the danger of electrocution from the operator simultaneously touching the equipment and the ground.
- The importance to the operator's safety of remaining inside the cab except where there is an imminent danger of fire, explosion, or other emergency that necessitates leaving the

cab.

- The safest means of evacuating from equipment that may be energized.
- The danger of the potentially energized zone around the equipment (step potential).
- The need for crew in the area to avoid approaching or touching the equipment and the load.
- Safe clearance distance from power lines.
- Power lines are presumed to be energized unless the utility owner/operator confirms that the power line has been and continues to be de-energized and visibly grounded at the worksite.
- (Power lines are presumed to be un-insulated unless the utility owner/operator or a registered engineer who is a qualified person with respect to electrical power transmission and distribution confirms that a line is insulated.
- The limitations of an insulating link/device, proximity alarm, and range control (and similar) device, if used.
- The procedures to be followed to properly ground equipment and the limitations of grounding.
- Employees working as dedicated spotters must be trained to enable them to effectively perform their task.
- Employees who may be exposed to fall hazards while on, or hoisted by equipment under this section.
- Signal persons. Piazza Inc. will train each employee who will be assigned to work as a signal persons who does not meet the requirements of Sec. 1926.1428(c) in the areas addressed in that paragraph
- Competent persons and qualified persons will be trained regarding the requirements of this subpart applicable to their respective roles.
- Each employee who works with the equipment will be trained to keep clear of holes, and crush/pinch points and the hazards pertaining to those tasks.
- Each operator and each additional employee authorized to start/energize equipment or operate equipment controls (such as maintenance and repair employees), will be trained in the tag-out and start-up procedures.

## **TRAINING ADMINISTRATION**

Piazza Inc. management will evaluate each employee required to be trained under this subpart to confirm that the employee understands the information provided in the training.

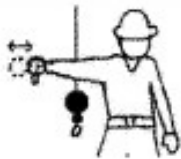





Refresher training in relevant topics will be provided for each employee when, based on the conduct of the employee or an evaluation of the employee's knowledge, there is an indication that retraining is necessary.

Whenever training is required under subpart CC, the training will be provided at no cost to the employee.

**APPENDIX A TO SUBPART CC OF PART 1926—STANDARD HAND SIGNALS**



 <p><b>STOP</b> – With arm extended horizontally to the side, palm down, arm is swung back and forth.</p>	 <p><b>EMERGENCY STOP</b> – With both arms extended horizontally to the side, palms down, arms are swung back and forth.</p>	 <p><b>HOIST</b> – With upper arm extended to the side, forearm and index finger pointing straight up, hand and finger make small circles.</p>
 <p><b>RAISE BOOM</b> – With arm extended horizontally to the side, thumb points up with other fingers closed.</p>	 <p><b>SWING</b> – With arm extended horizontally, index finger points in direction that boom is to swing.</p>	 <p><b>RETRACT TELESCOPING BOOM</b> – With hands to the front at waist level, thumbs point at each other with other fingers closed.</p>
 <p><b>RAISE THE BOOM AND LOWER THE LOAD</b> – With arm extended horizontally to the side and thumb pointing up, fingers open and close while load movement is desired.</p>	 <p><b>DOG EVERYTHING</b> – Hands held together at waist level.</p>	 <p><b>LOWER</b> – With arm and index finger pointing down, hand and finger make small circles.</p>
 <p><b>LOWER BOOM</b> – With arm extended horizontally to the side, thumb points down with other fingers closed.</p>	 <p><b>EXTEND TELESCOPING BOOM</b> – With hands to the front at waist level, thumbs point outward with other fingers closed.</p>	 <p><b>TRAVEL/TOWER TRAVEL</b> – With all fingers pointing up, arm is extended horizontally out and back to make a pushing motion in the direction of travel.</p>

 <p><b>LOWER THE BOOM AND RAISE THE LOAD</b> – With arm extended horizontally to the side and thumb pointing down, fingers open and close while load movement is desired.</p>	 <p><b>MOVE SLOWLY</b> – A hand is placed in front of the hand that is giving the action signal.</p>	 <p><b>USE AUXILIARY HOIST (whipline)</b> – With arm bent at elbow and forearm vertical, elbow is tapped with other hand. Then regular signal is used to indicate desired action.</p>
 <p><b>CRAWLER CRANE TRAVEL, BOTH TRACKS</b> – Rotate fists around each other in front of body; direction of rotation away from body indicates travel forward; rotation towards body indicates travel backward.</p>	 <p><b>USE MAIN HOIST</b> – A hand taps on top of the head. Then regular signal is given to indicate desired action.</p>	 <p><b>CRAWLER CRANE TRAVEL, ONE TRACK</b> – Indicate track to be locked by raising fist on that side. Rotate other fist in front of body in direction that other track is to travel.</p>
 <p><b>TROLLEY TRAVEL</b> – With palm up, fingers closed and thumb pointing in direction of motion, hand is jerked horizontally in direction trolley is to travel.</p>		