CDA

Chicago Department of Aviation

CONSTRUCTION SAFETY MANUAL

NOVEMBER 2024

O'HARE & MIDWAY INTERNATIONAL AIRPORTS

DISCLAIMER NOTICE

The information contained herein was prepared and presented with reasonable care and is based on the most reliable information available to the author. The City of Chicago and the Chicago Department of Aviation makes no warranty, expressed or implied, of the fitness, accuracy, or completeness of this information. Judgments as to the suitability of the information herein for the user's purposes are necessarily the user's responsibility.

INTRODUCTION

The Contractor/Tenant shall have sole and complete responsibility for the implementation of a project or jobsite safety plan. The Contractor/Tenant shall take necessary precautions for the health and safety of employees and fully comply with applicable provisions of:

- All sections of 29 CFR 1926 – OSHA Construction Industry Safety and Health Standards or appropriate safety and health standards
- All sections of 29 CFR 1910 – OSHA General Industry Safety and Health Standards or appropriate safety and health standards
- FAA Advisory Circular 150 Operational Safety on Airports During Construction 5370-2G
- All applicable standards from American National Standards Institute
- All nationally recognized standard developing agencies
- National Fire Protection Association code
- National Electric Code
- Local safety, building and electric codes
- Any other applicable standards

Due to the changing nature of health and safety regulations and because new information is constantly becoming available, this plan is subject to change without notice. Any omission of an OSHA standard, in part or its entirety does not in any way relieve a contractor from any safety requirement.

This document and applicable OSHA standards represent minimum requirements all contractors must meet. It is expected all contractors working on these projects will not only meet but exceed these requirements.

This document is not:

- A substitute for a contractor project-specific safety program; contractors are required to develop a project-specific safety program. Contractors can use this document as a reference when developing their project-specific safety plan for projects at O'Hare or Midway International Airports. Contractors must consult the resources listed above for the most current requirements.
- Intended to be a substitute for federal, state, or local regulations or standards.
- Intended to provide or interfere with a contractor's means and methods to perform its contractual obligations.

Compliance with this document does not guarantee compliance with standards nor requirements of the Occupational Safety and Health Administration.

Chicago Department of Aviation

Construction Safety Management Plan

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Definitions

- **Airport** means O'Hare International Airport and Midway International Airport
- **ATS** is Airport Transit System
- **CFD** is the Chicago Fire Department
- **Competent Person** means one who is trained to identify existing and predictable hazards in the surroundings or site conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them, as defined by the Occupational Safety and Health Administration (OSHA). Contractors are required to
    - determine the applicability of this person's role in its overall safety program. The requirement for a competent person is separate from the need and appointment of a designated safety representative or safety manager.
- **CM** is the Construction Manager
- **CMR** is the Construction Manager at Risk
- **Contracto**r means, broadly, any construction manager, general contractor, subcontractor, vendor, supplier, tenant, or material supplier.
- **Designated representative** means owner's representative of the contractor
- **Employee** means any person or persons on the payroll of any participant that is undercontract with the owner through the contractor or CDA.
- **FAA** is the Federal Aviation Administration
- **FOD** is Foreign Object Debris or Damage
- **General Contractor** means the company responsible for the day-to-day oversight of a construction site, management of vendors and trades, and the communication of information to all involved parties throughout the course of a project.
- **General Contractor's Safety Program** means the program covering worksite and property damage prevention that the contractor must submit to by CDA.
- **General Contractor's Safety Representatives** are those people assigned as Safety Manager or Safety Representative who have met the requirements outlined in this Construction Safety Manual.
- **H&R** is the **H**eating & **R**efrigeration plant for the Chicago Department of Aviation.

- **JHA** means **J**ob **H**azard **A**nalysis

- **Jobsite**, or onsite, means the location where work is expressly required under the applicable contract documents.

- **Midway Communication Center** means **MCC**

- **Near miss** means an unplanned event that has the potential to cause, but does not actually result in human injury, environmental or equipment damage, or an interruption to normal operation.

- **O'Hare Communication Center** means **OCC**

- **Owner** means City of Chicago; Chicago Department of Aviation (CDA)

- **Participant** means the contractor, subcontractor, or their employees under contract with the owner.

- **Project Management Office (PMO)** means the entity retained to provide overall management services for the Chicago Department of Aviation.

- **RPE** means a registered-professional engineer.

- **Safety Management System (SMS)** is the formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls.

- **Subcontractor** means any person or persons, partnership, joint venture, corporation, or other entity performing work at the jobsite, under contract to either the general contractor or one of its subcontractors.

- **Vendors, Suppliers and Materials Dealers** means those persons or entities and/or their employees whose activities on the jobsite are solely for loading, hauling, and/or unloading of materials or equipment at or from the jobsite.

Statement of Policy and Intent

The Chicago Department of Aviation Construction Safety Manual reflects the desire to prevent injuries to persons and to prevent damage to property and equipment.

No phase of construction is of greater importance than accident prevention and CDA asserts that accidents resulting in personal injury and damage to property and equipment represent needless waste and loss. It shall be our policy to conduct all operations safely and thereby prevent injuries to persons, damage to property and reduction of unplanned business interruption.

Planning for safety shall start with design and continue through purchasing, fabrication, and construction in all phases in construction. All practical steps shall be taken to maintain a safe place to work. The contractors must accept the responsibility for the prevention of accidents on work under their direction and shall be responsible for the thorough safety training of their employees.

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Program Objectives

The objective of the Chicago Department of Aviation Construction Safety Manual is to prevent or eliminate all hazards and risks associated with the construction projects for the Chicago Department of Aviation at O'Hare and Midway International Airports. Everyone associated with this project has the responsibility to protect workers and the public from injury and to prevent damage to property.

The success of this program relies on each contractor and each employee to perform work in the safest manner possible, ensuring that all contractors achieve the following objectives:

- Hazard identification and communication.
- Hazard elimination where applicable.
- Providing a safe environment for employees to perform high quality work.
- Using safety planning as a tool to reduce bodily injury and property damage.
- Conducting inspections to locate and abate unsafe conditions and practices.
- Protecting the public and property in all staging and construction sites.
- Maintaining mandatory personal protective equipment programs.
- Using incident investigation information to abate deficiencies and increase controls to prevent similar accident recurrence.

NOTE:

The CDA Construction Safety Manual does not supersede the contractor's safety program except where this manual exceeds the requirements of the contractor's program. This manual does supersede previous versions of the Construction Safety Manual. The contractor shall have first and foremost responsibility to enforce the more stringent safety program and requirements. By complying with the requirements in this document, contractors must understand that it does not necessarily guarantee compliance with OSHA standards.

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Roles and Responsibilities

Chicago Department of Aviation

The Chicago Department of Aviation Safety is responsible for:

- Developing, maintaining, and updating the Construction Safety Manual.
- Distributing the Construction Safety Manual as necessary to the airport community.
- Ensuring that all contractors uphold the requirements of the Construction Safety Manual and report any violations of the Construction Safety Manual to the internal CDA contacts of contractors, Contracts, and Law sections for appropriate follow-up.
- Identifying the safety requirements for each construction project based on the criteria provided within this Construction Safety Manual.
- Coordinating information sharing amongst contractors on construction safety best practices and lessons learned; and
- Reviewing the credentials and approving all contractors' safety representatives.

Contractor Safety Representative Responsibilities

The contractor's safety representative is responsible for assuring compliance with OSHA and all applicable regulatory agencies. The safety representative is also responsible for coordinating the day-to-day safety-related activities to include hazard identification and abatement, safety inspections, training and:

- Provide appropriate written materials for those conducting toolbox talks or other safety-related training.
- Attend progress meetings and be prepared to discuss safety issues, either on-going or new items that occurred since the previous meetings.
- Promote total job safety among employees and visitors.
- Conduct and participate in contractor monthly safety meetings.
- Provide monthly statistical safety reports for the project to CDA Safety and/or their designee.
- Oversee the investigation of all incidents involving the contractor or subcontractors to determine the primary cause, any contributing factors, and the actions necessary to prevent reoccurrence.
- Follow-up on all recommendations from CDA Safety or other governing authorities. The safety representative must supply a written response with completion of the recommendation to CDA Safety and/or their designee within 24 hours.
- Provide a list of names for the employees deemed as a competent person for the appropriate standard where OSHA defines its need.
- Maintain an accurate list of those workers deemed as "competent person" as required by OSHA.
    - A copy of this list must be submitted monthly with the statistical safety reports.

Contractor Supervisor Responsibilities

The contractor's supervisor must be responsible for planning and executing all work to comply with this document, the contractor's safety program, contract specifications, and all applicable local, state, and federal regulations. In addition, contractor's supervisors must:

- Be knowledgeable of hazard identification and mitigation techniques as well as public protection requirements identified in the safety specifications of the contract documents.
- Require all workers to use the personal protective equipment in accordance with the contractor's safety program and all federal, state, and local requirements.
- Assist in the investigation of incidents.
- Take the necessary steps to assist the safety representative in abating jobsite hazards.
- Cooperate with designated safety and government representatives.
- Enforce the requirements of this and the general contractor's safety programs and procedures as well as all applicable federal, state, and local regulations.

Contractor Employee Responsibilities

The success of a contractor safety program relies on its employees. Under this program, all contractor employees are required to:

- Perform all work in a safe manner.
- Accept responsibility for their safety and report all unsafe acts or conditions to their supervisor, and where necessary CDA Safety.
- Report all incidents, injuries, and illnesses immediately upon their occurrence. Report for medical treatment as directed and provide a physician's authorization before returning to work.
- Perform work in accordance with this program, the contractor's safety program and federal, state, and local regulations.
- Attend and participate in toolbox safety meetings and/or demonstrations as requested.
- Participate in accident investigations as requested.
- Protect fellow workers and the public from accidental injury.
- Protect equipment and tools from needless damage or loss from theft.
- Wear all required personal protective equipment as required.
- Use all safety devices provided by contractors.

Project and Jobsite Safety Personnel Requirements

CDA requires that all constructions projects at O'Hare or Midway International Airport have personnel designated with responsibilities for safety oversight. All contractors are required to have dedicated safety representation for their overall project that meet the requirements as listed below. CDA Safety maintains the overall authority to determine the type of safety person required for each job.

CDA Safety may reject safety representative candidates or ask the contractor to remove any safety representative at any time for not fulfilling the obligations of this manual.

Contractor Safety Candidate Vetting Process

Candidates assigned to work on projects as a safety representative may be subjected to a vetting process prior to the start of the project. The vetting process will assess the candidate's knowledge and experience for the level of safety coverage expected on the project.

The vetting process will be performed by CDA Safety and others as necessary. Once the candidate is accepted, he or she will be able to work on that project. Even though the candidate was accepted to work on a project, they must be resubmitted for future projects.

Process

The process contains two phases:

1. Review of the candidate's resume and supporting documentation
2. In-person interview conducted by CDA Safety and others as necessary to include:
    a. Verbal review of qualifications
    b. Developing a Job Hazard Analysis based on the project

Qualifications Review

Contractors must submit the candidate's resume to the CDA Safety and/or their designee for review and must contain the following information:

- Evidence of completion of the OSHA 30-Hour Safety and Health Standards for the Construction Industry. This must be current within five years of the project start date. If it is set to expire during the project, it must be updated, and the contractor must be provided proof of completion. If it expires, CDA Safety reserves the right to require the contractor to provide another candidate for the vetting process to replace that candidate.
- Evidence of completion for First Aid/CPR/AED and Stop the Bleed training and it must have been completed within the past 12 months. The candidate is required to maintain this card throughout the duration of the project.
- Evidence of safety experience on construction projects, developing and implementingjob hazard analyses, conducting safety inspections, safety training and orientations.

Candidates unable to complete this phase will not be considered for the safety representative on the project.

In-Person Interview

CDA Safety will interview the candidate to verify and explain duties from previous projects. The candidate will be required to develop a partial JHA based on project scope, using a current copy of the construction standards and the CDA Construction Safety Manual.

CDA Safety will review the JHA and discuss their findings with the contractor and/or others involved in the vetting process. Upon the completion of the Contractor Safety Representative Vetting Process, the CM Manager of Safety will notify the contractor of the candidate's acceptance or denial.

Safety Representative Qualifications

All safety representatives, whether dedicated or with dual responsibilities, are expected to perform the following duties:

- Ability to identify and communicate hazards.
- Ability to eliminate or control hazards.
- Stop work in the event of workplace hazards until corrective action has been implemented.
- Understand and implement Federal, State, and contractual safety regulations.
- Conduct a complete incident investigation and implement corrective actions.
- And communicate with field personal and project staff on relevant Health and Safety items.

CDA Safety and/or their designee reserves the right to accept, deny or replace any safety representative at any time should they not meet the expectations identified in the requirements for dedicated safety representatives and safety representatives with dual responsibilities.

Requirements for Dedicated Safety Representatives

Dedicated safety representatives cannot have any other duties, such as being an active trade worker, a foreman, superintendent, or a project manager. Some of the duties of the safety representatives include conducting safety orientation and training for construction personnel, conducting jobsite inspections, developing, and providing toolbox talks, and conducting incident investigations and identifying after action items.

All dedicated safety representatives are required to meet the following minimum requirements:

- A minimum of five (5) years of qualified project safety experience, which may include time spent in the role of a safety representative on large similar type construction projects that are representative of the planned construction activities.
- Evidence of completing the OSHA 30-Hour Safety and Health Standards for the Construction Industry within the last (5) years.
- Current CPR/First Aid/AED Certification provided by The American National Red Cross or equivalent training.
- Current Stop the Bleed Training Certification provided by the Chicago Department of Aviation or equivalent training.

Requirements for Safety Representatives with Dual Responsibilities

A safety representative with dual responsibilities is an individual, such as an active trade worker, a foreman, superintendent, or a project manager, that is also responsible for safety oversight on a designated job site. The duties of the safety representative with dual responsibilities include conducting jobsite inspections, developing, and providing job hazard analyses, developing, and providing toolbox talks, participating in incident investigations to identify action items, provide corrective actions, and communicate corrective actions to all appropriate staff on the project.

- A minimum of three (3) years of qualified project safety experience, which may include time spent in a similar role for dual responsibilities for a safety representative on large similar type construction projects that are representative of the planned construction activities.
- Evidence of completing the OSHA 30-Hour Safety and Health Standards for the Construction Industry (Construction Outreach Training or equivalent within the last (5) years.
- Current CPR/First Aid/AED Certification provided by The American National Red Cross or equivalent training.
- Current Stop the Bleed Training Certification provided by the Chicago Department of Aviation or equivalent training.

Requirement for Safety Manager

The Safety Manager must possess a minimum designation of Construction Health and Safety Technician (CHST) and have at least six (6) years of construction safety management experience on large-scale projects. The Safety Manager must be an employee of the contractor. If the safety manager does not possess a CHST designation or equivalent, it can be substituted with eight years of construction safety management on large scale projects. A safety manager shall be used on large scope projects when required by CDA Safety.

The safety manager must possess:

- Current CPR/First Aid/AED Certification provided by The American Red Cross, American Heart Association, or equivalent training.
- Current Stop the Bleed Training Certification provided by the Chicago Department of Aviation or equivalent training.

The Safety Manager is a dedicated, full-time position that cannot have any other function. A safety manager does not necessarily meet the requirements as a competent person.

Job Site Safety Staffing

The level of safety oversight per job site is dependent on contract specifications, the number of people working at that jobsite, or based on the scope of potential hazards. Prior to the start of each planned project, a pre-construction meeting will be held to identify staffing requirements per job site. CDA Safety will be notified of emergency work to ensure the contractor has adequate safety coverage and competent persons identified for the contractor.

In addition to a dedicated safety representative, projects will require additional dedicated safety representatives or safety representatives with dual responsibilities to cover all activities on the project whenever work is occurring, including nights and weekends. The following table identifies the number of safety representatives needed on each project per the number of employees. This ratio may chance based on the scope, size, and hazards identified for the job.

Project Required Safety Representative Requirements Table

Number of Project Employees	Required Number of Full-Time Safety Representatives
1 – 25	Dependent on-site hazards
26 - 100	1
101 – 200	3
201 – 400	5
401 or more	5 + 1 for each additional 100 employees

Depending on the amount of work performed at night or weekends, CDA Safety may require an additional safety representation on those shifts. The OCC/MCC shall be notified for all emergency/non-planned work at night. The OCC/MCC shall notify CDA Safety. All emergency work shall have a specified contractor designated competent person for the job performed.

All Construction Projects

Prior to the start of a construction project at O'Hare or Midway International Airport, the contractor must meet with CDA Safety to review their safety plan and determine if a dedicated safety representative is required for the project or if a safety representative with dual responsibilities will be sufficient given the size, scope, hazards, risk, and time associated with all work to be completed. Should it be determined that a competent person is sufficient for the project, such persons will be available on site whenever work requiring a competent person is being performed, including but not limited to scaffolding, excavation, confined space, fall protection, respirable silica dust exposure or any other operation identified by CDA Safety.

Project Safety Personnel Requirements Summary Table

Example Contract Type	Dedicated Safety Representative Minimum Safety Qualifications	Minimum Staffing based on Required Safety Representative Table
CIP, JOC, OMP, Tenant	OSHA 30-Hour for the Construction Industry current within 5 years 5 Years of verifiable construction safety experience Current First Aid/CPR from AHA/Red Cross or equivalent Current CDA Stop the Bleed Training or equivalent Passing CDA Safety Representative Vetting Process	1
Example Contract Type	Dual Role Safety Representative Minimum Qualifications	
CIP, JOC, OMP, Tenant	**<u>Contractor must obtain approval from CDA Safety for dual role</u>** OSHA 30-Hour for the Construction Industry current within 5 years 3 Years of verifiable construction safety experience Current First Aid/CPR from AHA/Red Cross or equivalent Current CDA Stop the Bleed Training or equivalent Passing CDA Safety Representative Vetting Process	1 per site based on scope of work as determined by CDA Safety
Example Contract Type	Safety Manager Minimum Qualifications	
Project Management Office (PMO), Construction Manager at Risk (CMAR)	Current CHST or equivalent certification with 6 years verifiable safety management experience on large scale projects > $100 M. May substitute certification with 8 of verifiable safety management experience on large scale projects > $100 M. OSHA 30-Hour for the Construction Industry current within 5 years Current First Aid/CPR from AHA/Red Cross or equivalent Current CDA Stop the Bleed Training or equivalent	1 per Contract

General Safety Requirements

Site-Specific Safety Programs

The contractor shall submit and implement its site-specific health and safety plan at the pre-construction safety meeting or when requested. CDA Safety and/or their designee will review the project-specific health and safety plan. **Corporate safety programs will not be accepted as a site-specific safety program.** The site-specific safety plan must address the safety hazards specific to the project, and include:

1. Review of Safety Procedures and Government Regulations

   Prior to the start of the project, the contractor shall review procedures, regulations, and industry standards applicable to the processes, equipment, materials, and procedures used at the worksite to evaluate whether hazards are present. The review must include federal, state, and local regulations and industry standards.

2. Review of Outside Sources

   The contractor must review federal, state, and local accident and illness statistics applicable to the activities they are undertaking to identify potential hazards and prevention techniques prior to the start of the project.

3. Review of Internal Records and Information

   CDA Safety and/or their designee shall review internal records of accidents, injuries, occupational illnesses, near-miss accidents, and safety violations to detect relationships between job hazards and recorded mishaps.

4. Job Hazard Analysis

   The contractor must develop a job hazard analysis (JHA) of each task of the project to determine what hazards exist relating to the procedures, processes, materials, and equipment used to perform each phase. To the greatest extent possible, each hazard identified in the JHA will be addressed to control or even eliminate it. A written JHA shall be prepared for each task prior to beginning that work and a copy shall be provided to CDA Safety and/or their designee. The JHA shall be communicated to all affected employees prior to beginning the phase of work. Each Contractor and/or subcontractor shall conduct a pre-shift production safety meeting and/or toolbox talk at the start of each shift.

5. Project Safety Inspections

   The contractor's site-specific health and safety plan must address project safety inspections to include frequency and methods to communicate its findings. Inspections must be conducted daily and forwarded to CDA Safety and/or their designee weekly.

6. Employee Safety Deficiency Reporting

   Contractors shall encourage, without discipline, employee reporting of safety deficiencies they observe. The reports can be made anonymously, verbally or written with name attached. Each report will be investigated, and any corrective actions will be identified and communicated to the employees. A copy of the report with corrective actions will be forwarded to the Project Manager and/or their designee.

7. Incident Investigations

   Every incident must be fully investigated by the safety representative and appropriate contractor. An incident investigation report must be generated within 24 hours of its occurrence identifying the cause of the incident, who or what was involved, date and time, weather conditions, diagrams or pictures of the scene and corrective actions taken to prevent reoccurrence. This report must also identify the timeframe to verify that corrective actions have been implemented. A copy of the incident report will be provided to CDA Safety or their designee. All reports should be emailed to CDA Safety at CDASAFETY@cityofchicago.org.

   Incident investigations should follow guidance provided in OSHA Incident Investigations: A Guide for Employers or the National Safety Council's How to Conduct an Incident Investigation training.

   If an imminent danger situation arises because of the incident, all nonessential personnel must be evacuated until the contractor or an authority having jurisdiction determines the area is safe for re-entry. CDA Safety and/or their designee must be immediately notified when this occurs and provide report on incident investigation and corrective action to be taken.

8. Safety Training

   The safety representative must assure all employees participate in health and safety hazard identification and prevention training. This will be accomplished by conducting safety orientations, toolbox talks, JHAs and OSHA's standard-specific training requirements. Training documentation and attendance sheets must be forwarded to the CDA Safety and/or when requested.

9. Maintenance of Safety Documentation

   The Contractor will maintain all safety-related documentation on site, making it available upon request by CDA or designated representatives for review. This must consist of, at a minimum:

   - Monthly summary reports of occupational injury and illnesses for the general contractor and all subcontractors.
   - Job Hazard Analysis
   - Safety Data Sheets
   - Fit testing, medical clearance documents, and training when required by OSHA standards
   - Incident investigations / Root Cause Analysis with corrective actions.
   - Safety inspections with appropriate corrective actions shown
   - Safety training records
   - Any OSHA citations from this project

- Toolbox Talks

10. Competent Person Identification

    The contractor is required to identify each competent person who is responsible for the various phases of work when OSHA standards require their involvement. OSHA defines a competent person as one who is trained to identify existing and predictable hazards in the surroundings or site conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate the hazard. The competent person can be a Safety Manager or Safety Representative provided that the designated safety representative or safety manager is properly trained.

    The contractor is required to identify a competent person for each phase of the project.

    The contractor will provide to CDA Safety and/or their designee a document listing each competent person. The document will identify the competent person and area of competency, the competent person's name and signature and the project manager's name and signature. Training documentation is also required to be submitted with the certification.

    The contractor will require the same from each of its subcontractors.

Please note: If urgent or emergency work is required outside of planned construction, the contractor is required to notify the O'Hare Communications Center or Midway Communications Center so that CDA Safety may meet the contractor on site and determine safety requirements, if needed. If work being performed will impact the airfield, CDA Airfield Operations must be notified.

Personnel Conduct

- Under no circumstances will alcoholic beverages or controlled substances be permitted or consumed on City property. Anyone found in possession of the above will be immediately removed from the site and prohibited from returning.
- Acts of violence or physical altercations will result in all participants being removed from the site.
- Firearms and weapons are prohibited on City property.
- Contractor personnel are required to obey all City of Chicago Security requirements prohibited from recording security processes and from using camera or video in the Airfield Operations Area (AOA) unless specifically required for the purposes of the project.

Identification and Reporting of Unsafe Conditions

The contractor shall immediately report to CDA Safety all accidents arising out of or relating to the performance of the work on the site, which caused death, personal injury, or property damage. A written report will be submitted with 24 hours of occurrence. If any claim is made by anyone against the contractor or any subcontractor regarding any accident, the contractor shall promptly report the facts in writing to CDA Safety with full details, including photographs of the claim.

- Report any incidents immediately to **O'Hare OCC (773)894-9111 | Midway MCC (773)838-9111**

Contractor Correction of Unsafe Conditions

If the Chicago Department of Aviation determines the contractor or one of its subcontractors is not in compliance with federal, state, local or project safety standards, CDA Safety can order a cessation of the non-compliant occurrence and require immediate corrective action. All costs associated with abatement shall be borne by the contractor deemed to be responsible and no time extension or additional costs shall be granted.

The contractor shall correct any unsafe condition existing on the project immediately upon receipt of written or verbal notice. The unsafe condition shall be corrected in accordance with applicable regulations at the contractor's expense. The contractor shall be responsible for all liability created from unsafe conditions, including but not limited to any legal expense, reinspection costs, and any delay to the project to other contractors.

Project Construction and Airfield Operations

To ensure the highest level of airfield safety is maintained a Construction Safety Phasing Plan (CSPP) will be developed for each specific project. The purpose of the CSPP is to identify all of the construction activities that will occur within the Airport Operations Area (AOA) of the airfield and determine how each construction area will comply with the requirements of FAR Part 139 and all applicable rules and regulations. Any deviations from the standards and regulations of the Advisory Circular (AC) will be identified within the CSPP.

The CSPP is a standalone document written to correspond with the safety and security requirements set forth in Advisory Circular 150/5370-2G, and the City of Chicago O'Hare International Airport's safety and security requirements, all local codes. The CSPP is to be used by all personnel involved in the project. The CSPP covers the actions and responsibilities of design, construction, inspection, and airport personnel.

Upon successful award of a project, the contractor will submit a "Safety Plan Compliance Document" (SPCD), which is a located in the CSPP, to identify that they have read and understand the CSPP and to identify how they will comply with all the requirements and safety procedures detailed within it. Any information not discussed in the originally CSPP or any changes to the constructability of the project must be outlined in the SPCD and submitted to the airport and FAA for review. The SPCD must be submitted to and approved by the airport prior to the Notice-to-Proceed (NTP) date for physical construction of the project.

In the event the contractor's activities are found to be in non-compliance with the requirements of the CSPP or SPCD, the airport's representatives will direct the contractor in writing to immediately stop all operations of that work until such time all deficiencies are mitigated and/or corrected to the satisfaction of the airport.

The CSPP and SPCD will be available on the jobsite. It is the responsibility of the contractor to ensure all construction personnel are familiar with the safety procedures and regulations of the airport.

Contractors are required to erect stop signs in all locations where project haul roads and site access roads intersect with airfield service roads, in accordance with FAA Part 139 standards. Contractors must maintain each sign it places.

Pre-Construction Safety Meeting

Prior to the start of the project, a representative of CDA Safety should be notified to participate and be engaged, the contractor's safety representative, project manager, general superintendent, and other key personnel will be required to participate in a pre-construction safety meeting conducted with CDA and/or their designee. CDA and/or their designee will develop and distribute the agenda before the meeting. Further, the CDA and/or their designee will take and distribute minutes of the meeting. All safety representative requirements will be discussed during this meeting.

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Activity-Specific Safety Requirements

The following sections describe general safety activity requirements that will be met by all personnel on site. Contractor safety programs shall meet these requirements as well as those topics not addressed in this document.

Hot Work

Hot work is defined as a process or procedure which could result in a fire if not properly controlled. Common types of hot work in construction include but are not limited to welding, burning, cutting, brazing, soldering, gasoline, or fuel storage areas repair, grinding, spark producing or heat generating activity.

Hot work will be permitted only during daytime hours unless otherwise authorized by the CDA Safety or their designee. Regardless of hours of the hot work activity, CDA Safety must be notified before beginning the hot work process. The area and surrounding areas must be inspected by the Contractor's Safety Representative and cleared of combustible and flammable materials. Contractors are to complete the hot work permit and post it within 50 feet of the activity. Contractors must oversee its subcontractors to assure it is following the same procedures.

Special considerations must be given to hot work activities that occur in the ring tunnel and the Heating and Refrigeration Facility and its associated locations. All hot work must follow the requirements of these areas as coordinated with the H&R Monitor Room and the Construction Manager (CM) or Construction Manager at Risk (CMR) if applicable.

If hot work is required to be performed inside active buildings and facilities, CDA Safety, CDA Facilities and/or their designee must be contacted by calling the H&R Monitor Room at (773) 686-2248 at least 24 hours in advance through the e-forms/Smartsheet process to initiate the hot work permitting process. For MDW, contact Airfield Operations at (773) 838-0677.

Contractors will issue all cutting/welding hot work permits to its employees and its subcontractor employees. Contractors must adhere to the requirements of 29 CFR 1926 Subpart J – Welding and Cutting before work commences and as it progresses to its end, including the following requirements:

1. Contractors shall not perform hot work without first completing a City approved FM Global hot work permit and submitting that through the e-form/Smartsheet process.
2. All flammable materials shall be removed from the areas before a permit is issued.
3. CDA Safety and/or their designee may assist in determining necessary precautions to safeguard life and property.
4. Contractors shall supply its own fire extinguishers for each welder and/or cutting torch.
5. Contractors shall supply its own fire watch for each hot work operation. The fire watch must remain at the location of each hot work operation based on the chart below. The person assigned to be a fire watch shall have no other responsibility while the area is under the fire watch requirement.
6. Contractors must provide an adequate number of welding screens (flash curtains), or similar, and be positioned to protect workers and the public from welding flashes.
7. All areas must be kept clear of trash.
8. Contractors must supply flammable-resistant clothing and appropriate shades of eye protection for its employees.

9. Gas cylinders must be upright and secured from tipping whether it is in use or stored.
10. When gas cylinders are stored or before moving, the valves must be closed, its gauges removed, and caps secured.
11. Valve caps shall not be used to lift cylinders.
12. Gas cylinders are prohibited inside confined spaces.
13. Employees need to "crack" fuel cylinders before attaching gauges.
14. Oils and similar substances must be kept away from oxygen cylinders. Employees are not allowed to use any compressed air to clean their skin or clothing. Oxygen can react with oil on the skin and cause fires.
15. Employees must be aware of changing atmospheric conditions caused by welding and cutting, especially in enclosed areas. Proper and efficient ventilation must be established and operational before any welding or cutting process begins and kept operational to maintain safe conditions.
16. All operations must cease immediately when any leaks from hoses, valves or torches are detected.
17. Electrode holders and welding cables must be free of defects and capable of handling the maximum intended current of the holders.
18. Employees must be appropriately trained in welding operations and follow the manufacturer's operating procedures.
19. Oxygen cylinders must be separated from fuel cylinders by at least 20 feet or a non-combustible barrier (fire wall) at least five feet high and be rated with a fire resistance of at least 30 minutes.
20. Fire suppression systems must remain operational during the hot work operation unless it is infeasible. The contractor is to notify all affected entities and coordinate alternative methods of fire protection as required by the Chicago Fire Department. These notifications must be made, and approvals obtained via a CDA Users Form or similar before work can begin. All impairments must comply with the FM Red Tag Permit Program. Additionally, all impairments to the fire suppression system must be coordinated through the O'Hare H&R Monitor Room at (773) 686-2248 for all O'Hare projects or the designated airport managing company for all Midway projects at (773) 948-6900

Hot Work Fire Watch & Monitoring Guidelines

Classification of Area	30 Minute	60 Min	60 Min + 1 HR	60 Min + 2 HR	60 Min + 3 HR	Special
Building Construction Noncombustible	X					
Occupancy is Noncombustible	X					
Occupancy is confined to metal hard pipe systems/tanks which if combustible must be properly drained, cleaned, purged and locked-out	X					
All other Conditions		X				
Noncombustible or FM Approved Class 1 Construction. No Combustible roof or wall features (skylights, light, bands, stucco-faced foam plastic)			X			
Occupancy involves an open production floor environment, typical office without accumulated paper, open laboratories, etc. (including terminal areas)			X			
Warehouse storage of materials of low combustibility (including baggage handling areas)				X		
Combustible roof covering or combustible roof features (skylights)					X	
Combustible wall coverings or assemblies without concealed spaces (including stucco-faced foam plastic construction and foam plastic metal sandwich panels)					X	
Torch applied roofing system installations on any roof					X	
Combustible construction with concealed spaces in walls, floors, ceilings, or roofs						X
Storage of bulk combustible materials such as wastepaper, baled paper, granular plastic, etc. or other storages where burrowing fires can occur						X
Production operations where combustible dust deposits are normally present in significant quantities to allow smoldering fires						X

NOTES:

1.) Non-open flame hot work in a classified area requires a constant fire watch during work but does not require post work constant fire watch or periodic monitoring.

2.) Non-open flame hot work in a non-classified area does not require constant fire watch during work, post work constant fire watch or periodic monitoring.

3.) Circumstances that can require fire watch or precautions longer than 4 hrs. are classified under SPECIAL.

Electrical Safety

Contractors using or installing electrical systems, whether it is temporary or permanent wiring, are required to follow all requirements of 29 CFR 1926 Subpart K – Electrical, and appropriate national and local electrical codes. Contractors must also comply with the requirements of NFPA – 70E when needed.

The following addresses some of the requirements of Subpart K and it is the responsibility of each contractor to protect its employees from electrocution hazards by applying the appropriate sections of this subpart.

Equipment Grounding Conductor Program

Ground-fault circuit interrupters (GFCI) must always be used. Additionally, an equipment inspection program shall be established on the construction site covering all cord sets and receptacles not a part of the permanent wiring of the building or structure, and tools which are available for use or used by employees. The program must comply with the following minimum requirements:

1. Each cord set, attached cap, plug and receptacle or cord set, and any equipment or tool connected by the cord and plug, except cord sets and any receptacles fixed and not exposed to damage shall be visually inspected before each day's use for external defects such as deformed or missing pins or damage to insulation. Equipment found to be damaged or defective shall be tagged and removed from service until is repaired, replaced, and tested.
2. The following tests shall be performed on all sets and receptacles which are not a part of permanent wiring of the building or structure. Cord plug-connected equipment required to be grounded is also subject to the following:
    a. All tools and cord sets shall be tested for grounding continuity.
    b. Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment-grounding conductor. The equipment-grounding conductor shall be connected to its proper terminal.
3. All tests shall be performed:
    a. Before first use
    b. Before equipment is returned to service following any repairs, and
    c. Before equipment is used after any incident which can be reasonably suspected to have sustained damage (for example, when a cord set is run over), and
    d. At intervals not to exceed three months
4. The results of the tests shall be recorded to include the last date of the test, its interval and the item tested. The record shall be kept by means of a log, color-coding or other effective means and shall be current and available on site for review.

Electrical Tools and Cords

1. Double insulated tools and appliances do not need to be grounded. The device must identify that it is double insulated as determined by the manufacturer.
2. Extension cords must be rated for hard- or extra-hard usage as defined by the National Electrical Code, consisting of three wires and a ground pin.
3. Extension cords must be sufficiently long to reach the device from the service outlet without allowing extension cords to be plugged into one another.

4. Cords must be kept seven feet above the working surfaces and secured to prevent potential cord damage and tripping hazards.
5. Any tool and cord in need of repair will be removed from service immediately. The tool will be rendered inoperable, either by tagging, removing the end plug or locking it until it is repaired and tested.

Electrical Panels and Temporary Wiring

1. All energized panels shall be marked with its operating voltage by the installing contractor.
2. All energized panels shall have its live parts covered and protected from accidental contact with an appropriate solid cover. Cardboard covers do not meet this requirement.
3. All temporary wiring shall be installed in accordance with 29 CFR 1926.405 and 29 CFR 1926.417 as it pertains to construction.
4. All temporary panels and boxes must be fitted with bushings to protect conductors. Knockout holes in the panel shall remain intact when not needed.
5. Temporary panels shall be protected from weather with canopies or covers when outdoors.

Lockout/Tagout Procedures

Contractors are required to implement lockout/tagout procedures to disable machinery or equipment, thereby preventing the release of hazardous energy while employees perform servicing and maintenance activities. Contractors must preplan their work to control hazardous energy, including:

- electrical
- mechanical
- hydraulic
- pneumatic
- chemical
- thermal
- other energy sources

Contractors are required to adhere to the requirements established in 29 CFR 1910.147 – The Control of Hazardous Energy (lockout/tagout).

The lockout/tagout standard establishes requirements that employers must follow when employees are exposed to hazardous energy while servicing and maintaining equipment and machinery. Some of the most critical requirements from these standards are outlined below:

- Develop, implement, and enforce an energy control program.
- Use lockout devices for equipment that can be locked out. Tagout devices may be used in lieu of lockout devices only if the tagout program provides employee protection equivalent to that provided through a lockout program.
- Ensure that new or overhauled equipment is capable of being locked out.
- Develop, implement, and enforce an effective tagout program if machines or equipment are not capable of being locked out.
- Develop, document, implement, and enforce energy control procedures.

- Use only lockout/tagout devices authorized for the equipment or machinery and ensure that they are durable, standardized, and substantial.
- Ensure that lockout/tagout devices identify the individual users.
- Establish a policy that permits the employee who applied a lockout/tagout device to remove it.
- Inspect energy control procedures at least annually.
- Provide effective training for all employees covered by the standard.
- Comply with the additional energy control provisions in OSHA standards when machines or equipment must be tested or repositioned, when outside contractors work at the site, in group lockout situations, and during shift or personnel changes.

Cranes and Rigging

Cranes are a vital part of any construction project. To assure that a crane is capable of handling loads safely with the greatest efficiency, all contractors must follow the requirements of 29 CFR 1926 – Subpart CC – Cranes and Derricks in Construction and instructions provided by the manufacturer.

All cranes must have a copy of its annual inspection certificate posted in the cab. A copy must be forwarded to CDA Safety and/or their designee before the crane arrives on site. Also, a current copy of the crane operator's City of Chicago crane license as well as other nationally mandated operator licenses must be forwarded to CDA Safety and/or their designee. The operator must always have the license available for inspection. If the crane does not have its annual inspection certification and/or the operator cannot produce a City of Chicago crane operator's license, the crane will not be operated.

FAA Part 77, Form 7460 must be completed before using a crane on the airfield and can be found in contract documents.

Controlling Entity and Ground Conditions

For the sake of this section and the applicability of OSHA's crane standard, the General Contractor will be the "controlling entity" as defined by the standard and will assume the responsibilities of this role. Before a crane can be erected or used, the controlling entity must determine if the ground is firm, drained and graded sufficiently to support the crane and its operations. Further, the ground condition must be adequate so the manufacturer's specifications for levelness and support can be achieved.

The controlling entity must take the necessary steps to identify and inform the employer using the crane and the operator of conditions below grade that may jeopardize the stability of the crane. This could include any voids, utilities, vaults, tanks or other underground installations or unknown ground conditions.

If the assembly/disassembly director or the crane operator determines the ground conditions do notmeet the requirements for stability and safe operations, that person's employer must have a discussion with the controlling entity to rectify the issue.

Mobile Crane Setup

Once it is established that ground conditions are adequate, the crane operator may position and prepare the crane for use.

1. Position the crane in accordance with a pre-determined lift plan.

2. Level the crane to within the safe working tolerances established by the manufacturer. Crane levelness must be checked by a competent person before each shift and after each move and setup.
3. Extend outriggers to the fully deployed, locked position unless otherwise permitted by the crane manufacturer exclusively.
4. Mats, steel plates, timber or composite pads or other supporting material should be used (if necessary) to ensure the manufacturer's specifications for adequate support and degree of level of the equipment are met.
5. If crane assembly/disassembly activities or travel occurs near or under overhead power lines, the requirements of 29 CFR 1926.1407 - .1411 must be followed with specific manufacturer specifications.
6. Swing radius protection and outrigger/float protection must be erected and maintained throughout the entire time of the crane's use to prevent accidental contact by vehicles and to keep personnel away.
7. Each crane must be equipped with a load chart, hand signal chart and the most current crane certification and accessible for inspection when requested.

Crane Operations

The contractor using the crane must comply with manufacturer procedures applicable to the operational functions of equipment, including its use with any attachments. If operational procedures are not available, the contractor's qualified person must develop and ensure compliance with all procedures necessary for the safe operation of the equipment. When the procedures are related to the capacity of the equipment, the procedures must be developed and signed by a registered professional engineer familiar with that piece of equipment.

The procedures applicable to the equipment, including rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions, and operators manual, must always be readily available and accessible in the cab for use by the operator.

If the procedures and applicable data are available in electronic format and there is a system failure or power loss and the rated capacities are inaccessible, the crane operator must cease all operations and begin shut down procedures until re-established.

The operator must not engage in any practice or activity that distracts attention away from safe operation of the equipment. This includes cell phone use, headphone radios or conversation with other workers not involved with the signaling procedures.

An operator cannot leave a crane with a suspended load unless the operator is immediately adjacent to the equipment and not engaged in other activities, or if the competent person deems it is safe to do so after taking steps to restrain the boom, load, swing, and outrigger functions. All workers must be removed and kept away from under the load when this occurs.

Weather conditions must be considered when operating a crane. Crane manufacturers have wind speed limitations that adversely affect the safe operation of a crane if not followed. Ice and snow can affect the crane's lifting capacity by placing additional weight on the boom and load. Ice can also affect the reeving

operation of the crane's wire cable. Crane operators must cease operations when weather conditions become too severe, making operations unsafe.

Traveling with a load is strictly prohibited unless the manufacturer allows for this to occur. If it does allow for traveling with a load, all manufacturer instructions must be followed.

Taglines or restraint lines must be used to control the loads to prevent spinning, pendular movement (swinging) or otherwise adversely affecting the stability of the crane. The line must be non-conductive, especially around overhead electrical lines.

Whenever there is a concern for safety, the operator must have the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.

All cranes must be equipped with a steady-burn red MARS light and an orange and white checkerboard flag, minimum 3' x 3' mounted at the crane's highest point.

Determining Load Weight

Prior to lifting any load with a crane, a lifting plan must be developed. The plan must include the following:

- The crane's position in relation to the load.
- The load's movement from start to finish.
- The weight of the load.
- The weight of all ancillary handling devices like hoist blocks, headache balls, hooks, cable, required rigging, parts of line, etc.
- The type of crane to be used and its capacity in the configuration being used.
- The angle, length of boom, and jib if attached required.
- Weather conditions such as ice or snow.

The lifting plan must be made available to CDA Safety and/or their designees for review upon request.

Crane Signaling and Signal Person

Employers using cranes must designate a signal person, meeting the qualifications addressed in 29 CFR 1926.1428. There can be only one signal person per crane lift. The signaler is the only person to signal to the crane operator and the operator can only respond to that signaler, except during emergency situations. If communication is interrupted between the operator and the signaler, the operator must cease operations until communication is re-established and verified. The contractor must have signal person qualification documentation available on site for review.

The employer using the crane must have a standard hand signal chart in Appendix A of 29 CFR 1926 – Subpart CC – Cranes and Derricks in Construction. If a different chart is used, the signaler and crane operator must coordinate signals and be posted on the equipment or near the hoisting operations.

Crane Inspections

Crane inspections must be conducted by the appropriate personnel at the following intervals:

Inspection Frequency	Inspection Performed by
After the crane was modified	Qualified person
After the crane was repaired or adjusted	Qualified person
Post assembly	Qualified person or registered professional engineer, if requested by QP
Each shift	Competent person
Monthly	Competent person
Annual or Comprehensive	Qualified person and Competent person
After severe service	Qualified person
Equipment not in regular use (3 months of non-use)	Qualified person
As required by manufacturer of slings, hooks, etc.	See manufacturer requirements

Those employers using cranes in its operations are required to reference manufacturer instructions and 29 CFR 1926 – Subpart CC – Cranes and Derricks in Construction for detailed inspection processes and inspection elements. All inspections are to be documented and available upon request.

Rigging

All rigging must be used, maintained, and inspected according to the manufacturer's instructions and the requirements of 29 CFR 1926.251. All rigging must be inspected before use. Rigging equipment found to be defective must be removed from service and destroyed, repaired, replaced, tested, and recertified before it is returned to service.

Rigging equipment must have permanently affixed identification stating size, grade, rated capacity and manufacturer. Any piece of rigging not having identification tags affixed must be removed from service and destroyed or recertified by its manufacturer and re-tagged for use.

All rigging is to be done by a qualified rigger.

Critical Lifts

A critical lift is defined as a crane lift using two or more cranes to pick a single load or whenever a load exceeds 75% of its lifting capacity of a single crane. Before a critical lift occurs, a written plan must be developed, addressing coordination between operators for lifting speed, ground observation, and communication by all parties involved in the critical lift. The plan must be developed by a qualified person and if necessary, an engineer as determined and requested by the qualified person. The written plan shall be submitted to CDA Safety and/or their designee for review.

The written plan must be implemented by a lift director, defined by OSHA as a person who meets the definition of a competent person and qualified person. The lift director must have a meeting to discuss this plan with all involved workers.

Trenches and Excavations

If a contractor is required to perform underground work, 29 CFR 1926 – Subpart P – Excavations must be followed. Contractors are required to provide a competent person to oversee the activities, assuring compliance with this subpart.

Any excavation that must remain open and unattended, must be protected to prevent other workers or the public from accidentally entering it. If it is close to vehicular traffic, it must be substantial enough to keep vehicles from entering the excavation. This can be done with barricades or something as substantial.

Preplanning is required before trenching or excavating occurs and the following must be considered:

Surface Encumbrances

All surface encumbrances near the excavation that creates a **hazard** to employees must be removed or supported.

Underground Installations – Utilities

Before opening any excavation, the contractor is responsible for identifying the location, depth and direction of underground utilities or other installations that may be encountered. Contractors must be in possession of a completed and fully executed copy of the O'Hare International Airport Underground Utility Notification Book (Dig Book). A copy of the complete dig book, including drawings and approval signatures must be at each location where there is an excavation, trench or other underground activity is occurring.

Contractors are required to adhere to requirements of the Dig Book including the identification and delineation of runway safety areas, taxiway safety areas and all potentially affected NAVAIDS. DIGGER and JULIE utility locating services must still be contacted by the contractor so the locate numbers and active dates can be included in the Dig Book.

If a utility is to be removed or disconnected and abandoned in place by the utility owner (3rd party) and the utility owner claims it has been removed or it is otherwise "dead", the general contractor must take all necessary steps to assure the utility has completed this task by conducting a physical inspection or other means.

When the excavation or trench approaches the approximate location of the utility, the exact location of the utility must be determined by hydro excavating, hand digging or other safe means. When the excavation or trench is open, all utilities must be supported, protected, or removed to safeguard employees.

Immediately notify the O'Hare Communications Center at (773)894-9111 or the Midway Communications Center at (773) 838-9111 if there is a utility strike. For utility strikes on the airfield, CDA Airfield Ops should also be notified at (773) 686-2255 for ORD or (773) 838-0677 for MDW.

Access and Egress

Contractors need to provide access/egress in and out of trenches and excavations at depths of four feet or greater by means of a ladder, stairway, or ramp. The access/egress point must be positioned so an employee does not have to travel more than 25 lateral feet to it.

If access/egress is provided using stairs or ramps dug into the side of the excavation, the following must take place at a minimum:

1. Stairs must be consistent in "tread" depth and "riser" height as required in 29 CFR 1926.1052. If there are more than four risers, handrails must be provided. Handrails may need to be removable depending on its location on the airfield.
2. Ramps must be free of obstructions and be even for its entire run.

If the stair or ramp is a part of the excavation side walls, it must be maintained during the entire time it is exposed to changing weather conditions and employee use. Stone, sand, or similar materials must be used to eliminate slipping hazards.

If structural ramps are used, either for personnel or equipment, a competent person must design it. The competent person must be qualified in structural design if vehicular ramps are used.

Exposure to Vehicular Traffic

When employees are exposed to vehicular traffic, safety vests with reflective stripes must be worn. Additionally, the contractor must provide additional protections such as traffic signs and barricades to protect the workers.

Exposure to Falling Loads

Employees must not be permitted to stand under suspended loads. When trucks are loaded or unloaded, employees must be kept away from the operation to avoid being struck by falling objects.

Warning System for Mobile Equipment

If heavy equipment is operated adjacent to or must approach the excavation and the operator does not have a clear, visible view of the edge, a warning system must be implemented. This can include stop logs, hand or mechanical signals or grading away from the excavation. Whatever method is used, it must be communicated to all affected employees.

Hazardous Atmospheres

If it is anticipated that hazardous atmospheres can, or do exist, the contractor must provide and conduct atmospheric testing to determine if workers are exposed to oxygen deficiency, flammable or toxic atmospheres. If hazardous atmospheres are detected, employees and must exit the area until the hazard has been controlled or eliminated.

Emergency rescue equipment must be readily available if these conditions exist. If employees need to enter deep, confined footing excavations, they must wear a harness and life-line that is separate from material handling lines.

Water Accumulation

Employees are not allowed to work in excavations or trenches with accumulated water until the contractor installs appropriate water control methods to protect employees. A competent person must verify the water control procedure is effective prior to entering it.

Stability of Adjacent Structures

If a contractor has excavation operations near an adjacent structure such as a building, a wall or other structure, procedures need be taken to protect workers a structure collapse. Examples of protection can be, but not limited to underpinning, bracing, or shoring.

Excavations below the foundation of a building or a retaining wall must adhere to the following if it poses a hazard to employees in the excavation:

- A support system is installed
- The excavation is in stable rock
- A registered-professional engineer (RPE) determines the excavation is sufficiently removed from the excavation and will remain unaffected by the operation.
- An RPE determines the excavation work does not pose a hazard to employees.

Protecting Employees from Loose Rock or Soil

The contractor must provide protection to employees in excavation whenever there is a hazard from loose rock or soil. This can include scaling the sides of the excavation to remove loose soil or rock to prevent it from collapsing onto employees. Materials that may roll into an excavation must be placed at least two feet away from the excavation's edge or be protected by barriers to stop or contain fallingmaterials.

Inspections

The competent person is required to conduct inspections of the trench or excavation for evidence of potential cave-ins, hazardous atmospheres, protective system failures or other hazardous conditions at the following intervals:

- Daily, before the shift begins and as needed throughout the shift
- After every rain event or severe weather condition.

If there is evidence of a potential cave-in or potential failure in the protective system, workers must be removed from the excavation until the hazard is mitigated. After the competent person deems it is safe to enter, work in the excavation may resume.

Protective Systems

Each employee in an excavation five feet or more in depth must be protected from collapses (cave-in) by an adequate protective system. The protective system must be capable of withstanding, without failure, all loads that are reasonably anticipated to be applied or transmitted to it.

Trenches and excavations greater than 20 feet deep must be designed by a registered professional engineer.

Sloping

If a contractor relies on sloping the sides of the excavation or trench to protect its employees from cave-ins, the contractor must follow the provisions 29 CFR 1926.652. If the excavation or trench is less than five deep, the designated competent person must decide if it is safe to enter. If the competent person decides it is unsafe, the trench or excavation must be sloped or supported to meet Type C soil conditions.

However, once it exceeds five feet in depth, it must be considered Type C soil and excavated to 34° from the horizontal direction or to a ratio of 1.5 horizontal to 1 vertical. If registered professional engineers are used to design the slope of any excavation, they must be instructed that the design must meet Type C soil conditions, even though actual soil conditions are better than Type C.

Support Systems

If a contractor decides it will not slope the sides of the excavation or trench, the contractor must rely on a soil supporting or shielding system, such as trench boxes, timber shoring or aluminum hydraulic shoring. Contractors can use one of four options when deciding on which system to use.

- Option 1 – If timber shoring is used, it must be designed according to soil classifications in Appendix A and constructed according to Appendix C of this Subpart P – 29 CFR 1926. If aluminum hydraulic shoring is used, it must be constructed using pre-manufactured tabulated data, but if the designs cannot be utilized, the aluminum hydraulic shoring system must be constructed using Appendix D to Subpart P.
- Option 2 – If contractors use pre-manufactured systems, such as trench boxes, the contractor must follow the manufacturer's tabulated data and not deviate from it, unless there is written approval from the manufacturer. The data, the manufacturer's written approval for deviation and the limitations of deviation must be kept on site and available for review upon request. The data must be retained after the project.
- Option 3 – Contractors using other tabulated data and not manufacturer's tabulated data, the rationale and limitations must be written and available for review for the duration of the project. The contractor must retain the data after the project's end.

- If Options 1, 2 or 3 are not used, a registered professional engineer must approve the designed system plan. The plan must indicate sizes of the various components that will be used in the protective system and the identity of the registered professional engineer approving the design. A copy of the plan must be on site available for review and retained after the project is complete. This includes the use of steel road plates as a part of a shoring system or even independent of a shoring system. All designs such as this must be reviewed, approved, and stamped by a registered professional engineer appropriately licensed in the State of Illinois. The system must be installed and used as designed by the registered professional engineer.

All components of a shoring or shielding system must be free of damage. If damage occurs, the competent person must evaluate the component for its structural integrity. If the competent person cannot make this determination, it must be removed from service and evaluated and approved by a registered professional engineer. All documentation for shielding or support systems must be available when requested.

Shielding systems, such as trench boxes must meet the following additional requirements:

- The top of the trench box must extend at least 18 inches above grade when used in conjunction with a sloped configuration.

- The bottom of the trench box cannot be more than two feet above the bottom of the trench and designed for that application.
- Employees are not allowed to be outside the shielding system, including for access and egress.

  Employees must exit the shielding system while it is installed when it is removed or when moved vertically or horizontally.

Soil Classification

The Chicago Department of Aviation has determined that ALL soils are to be treated as Type C soil. Soil classifications are not required for Type C soils.

Personal Protective Equipment

All personnel, including jobsite visitors and drivers, are required to wear personal protective equipment (PPE) and follow 29 CFR 1926 – Subpart E – Personal Protective and Life Saving Equipment. All PPE must be maintained in good condition and include:

1. Head Protection
2. Eye and Face Protection
3. Foot and Leg Protection
4. Hearing Protection
5. Torso Protection
6. Minimum Class 2 ANSI/107-2015 High Visibility Clothing/Vests

Head Protection

All workers are required to wear hardhats when on the project. The exception to this includes:

- When inside the main office trailers
- When inside enclosed vehicles
- When welding with the use of a welding helmet with over-the-head harness
- When the hardhat may otherwise constitute a hazard, such as working in an upside-down position, narrow openings, etc.

In high wind environments, hardhats must be adjusted to be snug enough to prevent accidental loss or be equipped with a chin strap.

All users of hardhats must follow the manufacturer's instructions for assembly, use, inspection, maintenance, and cleaning. Holes must not be drilled into the hardhat as it can affect the structural integrity of its shell. When the hardhat or its suspension shows signs of wear, that component must be replaced. Defective hardhats must be removed from service.

Manufacturer's recommendations for replacement must be followed. Generally, the shell of the hardhat must be replaced every five years. Its suspension must be replaced yearly. Refer to manufacturer instructions for specific requirements.

Hardhats must be stamped with the most current version of ANSI/ISEA Z89.1 and must be worn in accordance with manufacturer's requirements. No other hats can be worn underneath a hardhat because it can prevent the hardhat from being adjusted properly for a good fit. Novelty hardhats, such as cowboy hats cannot be worn on any project.

Eye and Face Protection

Employees are required to wear eye protection while working and must be supplemented with face protection when the operation creates face hazards from flying particles, liquid chemicals, acid, or caustic liquids, etc. Eye and face protection must meet ANSI/ISEA Z87.1.

Safety Glasses – All safety glasses must meet the most current version of ANSI/ISEA Z87.1, which must be stamped on the stem or similar visible location. Clear lenses are to be worn when working indoors or other dark environments. If prescription lenses are worn, they must meet ANSI/ISEA Z87.1 and be equipped with side shields.

1. Goggles – Goggles must be worn in situations where additional protection beyond safety glasses is needed. Goggles should be worn in dusty environments or when working with caustic or acid- based liquids.
2. Face Shields – When employees are exposed to flying particles from operations involving sanding, compressed air use, metal, or concrete grinding, etc. Safety glasses or goggles must be worn with face shields.

Hearing Protection

Hearing protection is required when noise levels exceed the permissible exposure limit of 90 dBA as defined in 29 CFR 1926.52.

If hearing protection devices are provided, employees must be trained to understand its use and limitations. Employees can select the most comfortable hearing protection devices that offers the best protection.

Foot and Leg Protection

Employees are required to wear durable footwear appropriate for construction sites. The shoes should have a rugged sole and over-the-ankle leather upper.

Metatarsal guards are required when jack hammering, using walk-behind compactors, during demolition activities or when other hazards exist that can severely injure feet.

There are certain types of shoes that are not permitted on construction sites. These include:

- Athletic or running shoes, including those with steel toes
- Moccasins or sandals
- High-heeled shoes
- Footwear with exposed toes
- Street shoes

Contractors are required to provide full leather or Kevlar chaps when chainsaws, circular saws or partner saws used. Under no circumstances are shorts or pants with holes allowed on a construction site. All footwear and leg protection must conform to the most current ANSI and ASTM standards.

Torso Protection

All workers are required to wear a safety vest with reflective stripes on construction sites. Fluorescent shirts are allowed if reflective stripes are incorporated into the garment and meets ANSI 107-2015 requirements for reflective outerwear. The vests or shirts must be kept in good condition, maintaining its fluorescent and reflective properties. **Plain, fluorescent shirts or coats without reflective stripes are NOT allowed.**

Shirts must always be worn. The shirts must cover the shoulder and have at least a four-inch sleeve. Tank tops are not permitted.

Housekeeping, Foreign Object Debris, Sanitation and Lighting

Housekeeping

Good housekeeping is generally a visible confirmation of a successful safety program. Contractors are required to implement good housekeeping procedures to make the worksite and any area interfacing with other contractors or the public safe from hazards.

Contractors need to supply enough trash receptacles to keep worksites clean and must be emptied regularly to prevent trash from overflowing onto the ground or entering the AOA. Trash receptacles on the airfield must be secured to prevent it from tipping over. Trash must be removed from the airfield daily or contractors must supply a covered dumpster for trash collection.

All scrap lumber must have all nails removed and all other debris must be kept clear from work areas, passageways, and stairs throughout the project site, especially before severe weather to include snow and icing conditions.

Foreign Object Debris

Contractors must take all necessary steps to prevent foreign object debris (FOD) by keeping its work areas inside and outside of the airport clean and free of trash. Eliminating FOD requires a multi-faceted approach assuring the airfield operations area (AOA) remains free of trash and debris that could get ingested into aircraft engines.

Contractors are required to develop a written plans as part of the overall site-specific safety plan. At a minimum, the plan must address the use of trash receptacles and dumpsters to collect trash throughout the project. Dumpsters and trash receptacles must be covered and emptied at intervals, so its contents do not become airborne, creating FOD.

If sweepers are required by contract, they must be used at a frequency so airborne dust is not created on services roads. Special attention must be given to the services roads and taxiway intersections, so debris is eliminated, including stone, dirt, and mud. Water trucks must also be used when service roads and haul routes are excessively dirty or dusty.

Projects must follow specific requirements of the construction safety phasing plan as well as other project documents.

Sanitation

Contractors must provide toilet and hand washing facilities in enough quantities and locations for employees. Contractors must follow the cleaning frequencies as required by the supplier. Contractors must comply with 29 CFR 1926.51 to determine the quantities of toilet facilities.

Drinking water must also be available in potable containers and constructed with a tightly closing lid and provided with individual drinking cups. Unused cups shall be kept in a closed, sanitary container. Trash receptacles must be provided for used cups.

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Lighting

Construction projects, including ramps, runways, corridors, offices, shops, and storage areas must be properly illuminated with the minimum requirements listed below:

Foot Candles	Area of Operation
3	General construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling and field maintenance areas
5	General construction area lighting
5	Indoors: warehouses, corridors, hallways and exit ways
10	General construction plant and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active storage rooms, locker or dressing rooms, indoor restrooms, and workrooms.
30	First aid stations, infirmaries, and offices.

Medical Services and First Aid

Before a project begins, the contractor is required to be prepared for identifying emergency medical services and first aid for injured employees. **The O'Hare Emergency Phone Number is 773-894-9111 and the Midway Emergency Phone Number is 773-838-9111.** Phone numbers for physicians, hospitals and local ambulance services must be posted.

First aid must be available for employees, large enough to provide supplies for the worksite. Eye washing provisions must also be made available. Components of first aid kits must be individually wrapped.

Contractors must provide at least one employee trained and must remain current in first aid and cardio-pulmonary resuscitation, AED and Stop the Bleed by the American Red Cross or its equivalent for the entire duration of project through completion.

Injury Management

Contractors are required to develop an injury management plan prior to beginning the project. The plan, which must be a part of the site-specific safety plan, must address how injuries will be dealt with, ranging from minor first aid cases to more severe injuries.

Contractors must identify and provide a list of occupational clinics and hospitals with driving directions to its foreman and superintendents or to anyone else who may be responsible for transporting an injured worker, if CFD paramedics are not summoned. Clinics, hospitals, driving directions and emergency phone numbers must be posted throughout the office area and communicated to all workers, prior to starting on any project and be included in toolbox talks or other training venues on a regular basis.

The contractor must have enough workers trained in first aid/CPR/AED and Stop the Bleed and must remain current for the duration of the project.

Injury Reporting

Contractor employees are required to immediately make notification of any injury to:

- Contractor's Safety Manager or Safety Representative
- Safety Manager/Safety Representative must in turn notify the following to CDA Safety:

Written incident reports must be generated and provided to the above groups within 24 hours of the injury's occurrence. If all the information surrounding the incident cannot be obtained within this timeframe, a partial report must be completed and submitted within 24 hours and a final report provided as soon as possible. The Safety Manager/Safety Representative must provide updates as the incident facts evolve, before and after the final report has been submitted. All reports should be emailed to CDASAFETY@cityofchicago.org.

Light Duty/Return-to-Work

All contractors are required to develop a light duty/return-to-work program, allowing injured employees to return to work as soon as medically cleared to do so. Workers must be allowed to operate within the parameters of any restrictions imposed by the physician. Written guidance for the light duty restrictions must be provided to the contractor from the physician. Injured workers are required to follow-up with medical appointments to measure their progress and to adjust the restrictions as allowed by the physician.

If the injured worker is prescribed medications, the contractor must work with the physician to determine how it may affect the worker's ability to work. This may require the worker to stay at home, or at least limit their work especially if the work is airside or around live traffic and the traveling public using the airport. The contractor and employee must follow the physician's recommendations.

Workers will be allowed to return to regular duties when the physician determines it is safe to do so. The employee must obtain clearance from the physician and provide that evidence to project management before returning to the project with no restrictions.

Notifications to OSHA and CDA Safety

Contractors are required to notify OSHA and CDA Safety if the following injuries occur within the timeframes indicated:

Injury Type	When OSHA Must be Notified
Work-related fatality	Within 8 hours after employer was notified
In-patient hospitalizations*	Within 24 hours after employer was notified
Amputation	Within 24 hours after employer was notified
Loss of an eye	Within 24 hours after employer was notified

Emergency Response Coordination

Contractors are required to maintain haul roads in such a way that Chicago Fire Department (CFD) equipment can pass through, and access areas where emergencies occur. Coordination with CFD may be necessary to assure emergency response is quick and effective.

At the discretion of CFD and CDA Safety or competent person, emergency response location signs may be needed to assist CFD with its response. The signs will be of a specific size and color scheme and at a quantity to assist in the most efficient emergency response. The time and material to make and place these signs are at the contractor's expense and will be at no cost to the project.

If an emergency occurs the O'Hare Emergency Phone Number (773) 894-9111 or Midway Emergency Phone Number (773) 838-9111 must be called, and the location and description of the emergency must be provided. If emergency response is required, the contractor must send someone to meet the responders at a predetermined location such as at an emergency response sign, a building or near taxiway locations for example. A grid map should also be used to identify location of the incident.

Fire Protection and Prevention

Contractors must develop a fire protection program for all phases of the project. All requirements of 29 CFR 1926 – Subpart F – Fire Protection and Prevention must be adhered to.

Fire Protection

Contractors must supply properly rated fire extinguishers. The fire extinguishers must be kept in working order with all its components intact, including its service tag. Any fire extinguisher that is been discharged or is otherwise been rendered inoperable or may provide unreliable service must be removed and serviced before returning it for duty.

If fire sprinklers are in the work area, steps must be taken to protect the system from accidental damage and discharge. Fire sprinklers cannot be taken out of service without first notifying and receiving written approval from the Chicago Fire Department. All impairments must comply with the FM Red Tag Permit Program. Additionally, all impairments to the fire suppression system must be coordinated through the O'Hare H&R Monitor Room at (773) 686- 2248 for all O'Hare projects or the designated airport managing company for all Midway projects at (773) 948-6900.

Existing fire hydrants must be kept free of obstructions and not be obstructed from view. Fire hydrants cannot be taken out of service without first notifying and receiving written approval from the Chicago Fire Department.

Depending on the project and its proximity to existing fire sprinklers, contractors may be required to develop a water mitigation plan describing procedures in case of accidental contact with live fire sprinklers. The plan must address emergency notifications, installing fire sprinkler emergency repair kits and clean-up of released water. The plan and kit must be onsite and ready to use in case a sprinkler head in a live fire system is damaged. Notifications must be made immediately to CDA and appropriate facility managers if this occurs.

Fire Prevention

Contractors are required to take all necessary precautions to prevent fires from occurring. Contractors must assure its employees follow all local fire prevention codes and adhere to the following requirements:

- Smoking is prohibited on all projects including cigarette, pipe, cigar and vaping.
- Flammable or combustible liquids must be limited to a one-shift supply when used indoors. Remaining supplies must be removed from the building after the shift is complete, unless stored properly in a flammable storage cabinet.
    - No more than 25 gallons of a flammable liquid is allowed to be stored outside of any flammable storage cabinet. The following shall also apply for indoor storage of flammable liquids:
    - No more than 60 gallons are allowed to be stored in an approved flammable liquid storage cabinet for Category 1, 2 and 3 flammable liquids.
    - Category 4 flammable liquids can be stored in an approved flammable liquid storage cabinet in quantities not to exceed 140 gallons.
    - All cabinets must provide containment for the maximum spill volume. If that is not feasible, secondary containment must be utilized.
    - A maximum of three cabinets may be stored in any one storage area.
    - The Chicago Fire Department shall be consulted prior to establishing indoor storage of flammable liquids.
- Above ground storage tanks containing a flammable or combustible liquid must be protected with secondary containment capable of holding at least 110% of total quantity capacities and must be protected from vehicles and other equipment.
- Only metal safety cans with self-closing lids and flame arrestor screens can be used to store and transport flammable or combustible liquids. Plastic containers are prohibited.
- Good housekeeping must be maintained.
- **Temporary heating devices must be equipped with automatic shut-off devices.**
- "No Smoking" signs must be posted near flammable and combustible liquid and gas storage areas.
- An adequate number of fire extinguishers must be readily available near flammable and combustible liquid and gas storage areas. The fire extinguishers must be located so its view is unobstructed.
- Operations involving hot work must have a fire watch and fire extinguishers dedicated to the work.
- If propane is stored and used on site, it must be protected from vehicular, and equipment contact using jersey walls or similar. All tanks must be adequately marked with appropriate warning signs and be visible from a distance.

Temporary Heating

Whenever temporary heating devices are used, contractors must assure adequate ventilation is provided naturally, mechanically, or both in sufficient quantities to support sufficient combustion and to eliminate carbon monoxide or other air contaminants.

The heaters must be placed on a firm, level and non-combustible surface and its fuel source must also be placed in an upright position and secured to prevent it from being overturned. Hoses and connections used with the fuel source must be in good condition to prevent gas from escaping. Fire extinguishers must be immediately available.

Temporary heating devices must be equipped with an automatic shut-off device that will shut the heater off if the unit is tipped over. Heaters must also be equipped with an electric ignition switch or a pilot light to

ignite the main burner. National and local safety and building codes in conjunction with manufacturer's instructions must be followed when temporary heating devices are used.

If ground heaters are needed for adherence to a winter concrete plan, the contractor must consult the **Chicago Fire Department and CDA Safety** before its use. A written plan must be developed and submitted after the consultations are completed, identifying the unit and its fuel source and a fire watch, as determined by CFD and CDA. Special considerations for the placement of the units include terminal areas, both airside and landside or near the ATS, airport facilities or anywhere the traveling public is located nearby.

Ladders and Stairways

Whenever an access point to a work area has a break in elevation that is 19 inches or more where a ramp, runway or sloped embankment is not provided, a ladder or stairway must be provided. This section applies to:

- Extension ladders
- Stepladders
- Stairs

Contractors using ladders or stairs on a project must follow the requirements of 29 CFR 1926 Subpart X – Stairways and Ladders.

Employees using stairways or ladders must be trained to recognize hazards and the procedures to prevent those hazards. All training must be completed by a competent person and address the following:

- Nature of fall hazards associated with ladders and stairways
- Correct procedures for erecting, maintaining, and disassembling the fall protection systemsused
- Proper construction, use, placement and care of ladders and stairways
- The maximum intended load-carrying capacities of ladders, and
- The standards in 29 CFR 1926 – Subpart X – Stairways and Ladders

Ladders

- All manufactured ladders must be used in accordance with manufacturer's written instructions and requirements.
- The ladder must have a duty rating of no less than Type IA (Extra Heavy Duty – 300 pounds maximum)
- The ladder must be inspected periodically by a competent person, according to OSHA and manufacturer instructions. All ladders must have all warning labels properly affixed to its siderails and must be replaced immediately if missing or are illegible.
- Workers must be trained to inspect ladders before use.
- Broken or defective ladders must be removed from service and destroyed or repaired according
- to the manufacturer. The ladder must be tagged "Do Not Use".
- When ascending or descending ladders, the user must always face the ladder and maintain three- point contact.
- Ladders must be maintained free of grease, oil, and other slip hazards.
- Ladders must be placed on a firm, level, and non-slip surface.
- Boxes, chairs, etc., must not be used in lieu of ladders and cannot be used with a ladder to increase its height.
- All ladders will be constructed of non-conductive side rails.

- When placing ladders, consideration needs to be given to work in the immediate area. Ladders must be kept away from high-traffic areas, doorways, passageways, and driveways where it could be accidentally displaced. If this is unavoidable, the ladder must be protected by barricades, spotters, or similar devices to isolate the ladder from the hazards.
- Only one person is allowed on a ladder at one time.
- A ladder can only be used only for which it is designed. Ladders cannot be used as a scaffold platform.
- The area at the base of a ladder and around the landing area above must be kept clear of debris, clutter and other obstacles that can create tripping hazards.
- Only one worker is allowed on a ladder at any one time. Job-made ladders built for two-person use is allowed if built according to the appropriate ANSI and OSHA standards.

Extension Ladders

- The ladder must be placed at a distance from the vertical support that is one-quarter the working length of a ladder.
- The ladder must extend at least three feet above the landing area and be secured from accidental movement. When the ladder cannot extend three feet above the landing, a grab rail must be provided to assist users on and off the ladder.
- When ladders are extended, the minimum overlap length must be achieved as specified by the ladder manufacturer.
- The ladder feet must move freely and have non-slip bottoms.
- The ladder's pulley and locking devices must be in working order.
- An extension ladder must not be separated and used as two independent ladders unless the ladder manufacturer allows it.

Stepladders

- Stepladders can only be used if the metal spreaders are open and in the locked position.
- Stepladders cannot be used as a straight ladder.
- Workers are not allowed to work from the top step or the step immediately below it.
- All feet of the stepladder must be on the same level.
- The bottom of ladder feet must be of non-slip material.

Job-made Ladders

- **All job-made ladders must be built according to ANSI A14.4 Safety Requirements for Job-Made Wooden Ladders. Contractors constructing these ladders must obtain its own copy of the above ANSI standard.**
- **Ladder feet must be cut so it is even with the ground that it rests upon.**
- **Job-made ladders must be secured from movement.**

Stairs

- Riser height and tread depth must be uniform throughout the entire system.
- Stairs must be equipped with a stair rail when there are four or more risers or when the stair system has an elevation greater than 30 inches.

- When metal pan stairs are being installed, the tread must be filled completely with a solid material like wood or something similar. The stair system cannot be used until this is complete.
- Stair rails must be 36 inches above the front edge of a tread.
- Handrails must be between 30 and 37 inches above the front edge of a tread, except where the stair rail also serves as a handrail, then it will be no less than 36 inches.
- Handrail and stair rail systems must be surfaced to prevent lacerations or punctures, and to prevent clothes from being snagged.

Scaffolds

Contractors are required to erect, use, and dismantle scaffolds according to 29 CFR 1926 – Subpart L – Scaffolds. All scaffolds must be designed to support, without failure, its own weight plus four times the maximum intended load. The scaffold system must be designed and loaded by a qualified person and shall be constructed and loaded according to that design.

Contractors are required to use a scaffold tagging system indicating whether the scaffold system is safe for use. The tagging system should include the following:

Placard Color	Action
Green	Scaffold is safe for use
Yellow	Scaffold under construction; fall protection required
Red	Scaffold unsafe, do not use
No Tag/Missing Tag	Same as red tag, until comp. person deems safe

- Each platform must be fully planked or decked and must be at least 18 inches wide.
- Platforms must overlap its support at lengths between 6 and 12 inches, depending on its design and length.
- When platforms are overlapped to create a longer one, the overlap must occur over the support and consist of at least 12 inches.
- Scaffold platforms must have a maximum deflection no greater than $1/60^{th}$ its span when it is loaded.
- Platforms must be kept free of clutter.
- Fall protection must be provided when employees are greater than 6 feet above a lower level and consist of personal fall arrest systems, guardrails, or both when on single-point or two-point adjustable suspended scaffolds.
- Guardrail heights must have:
    - Top rails installed between 39” and 45” above the work platform
    - Mid rails installed approximately halfway between the top rail and work platform
    - Toe boards to prevent objects from falling
    - Guardrails erected on all open sides of the scaffold
- Workers expected to work on a scaffold must be trained by a qualified person to understand the hazards associated with use and how to control those hazards.
- A competent person must train workers involved with erecting, dismantling, moving, operating, repairing, maintaining, or inspecting scaffolds.
- A competent person must inspect each component of a scaffold system before each work shift or if there is an occurrence where the structural integrity may potentially be compromised.

- A competent person must determine the safe means of access and fall protection while erecting and dismantling scaffold systems.
- Safe access must be provided to scaffold systems.
- Falling object protection must be provided on all scaffolds.
- A job hazard analysis must be developed for the erection, use and dismantling of scaffold systems specifically identifying fall protection methods and anchor points during erection and dismantling phases.

Supported Scaffolds

- When a scaffold system exceeds a height to base width ratio of 4:1 is must be braced and secured from tipping.
- Braces must be installed as the scaffold increases in height.
- Cross braces cannot be used to access the scaffold system.
- Scaffold systems must be placed on solid, firm, and level ground.
- Mudsills and baseplates must be used.
- Contractors must provide safe access to scaffold systems.
- Scaffold systems must be at least 10 feet away from overhead power lines. This distance must increase as line voltages increase.

Suspended Scaffolds

- All components of a suspended scaffold system must support, without failure, four times its maximum intended load when operating at the rated load of the hoist.
- A competent person must evaluate all direct connections prior to use to verify the supporting surfaces can support the imposed load. The competent person must inspect all components, including suspension ropes before each shift.
- Guardrails, personal fall arrest systems or both must be provided and used on suspended scaffolds.
- Counterweights used to balance adjustable suspension scaffold must be able to resist at least four times the tipping moment imposed by the scaffold operating at either the rated load of the hoist or 1.5 times the tipping moment at stall load of the hoist, whichever is greater.
- Contractors must use the appropriate counterweights provided by the scaffold manufacturer or supplier. Masonry units, roofing felts or flowable materials like sand or water cannot be used as counterweights.
- All tiebacks must be made to structurally sound anchorage on the building or structure. This does not include standpipes, vents, piping systems or electrical conduit.

Aerial Lifts and Scissor Lifts (Mobile Elevated Work Platforms MEWP)

- Only properly trained personnel can operate aerial lifts.
- The manufacturer must certify any modifications made to the lift.
- Lift controls must be tested daily before use.
- Controls must be clearly marked.
- Brakes must be set, and outriggers deployed, if equipped.
- Boom and basket load limits must not be exceeded.
- Employees must use a personal fall prevention system attached to a manufactured-made anchor point inside the basket. Workers are not to attach to a structure outside the lift is prohibited.
- Employees cannot use devices, materials, or boxes to increase height while inside the basket.
- A competent person must inspect the lift before use and as required by the standard and the manufacturer.
- Lifts must be equipped with a fully functional fire extinguisher.
- All lifts must be safely stored from the traveling public and unauthorized users when not in use and properly barricaded or secured from general public.
- Lifts Shall not be operated during a high wind advisory. Contractor is responsible for checking and communicating weather conditions with staff. Refer to the manufacturer's user manual.

A fabric material or mesh must be installed on the inside of the lift to keep dropped tools or other materials from striking workers below. It must be attached to the mid rail and secured to the floor so as not to create a tripping hazard in the lift.

Floor, Roof, or Wall Openings

Contractors must protect floor, roof, or wall openings to prevent falls into or through it by workers or equipment. The protection must be sufficiently strong to support any load placed upon it and protected on all sides with standard guardrails and toe boards.

If a cover is used, it must be secured from movement and identified with "Floor (Roof) Opening. Do Not Remove" or be color-coded to prevent accidental removal. The covermust remain in place until the hazard has been eliminated.

Openings for ladders in floors or platforms must be guarded by standard guardrails and toe boards on all exposed sides (except at entrance to opening) with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening. If it becomes necessary to work within the barricaded area, workers must be protected from falls using personal fall arrest systems.

Power and Hand Tools

Any contractor using hand or power tools must follow the requirements described in 29 CFR 1926 – Subpart I – Tools – Hand and Power. All tools must be maintained in good condition and if any tool is found to be in

disrepair, it must be removed from service, tagged, and repaired before placing back into service.

Power Tools

Power tools must have its guards intact and inspected before and during use. Any power tool without a guard must be removed from service, tagged, and repaired before it can be used. Before servicing a power tool, it must first be disconnected from its power source. If it is necessary to be out of sight of the plug or connection while the repair is made, lockout/tagout procedures must be followed to prevent the tool from being accidentally reconnected to the power source.

Safety switches on power tools must not be bypassed or made inoperable. The switch must be tested before using the tool. If the safety switch is inoperable, the tool must be removed from service and repaired.

Electrical Tools

Electrical power tools must either be double-insulated or grounded in accordance with 29 CFR 1926 – Subpart K – Electrical. Any tool or extension cord that does not meet manufacturer specifications or is rendered inoperable, it must be removed from service and tagged, "Do Not Use" or similar. The device must be tested before returning to service.

- Tools that are not double insulated must have its grounding pin intact and be able to pass a continuity test.
- All electrical tools must be plugged into a ground-fault circuit interrupter (GFCI).
- GFCIs must be tested before use by depressing the test and reset buttons. If the GFCI does not function, it must be tagged and prevented from use until it is repaired and tested. An alternate GFCI must be provided.
- Power cords must be free of damage. If there is evidence of damage to the cord, it must be removed from service, repaired, and tested before use.
- Portable electric tools must be equipped with a strain relief device to prevent the outer insulation of the power cord from separating from the tool.
- Electric cords cannot be used for hoisting or lowering the tool.
- Portable electric saws must be used in conjunction with a centrally located cutting table. Employees cannot place stock on their legs or against their foot when cutting.
- Proper PPE must be used when using power tools.
- Electric tools shall not be used in areas with flammable vapors, gases, or dusts unless it is rated for safe use in those atmospheres by the manufacturer.
- Extension cords must be rated for at least heavy-duty construction use and be visibly and suitably marked on its outer insulation.
- Extension cords must have the ground pin intact.
- If the outer insulation of an extension or tool power cord is damaged, it must be removed from service, replaced, tested, and repaired.
- Extension cords must be managed to prevent tripping hazards. When in the interior of buildings, all extension cords must be kept off the ground or otherwise protected from equipment rolling over them and/or workers tripping over the cords.

Pneumatic Tools

- Only those workers who are experienced and trained in its use can use pneumatic tools.
- All pneumatic tools must be secured by a positive means to prevent accidental tool separation

from its air source.

- Compressed air cannot be used to blow dirt off skin or clothing.
- Tools or air hoses must be pointed away from other workers and the public.
- Required PPE must be worn as well as a face shield and hearing protection.
- Contractors must determine whether respiratory protection is needed during compressed air use. If it is needed, the employee must be medically evaluated prior to wearing respiratorprotection.
- Contractors must determine whether safety googles are needed to increase the level of eye protection.
- Prior to servicing or changing tools, the air source must be shut down and the system bled down to relieve pressure.
- All pneumatic tools and devices must be used in accordance with manufacturer's instructions.

Fuel Powered Tools

- When refueling, the power tool must be shut off and allowed to cool before filling.
- If fuel power tools are used in enclosed areas, measures must be taken to protect the occupants of that space from carbon monoxide. Air monitoring equipment may be necessary to validate proper oxygen and carbon monoxide levels.
- Only metal safety gas cans fitted with spark arrestors and a self-closing lid may be used to store and fuel tools. Plastic gas containers are not allowed on any project.
- Fire extinguishers must be available within 10 feet of the filling area.
- Spills must be cleaned immediately.
- When gas or diesel-powered equipment is used inside buildings being constructed, the contractor must make provisions to assure air quality remains adequate. This must include, at a minimum, multi-gas air monitoring equipment that can read carbon monoxide, and increased ventilation. If proper air quality cannot be maintained, all operations shall cease until the contractor determines and implements the appropriate corrective measures.

Hydraulic Power Tools

- Hydraulic fluid must be appropriately rated and fire-resistant for the tool.
- Safe operating pressures must not be exceeded.

Powder-actuated Tools

- Only those employees who have been properly trained may operate a powder-actuated tool. Proof of training must be provided if requested.
- The tool must be tested daily before loading and be performed according to manufacturer's instructions.
- If a tool is found inoperable during inspection or during use it must be immediately removed from service until it is properly repaired, meeting manufacturer's specifications.
- Personal protective equipment must be worn in accordance with manufacturer requirements when using powder-actuated tools.
- Tools should only be loaded prior to use and never pointed at anyone.
- Loaded powdered-actuated tools are not to be left unattended.
- Do not leave unspent charges unattended.

- Users must be trained to understand the immediate procedures to be taken if a tool misfires.
- Fasteners must only be driven into solid materials. Check to make sure someone is not standing on the other side of the surface the fastener is driven into.
- Powder-actuated tools must not be used in flammable or explosive atmospheres.
- All tools must have the appropriate shield or guard as required by the manufacturer.

Grinders (Portable and Stationary)

- Stationary grinders must be mounted to a substantial floor, bench, or foundation to prevent excessive vibration or tipping.
- Guards for both portable and stationary grinders must be installed and used in accordance with the most current version of ANSI Standard B7.1, Care, Use and Protection of Abrasive Wheels, 29 CFR 1926 – Subpart I and the manufacturer. Stationary grinders must be equipped with an adjusta3ble tongue guard on the side of the grinder must be used and kept to within ¼-inch (0.6350 cm) of the wheel in accordance with 29 CFR 1910.
- Guards must be large enough and sturdy enough to deflect wheel fragments away from the user.
- Tool rests must be maintained at 1/8th inch from the wheel and adjusted to maintain this distance as the wheel wears down.
- The maximum RPM rating of each abrasive wheel must be compatible with the RPM rating of the grinder motor.
- All abrasive wheels must be closely inspected for imperfections and ring-tested before mounting it on the grinder. Defective wheels are to be immediately removed from service and marked so it cannot be used.
- Portable grinders must have guards and handles attached prior to use.
- Hot work permits are required for grinding operations.

Battery Operated Power Tools

Battery operated hand tools equipped with lithium-ion batteries must be used, charged, and stored in accordance with manufacturers requirements. Li-ion batteries must not be stored in any CDA building during non-working hours unless they are stored in storage cabinets designed specifically for Li-ion batteries. If a cabinet is not used, all batteries must be removed from the buildings.

The Chicago Fire Department (CFD) must be informed of the location of Li-ion storage units and the quantity of the batteries stored. As this changes, CFD must be updated accordingly.

- Li-ion batteries that are dropped must be removed from service and inspected according to manufacturer requirements. Please note this may require the battery to be returned to the manufacturer for that inspection.
- Batteries must not be exposed to water or other liquids that will harm the effectiveness and safety protections.
- Batteries kept onsite for the day's use must be stored and charged in cool environments.
- Enough of the appropriate fire extinguishing media must be present if the battery fails and burns.
- Avoid damaging lithium batteries and devices. Inspect them for signs of damage, such as bulging/cracking, leaking, rising temperature, and smoking before use, especially if they are wearable. Immediately remove a device or battery from service and place it in an area away from flammable materials if any of these signs are present.

- Ensure workers remove a device from clothing if it feels hot
- Remove lithium powered devices and batteries from chargers when they are fully charged.
- Ensure that appropriate information about the hazards of lithium-powered devices and lithium batteries is communicated to exposed workers
- Have an action plan in place when handling lithium- powered devices or batteries in case of any battery failures or fires.

Hand Tools

- Only hand tools that are in good working order may be used by employees.
- Employees must be trained on its use, limitations, and inspection process.
- Tool must be used in the manner for which it was designed.
- Tools must be inspected before use. Any tool found to be damaged must be removed from service and repaired according to the manufacturer's requirements.
- Impact tools with mushroomed heads, such as chisels and concrete form pins, must be reconditioned or replaced to remove this hazard.
- Tools with loose, cracked, or splintered handles must be removed from service and repaired or replaced.
- Pipes or other extensions, "cheaters", must not be used on a wrench handle for added leverage, unless it was specifically designed and allowed by the manufacturer.
- Metal tools must not be used around electricity unless it was designed, and the tool maintains its safeguards to allow that use.
- If tools can be dropped from an elevated surface, safeguards must be taken to prevent it from occurring or steps must be taken to protect those below.
- Tools must be appropriately stored when not in use.

Powered Industrial Trucks (Forklifts)

When forklifts are used on a project, all rules and recommendations from the manufacturer must be followed. Forklift training must be conducted in accordance with 29 CFR 1910.178 – Subpart N – Powered Industrial Trucks and 29 CFR 1926.602 Subpart O – Motor Vehicles, Mechanized Equipment, and Marine Operations

Contractors are required to establish a training program and evaluation process to determine a potential operator's competency for the safe operation of the forklift. This training must consist of two components:

- Formal Training – Using lecture, interactive computer-based training, discussion and/or written materials, for example.
- Practical Training – The trainer demonstrates techniques and the trainee performing practical exercises and evaluated on their competency.

Formal training, typically conducted in a classroom setting must include the following general topics:

- Forklift-related topics to include controls, steering and maneuvering, stability, and capacity, for example.
- Workplace-related topics to include surface conditions, composition of the load and methods to

make it stable, pedestrian traffic and ramps or sloped surfaces, for example.

- The requirements of the forklift standard.

Forklift operators must be certified indicating competency in the safe operation of each forklift; contractors and the operator must be able to supply proof of certification on request. Forklift operators must also participate in refresher training as required by 29 CFR 1910.178 – Subpart I.

Traffic Control, Barricades and Signs

When contractors are required to work near live traffic, precautions must be taken to protect employees from that hazard. Contractors must establish construction zones in roadways according to the most current version of the Manual of Uniform Traffic Control Devices (MUTCD) and state or local road construction requirements.

When construction activities impact the traveling public and pedestrians, contractors must take the necessary steps to keep them safe from the hazards created in the work area. This can consist of:

- Clearly delineated walkways with canopies if there are overhead hazard
- Protection from flying debris or arc flashes
- Barriers erected to keep dust away from pedestrians
- Keeping dust to a minimum
- Well-marked areas with appropriate signage and barricades to safely guide pedestrians through the work area
- The construction site must be protected against access by the public
- Haul routes or heavy equipment travel must be kept as far away as possible from pedestrians and the public
- A sufficient number of flaggers and additional signage may be needed if construction activities cross pedestrian or vehicular travel paths. **All flaggers must have and maintain current flagging certification.** When construction activities interfere with the movement of the traveling public, such as in terminal areas and roadways leading in and out of the airport, additional traffic control devices may be required. This can include variable sign boards, arrow boards and lane closed ahead signs.
- Traffic control barricades must be inspected daily before the shift begins and throughout the day. Any barricades that are displaced must be placed back in its original designated location.

Contractors are required to place stop signs in all locations where project haul roads and site access roads intersect with airfield service roads. Contractors must maintain each sign it places.

Trenches and excavations must be barricaded to warn and prevent equipment, workers, and other airfield vehicles of its location. The method and type of barricades must be consistent with FAA requirements and must meet the requirements of the project's Construction Safety Phasing Plan.

Heavy Equipment

Contractors using heavy equipment must follow the rules established in 29 CFR 1926 – Subpart O as well as manufacturer's instructions for use and maintenance.

- Functioning seat belts must be provided on all equipment and must be worn when the equipment it operational. The exception to this is when the vehicle is not equipped with roll-over protection

systems (ROPS).

- All controls, such as steering, brakes and hydraulic systems must be fully functional.
- Cab glass and mirrors must be immediately replaced when broken.
- All heavy equipment must have its rear view and side mirrors attached and free of cracks.
- All equipment must have a functional back-up alarm audible for 200 feet and must be distinctive and loud enough to differentiate from other noises.
- Equipment operators must not allow riders inside the cab unless there is an available seat with a functioning seat belt for that purpose.
- Equipment operators must not allow riders to stand outside on equipment access platforms when the vehicle is in motion.
- Ground workers must maintain line-of-sight contact with the equipment operator and coordinate their movements around the equipment with the operator.
- Operators must be trained on the equipment they are using.
- If visibility is limited, a spotter must be used to assist the operator.
- All heavy equipment is required to have a functional and operational MARS light whenever airside. S

Steel Erection

Contractors involved with steel erection activities are required to follow the requirements of 29 CFR 1926 – Subpart R – Steel Erection.

Site Preparation and Contractor Approvals

The general contractor will have the responsibilities of the "controlling contractor" and will make all necessary written notifications to the steel erector. The steel erector cannot begin work until thewritten notification has been received. The written notifications must indicate:

- The concrete in the footings, piers and walls and the mortar in the masonry piers has attained, based on an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.
- Whether any repairs, replacements and modifications to the anchor bolts were conducted and approved by the project structural engineer of record.

The general contractor must assure the site is adequately prepared for the safe delivery and movement of the crane, trucks, and materials to be hoisted. The general contractor must also take the necessary steps to protect pedestrians and vehicular traffic exposed to the steel erection process.

The steel erector's worksite must be a firm, properly graded and drained area to work with adequate space to stage and erect steel.

Hoisting and Rigging

The steel erection contractor must appoint a qualified rigger. All rigging and rigging-related inspections must be conducted by the qualified rigger.

All overhead hoisting operations and routes must be predetermined to ensure employees are not under the load unless the worker is involved with initial setting of the steel or hooking or unhooking the load. If workers need to be under loads, the steel erection contractor and the qualified rigger must ensure the load is rigged to prevent unintentional displacement. Also hooks with self-closing safety latches must be used to prevent rigging from

slipping out of the hook's throat.

If a contractor elects to implement a multiple piece-lift (Christmas-treeing), the contractor must assure the manufacturer of the crane allows this activity and the crane is capable of the load and dynamic forces imposed on the crane, such as wind. The qualified rigger must determine the capacity of the rigging used in the lift are not exceeded. Each member of the lift must be a minimum of seven feet apart and securely rigged at its center of gravity. The lowest piece of the lift must be the first member set in place.

Steel Erection Assembly

The steel erection contractor must maintain the structure's stability throughout the entire erection process.

The following must be addressed during all phases of steel erection:

- Permanent floor installations
- Installation of shear connectors relating to tripping hazards
- Plumbing-up as deemed necessary by a competent person
- Hoisting, landing, and placing of metal decking
- Installing and covering roof and floor holes
- Gaps in decking around columns
- Column anchorage
- Installation of beams and columns
- Installation of open-web steel joists
- Erection of systems-engineered metal buildings

Fall Protection

Fall protection must be provided for employees engaged in steel erection at heights exceeding six feet above a lower level. Connectors are required to wear personal fall arrest systems at heights exceeding six feet or more. All connectors must be appropriately trained in the duties of a connector.

All fall protection must follow the requirements established in 29 CR 1926 – Subpart M – Fall Protection as it relates to personal fall protection and restraint, guardrails, and safety nets for example.

Training

Steel erection contractors must provide training to its employees engaged in the steel erection process. The training must be conducted by a qualified person.

All employees exposed to a fall hazard during the steel erection process must be trained to understand the hazards associated with erection and how to prevent the hazards from occurring. The training program must include employee participation.

Training must include multi-lift procedures, connector procedures, and controlled decking zone procedures.

Hazard Communication

Any contractor using chemicals on the project must develop a written hazard communication program, consistent with the requirements of 29 CFR 1910.1200 – Subpart Z – Toxic and Hazardous Substances. The program must include information relating to:

- Container labels and warnings
- Safety data sheets
- Employee information and training
- A list of chemicals produced, used, or stored on site
- How information will be shared/disseminated on a multi-employer worksite

The written program, chemical inventory lists, and safety data sheets must be made available for review upon request.

Container and Product Labeling

Contractors must assure hazardous chemicals or products arrive with labels affixed properly on each container. Each label at a minimum must contain:

- Product identifier
- Signal word
- Hazard statements
- Pictograms
- Precautionary statements
- Name, address, and telephone number of the manufacturer, distributor, or other responsible party.

Contractors must notify the supplier if container labels are not affixed or otherwise rendered unreadable and request replacement labels.

Safety Data Sheets

When contractors receive shipments of hazardous materials, safety data sheets (SDS) must be provided by the supplier. The contractor must immediately contact the supplier and request an SDS if it is not included in shipment. The SDS must be kept and made a part of the written program and listed on the chemical inventory list. The SDS must contain the following sections and in the following order:

1. Product identification
2. Hazard identification
3. Composition of ingredients
4. First-aid measures

5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/ personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information, including date of preparation or last revision

Employee Information and Training

Contractors must train its employees to understand the hazards associated with the chemicals they encounter at the worksite, and how to protect themselves from those hazards. Training must be conducted before job assignment or whenever a new chemical is introduced.

Training must include the following topics:

- Methods to detect the release of a chemical
- Health hazards related to the chemical
- Methods to protect against exposure
- Details of the Hazard Communication Standard

Confined Spaces

Contractors are required to identify confined spaces that its employees may, or will, enter. This identification must be conducted by a competent person. If confined spaces are identified, the locations and hazards must be communicated to its employees. Accordingly, contractors must follow the requirements of 29 CFR 1926 – Subpart AA – Confined Spaces in Construction or 29 CFR 1910.146 depending on the type of work being performed.

A confined space is a space that meets the following three criteria:

- It is large enough for a worker to enter it and perform a task,
- It has limited means of entry or exit, and
- It is not designed for continuous occupancy.

A confined space may also be a permit-required confined space if it has a hazardous atmosphere, the potential for engulfment or suffocation, a layout that might trap a worker through converging walls, a sloped floor, or any other serious safety or health hazard. CDA classifies all confined spaces as permit- required confined spaces.

A competent person must evaluate each confined space to determine if is a non-permit-required confined space (non-PRCS) or a permit-required confined space (PRCS).

Permit-required Confined Spaces

Prior to entering a PRCS, contractors must first develop a written program that:

- Identifies methods to prevent unauthorized entry
- Identifies methods to evaluate hazards in the space
- Provides procedures for safe permit space entry
- Identifies the equipment needed for safe entry
- Identifies the atmospheric monitoring required to evaluate the space
- Provide and identify the responsibilities of the following personnel involved in a safe permit space entry:
    - At least one attendant to remain outside the space
    - An entry supervisor to authorize and terminate the entry
    - Authorized entrant(s) trained appropriately to understand the hazard and the mitigation of hazards
    - At least one person to perform atmospheric testing in the space
    - Note: If more than one space is to be entered, additional employees will be needed to fill these roles
- Provides procedures for summoning rescue and emergency services
- Provides the steps to issue, use, and cancel entry permits
- Coordinates entrants from other employers

The written program must be reviewed within one year after each entry and revised as needed.

Prior to entry into a permit required confined space, the OCC/MCC shall be notified with location, description, and time. Once the confined space work is completed, the OCC/MCC shall be notified of the out time.

Alternate Entry Procedures

If a contractor can demonstrate that the only hazards in the PRCS are atmospheric hazards, and those hazards can be controlled using forced air ventilation, the contractor can enter the space using alternate entry procedures. The contractor must verify and record conditions using atmospheric monitors. The contractor must also demonstrate physical hazards in the space have either been eliminated or isolated.

Non-permit Required Confined Spaces

A PRCS can be reclassified as a non-permit required confined space (non-PRCS) by a competent person when all hazards, atmospheric and physical, have been eliminated or isolated. The contractor must certify that has been achieved and recorded with the date, the specific space and signature of the person making that determination. It must be made available to each employee entering the space.

Permitting Process

The entry supervisor identified on the permit must verify all precautions have been taken and permit conditions have been met before authorizing entry into the PRCS. The signed permit must be posted at the entry point of the PRCS and is only valid for the time specified on the permit.

The entry supervisor must terminate the permit if one of the following conditions occur:

- When the task inside the PRCS has been completed
- If an unpermitted condition arises inside or near the PRCS
- If an unpermitted atmospheric condition arises inside or near the PRCS

Entry Permit

The PRCS permit must contain the following information:

- The permit space to be entered
- The purpose of the entry
- The date of entry and authorized duration of entry
- Names of authorized entrants
- A means of detecting increases in atmospheric conditions when ventilation systems fail
- Name(s) of attendants
- Name of the entry supervisor
- Hazards inside PRCS
- Measures taken to isolate the space
- Acceptable entry conditions
- Rescue and emergency services
- Communication methods
- Equipment such as PPE, communication systems, alarm systems, etc.
- Any other information pertaining to employee safety
- Any other permits used in the PRCS such as hot work

Training

Employees entering any PRCS must be trained to understand the hazards and the methods used to isolate and control each one to protect the authorized entrants. The training must be provided to each affected employee:

- In both a language and vocabulary understood by each employee
- Before initial assignment
- After a change in initial assignment
- When a new hazard arises in a PRCS not previously expected or known
- When there is a demonstrated inadequacy in the employee's knowledge of the procedures

The training must establish employee proficiency in the procedures and duties.

Rescue and Emergency Procedures

Contractors are required to develop and implement rescue and emergency services before a PRCS entry takes place. The contractor can:

- Designate an outside rescue and emergency service group to provide these services during a PRCS entry, which must be evaluated for its capability before relying on its service. The rescue service must be on-site and available during the PRCS entry.
- Designate employees to provide rescue services and provide the employees with the appropriate

equipment to facilitate the rescue, to include training.
- Perform non-entry rescues with retrieval equipment.
- If a contractor relies on CFD for rescue services, the contractor must coordinate with CFD before the entry is to take place. This must be done with sufficient time for CFD to prepare for it.

The OCC/MCC shall be notified prior to all rescues. Information should include the location, time in, how long the rescue took, and how many people entered to perform the rescue.

- OCC (773) 894-9111
- MCC (773) 838-9111

The contractor must make safety data sheets available to the emergency responders and/or the medical facility to assist in the evaluation of the injured worker.

Respiratory Protection

If a project requires the use of respiratory protection to control airborne contaminants that exceed permissible exposure limits, contractors need to follow 29 CFR 1910.134 – Respiratory Protection. A written program must be developed and implemented, addressing the following topics:

- Employee selection of respirators
- Medical evaluations
- Fit testing procedures
- Respirator use
- Maintenance and care for respirators
- Breathing air quality and use for self-contained breathing apparatus.
- Calibration frequency for carbon monoxide detectors in supplied air systems used for sandblasting operations.
- Identification of filters, cartridges, and canisters
- Training and information
- Program evaluation
- Recordkeeping

Contractors must include its written respiratory program as a part of its overall site-specific safety program if respirators are needed on the project.

Fall Protection

When employees are exposed to fall hazards greater than six feet above lower levels, fall protection must be provided and contractors are required to follow 29 CFR 1926 – Subpart M – Fall Protection and applicable American National Standards Institute fall protection standards. This is mandatory for all trades and includes, but is not limited to the following activities:

- Steel erection
- Rebar assembly
- Concrete formwork assembly/disassembly
- Precast erection
- Masonry
- Inspections greater than six feet above lower levels
- Equipment maintenance

Contractors are required to provide fall protection in the following situations:

- Unprotected sides and edges
- Controlled Access Zones
- Leading edges
- Hoist areas
- Holes
- Formwork and reinforcing steel
- Ramps
- Excavations
- Above dangerous equipment, such as concrete crushers and at batch plants
- Overhead bricklaying and related work
- Roofing work or low-sloped roofs
- Steep roofs
- Precast concrete erection
- Residential construction
- Wall openings
- Walking/working surfaces

If fall hazards exist greater than six feet above a lower level, contractors must use one of the following options below to protect its employees:

- Guardrails
- Safety nets
- Personal fall arrest systems
- Positioning device systems

The following fall protection options **are prohibited** at O'Hare or Midway International Airports:

- Warning line and safety monitoring systems
- Controlled access zones Fall protection plans

Guardrails

The top rail must be located between 39 and 45 inches above the working level and must support a 200-pound force in an outward or downward direction. Mid rails need to be located halfway between the top rail and the working/walking surface and capable of supporting a 150-pound force. Guardrails must also be equipped with a toe board with a height of at least 3½ inches or the standard height of standard 2" x 4" piece of lumber on its edge and capable of withstanding a 50-pound force. Note: 29 CFR 1926.502(j)(3).

The contractor with the responsibility to maintain guardrails must do so as often as necessary to eliminate fall hazards.

Safety Nets

Safety nets must be placed under, and as close to as practicable, the working surface. The minimum horizontal distance of the outer edge of the net must be maintained according to its distance below the work platform. The contractor must test the net's ability to withstand an impact force test of at least 400-pounds and performed at the required intervals. If the contractor can demonstrate that it is unreasonable to perform a drop-test, a certification record may be prepared prior to the net being used as a fall protection system. The certification record must include an identification of the net and net installation for which the certification record is being prepared; the date that it was determined that the identified net and net installation were in compliance with OSHA standards, and the signature of the person making

the determination and certification. The most recent certification record for each net and net installation shall be available at the jobsite for inspection. The contractor must inspect and maintain the safety net according to manufacturer's requirements.

Personal Fall Arrest Systems

Personal fall arrest systems (PFAs) consist of a full body harness, connector, and an anchor point, meeting all ANSI and OSHA fall protection requirements. Before using PFAs, employees must be trained on its use, inspection and maintenance, and its limitations.

Anchor points for the attachment of PFAs must be capable of supporting, without failure, 5,000 pounds per attached employee and designed with a protection factor of two. Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pound per employee attached, or shall be designed, installed, and used as follows: 1926.502(d)(15)(i) as part of a complete personal fall arrest system which maintains a safety factor of at least two; and 1926.502(d)(15)(ii) under the supervision of a qualified person.

Lanyards must be equipped with leading edge protection when working near the sides of structures. Under no circumstances will more than one lanyard be allowed to be attached to any user.

- When a PFA is subjected to a fall it must be removed from service.
- PFAs cannot be used as a device to hoist materials.
- If the maximum weight of a person and tools exceeds 310 pounds, the contractor must provide proper protection for such heavier weights.
- PFAs must be inspected before each use and at intervals required by the manufacturer. Signs of wear, deterioration, or ripped stitches must be removed from service.

Floor and Wall Openings

Contractors are required to protect workers from fall hazards created by floor and wall openings. The contractor safety representative is required to make sure this is fully implemented, especially when in building interiors.

Floor Openings

Any opening in a floor or other walking/working surface that measures greater than two inches in its largest dimension will be protected with a cover. The cover must be capable of supporting, without failure, two time the heaviest anticipated load. This must include the weight of the heaviest vehicle or piece equipment, such as skid steer, scissor lifts, aerial lifts, or forklifts.

The hole covering must be secured to prevent displacement caused by wind, equipment, or employees.

Additionally, the cover can be color coded, or must be marked with the words, “Hole” or “Cover”.

Fall Protection Training

Contractors must assure its employees have been adequately trained for the anticipated fall hazards and the methods to protect themselves from those hazards. Contractors must be able to provide proof of training when requested. Training must be performed with the content and at the intervals specified in 29 CFR 1926.503.

<u>Concrete, Masonry, and Asphalt Safety</u>

Contractors involved in concrete work must follow 29 CFR 1926 – Subpart Q – Concrete and Masonry Construction.

- All reinforcing steel (rebar) must be protected against impalement hazards. The protection devices used must be maintained.
- Employees not involved with post-tensioning operations must be kept away during this process. Warning signs and barriers must be erected and maintained during this process.
- Employees must be instructed to not ride concrete buckets.
- No workers are allowed under an elevated concrete bucket.
- All tools used in concrete work must be in good working order and must be used according to manufacturer instruction.
- Lockout/tagout procedures must be followed when servicing or repairing concrete tools.
- Workers involved in placing concrete must have the skin and face protected to prevent concrete burns.
- Workers must be protected against respirable crystalline silica (RCS) dust when saw cutting, crushing or other operations that generate RCS in a manner that meet the requirements of 29 CFR 1926.1153.

Cast-in-place Concrete

Formwork must be designed, fabricated, erected, supported, braced, and maintained so it can support without failure all vertical and lateral loads that may reasonably be anticipated to be applied to it. All supporting documentation for its use, such as drawings or plans must be at the project. Contractors must take the necessary steps to protect employees from the hazards involved with:

- Shoring and reshoring
- Vertical slip forms
- Reinforcing steel
- Removal of formwork

Precast Concrete

Lifting inserts and hardware must support the necessary loads transmitted to those devices with required safety factors. When placing precast concrete, all unnecessary personnel must be kept away as the panels or members are being erected. Employees are not allowed under the precast concrete member unless involved in the erection process.

Lift-slab Construction

Lift-slab operations must be designed and planned by a registered professional engineer with experience in this type of construction.

Jacks or lifts must be appropriately rated for the load it will lift and be marked accordingly. The jacks/lifting equipment must lift/support 2.5 times the load without overloading. Some additional requirements include:

- Coordination for synchronized lifting
- Maintaining levelness during the lifting process
- Temporary connections to support slabs must be tack welded, or similar, to prevent it from falling out of position
- Temporary and permanent connections must be performed by a certified welder

Masonry Construction

When contractors are engaged in masonry work, the following rules apply:

- Limited access zones must be established and demarcated prior to starting the construction of the wall.
- The limited access zone must be at least equal to the height of the wall plus four feet and be continuous for its entire length.
- The zone must be erected on the unscaffolded side of the wall.
- No other employees are allowed in the zone except for those constructing it.
- The limited access zone must remain in place until it is adequately supporting to prevent it from overturning.
- Walls more than eight feet high must be adequately braced until it is supported so it doesn't overturn or collapse.
- Masonry saws must be equipped with a semi-circular enclosure that can contain blade fragments.
- Masonry saws must not be left unattended with the blade running.
- Workers must be protected against respirable crystalline silica (RCS) dust when saw cutting and when handling dry mortar.

Asphalt Work

Employees must be protected from the high temperatures associated with asphalt. Due to the heavy viscous nature of the asphalt, the following PPE must be worn.

- Long-sleeved shirts
- Long pants without cuffs
- Over-the-ankle boots that tuck under the pants
- Gloves loose enough that can be easily removed in an emergency

A five-gallon bucket of potable water marked, "Non-drinking water" must be onsite to be used for the possible treatment of burns.

Polyester or nylon clothing shall not be worn as these materials can melt and adhere to the skin.

Workers placing asphalt paving need to pay attention to other safety hazards, including:

- Employees must maintain three-point contact while climbing on and off equipment.
- Asphalt delivery drivers need to pay attention to overhead power lines. The asphalt paving contractor should mark and communicate the overhead power lines with drivers and the ground crew.
- Drum roller and paver operators need to pay attention to the ground crew. The ground crew must maintain a line-of-sight contact with the operators. Crew members need to notify the operators of their intentions if they need to cross in front of or behind the equipment.
- All unnecessary personnel, including the public must stay away from the operation.
- Separation from traffic must be clearly delineated so drivers know where the paving crew is working. A temporary traffic control plan must be developed and implemented.
- Flaggers must be used as site or traffic patterns dictate.
- Operators need to assure back-up alarms are working as necessary.

- Workers need to be trained appropriately to understand the hazards and how to mitigate those hazards.

Severe Weather Safety

Contractors must develop a written severe weather plan in the overall safety program when working outdoors. The severe weather plan must address the weather conditions to include heat and cold stress. It must also address evacuation plans and routes, relocation, or shelter in place plans as weather conditions warrant. All contractors must identify a rally point for employees to gather and take a head count.

Project managers and safety personnel will be required to register for CDA weather notifications, which is free to all subscribers.

Contractors must identify how they will notify key employees for clean-up activities after the event, if necessary.

Thunderstorms

When severe thunderstorms are predicted, all contractors must prepare their crews for work-stoppage situations and evacuations if needed. This can be done during a daily brief or something similar. Contractors must identify how it determines an "all-clear" how it will be communicated before workers return to their activities.

Excessive Wind Speeds

Contractors must prepare projects for excessive wind events to prevent personal injury and property damage throughout the airport. Contractors are required to survey their projects and secure loose materials before the wind event begins and after the event ends for damage or other materials that may have been displaced.

Tornado

Like thunderstorms, contractors must prepare its crews for tornadic activities if it is forecasted during the day or night (for night work). Contractors are required to identify how and to where employees will be evacuated.

Weather and Walking/Work Areas

Snow/Ice – When there is a threat of ice and snow, contractors must instruct employees to prepare the area for the event. This would include clearing the area of items that could be covered with ice or snow, increasing slip/trip hazards after the event. Depending on the layout of the project, it may be necessary to delineate specific walking paths with flagging or similar items to keep workers out of areas that will not be maintained.

Contractors must develop a JHA or conduct a specialized toolbox talk if workers are required to remove snow or ice from elevated surfaces. Fall protection must be required.

Mud – Contractors must address how it will eliminate the slipping hazards associated with mud created by snow, rain, or thawing conditions throughout walking/working areas. Ruts created by the mud must be eliminated so tripping hazards do not exist and emergency vehicles can access the project areas.

Heat Stress

Exposure to heat can cause injury or death to workers. While the most serious of all heat illnesses is heat stroke, heat exhaustion, heat cramps and heat rash should also be avoided. Workers and contractors alike must take this seriously to prevent over-exposure.

Risk factors for heat illness include:

- High temperature and humidity, direct sun exposure, no breeze or wind
- Heavy physical labor
- No recent exposure to hot environments
- Low liquid intake
- Waterproof clothing
- Physical condition of worker

The table below identifies symptoms of heat illness and typical treatment techniques. This does not take into effect unique physical characteristics that can enhance symptoms or hinder treatments.

Heat Illness	Symptoms	Treatment
Heat exhaustion	Fatigue, nausea, headache, giddiness, clammy skin but moist, may faint with rapid pulse and low blood pressure	Remove to shaded or cooler environment. Rest in inclined position and drink fluids
Heat rash	Red rash with blister-likebumps, prickly sensation during exposure to heat	Seek relief from heat, keep clothing and skin dry, prevent secondary infection
Heat cramps	Painful muscle spasms, particularly those muscles used during the shift.	Drink water or electrolyte fluids eat foods containing salt. Keep away from caffeinated a n d alcoholic beverages; salt tablets.
Heat syncope	Fainting while standing, nausea, dizziness, headache or increased pulse	Lay down or sit in shaded, cooler area. Elevate feet and drink fluids
Heat stroke	Dry, red skin; mottled cyanosis; confusion; loss of consciousness.	Call for emergency service immediately, begin to cool body by wrapping victim in wet sheet or immerse into chilled water.

<u>NOTE:</u> The information contained in the table above is not intended to take the place of summoning emergency services.

Training

To help prevent heat-related illnesses, all workers must be trained to:

- Understand the signs and symptoms of heat illnesses and how to monitor themselves and co-workers.
- Understand prevention techniques, such as:
    - Drinking plenty of fluids, and drinking before becoming thirsty
    - Avoid alcoholic beverages
    - Avoid caffeinated beverages
    - Wear lightweight, light-colored, loose-fitting clothing

- Understand emergency procedures when workers become ill from heat exposure:
    - Call a supervisor. If not available, call for emergency services.
    - Have someone stay with the worker until help arrives.
    - Move the worker to a cooler/shaded area. If the worker cannot be moved, create a shaded area where the worker is located.
    - Loosen outer clothing. If the worker is experiencing symptoms of heat stroke, remove outer clothing and fan or mist the worker with water.
    - Apply ice if possible, to cool the body quickly.
    - If the worker is conscious, give the worker water to drink.

If possible, contractors should consider altering work hours and implement work/rest cycles to help facilitate safe working environments during hot weather.

Cold Stress

Cold temperatures create seasonal hazards to construction workers and contractors need to make sure workers are prepared for these events.

Common types of cold stress and symptoms include:

> ***Hypothermia*** – is caused by the body temperature dropping below 95 F. Workers experiencing this can exhibit shivering, but they are generally alert. More moderate to severe symptoms include confusion, slurred peach, heart rate increase/decrease, loss of consciousness or death.
>
> ***Frostbite*** – occurs when the skin and tissues begin to freeze, and typically occur on the hands, feet, and face. In severe cases, amputation can occur.
>
> ***Trench (Immersion) Foot*** occurs when shoes and socks are wet. It can result in redness, swelling, numbness and blisters.

In preparation of cold weather, contractors must monitor the weather for timing of changing weather conditions.

Dust Control

Dust generated from construction activities can create significant health hazards as well as significant hazards for aircraft. To that end, contractors are required to provide dust control.

Contractors are required to develop and implement dust control plans on projects where dust is generated by either excavation activities, mass grading or general site activities. The project must have enough sweepers and water trucks to keep the levels of dust to a minimum, and below threshold limit values or OSHA Permissible Exposure Limits, whichever provides a lower exposure. Water trucks must be used at a frequency and at enough water-flow rates to maintain the minimum levels referenced above.

Sweepers must be used on roads where other airport employees may travel, and on public roads.

Tunneling and Underground Construction

Contractors with tunneling and underground construction in its project scope must identify how employees will be protected by the hazards presented by this type of work and included in the site-specific safety plan. The plan must be consistent with the requirements of 29 CFR 1926.800 addressing the following information:

Access and Egress	Gassy Operations – Add'l Req.	Ground Support
Check-in/Check-out Procedures	Ventilation	Blasting
Safety Instructions	Air Quality and Monitoring	Drilling
Notifications	Ventilation	Haulage
Communications	Illumination	Electrical Safety

Emergency Provisions	Fire Prevention and Control	Hoisting for Underground Const.
Hazardous Classifications	Welding/Cutting/Hot Work	

Prior to any blasting, the contractor must request the use of explosives and provide a detailed plan according to 29 CFR 1926.900 and all provisions of Subpart U. The plan must be submitted to CDA Safety and/or their designee, CFD, CPD and ATF or any other entities determined by CDA.

Contractors can perform blasting operations only with written approval from all entities listed above. E

Emergency Action Plans

Contractors must develop an emergency action plan describing the actions to be taken in the event of a serious injury, property damage, or catastrophic events according to 29 CFR 1926.35 This plan must be updated as the project progresses. The emergency action plan needs to be communicated to all employees and posted in a conspicuous location.

The plan must identify key personnel and their phone numbers and emergency phone numbers identified above for the O'Hare and Midway Communications Centers. It must also identify locations to local clinics and hospitals with addresses and phone numbers. This information must also be communicated and posted so it is accessible to all employees.

All projects are required to provide and maintain emergency access routes throughout the site so first responders have access to the emergency. Contractors are required to identify someone with a vehicle

to meet and guide the responders to the area where the emergency is occurring. As an emergency occurs or evolves, contractors may need to shut down operations to assure the safety of the emergency responders and other workers and protect the emergency area.

Contractors need to prepare their crews before the project begins and keep this information relevant throughout the project. This can be completed with toolbox talks or other training techniques to remind workers of procedures and expectations during emergencies.

Contractors or its safety representative should contact emergency responders to understand its capabilities and limitations to respond in a timely fashion. First responders need to understand the typical hazards on the project and some of the difficulties to expect. The first responders should be invited to visit the project as it progresses so there is an understanding of the hazards.

Contractors or its safety representative should contact the clinic to be used so the staff and physicians understand the type of work to be performed. This may help the physician understand the type of work the employees perform and allow for an early return-to-work program to work efficiently.

General contractors must notify its subcontractors of the site-specific emergency response procedures.

When emergencies occur, CDA Safety must be notified immediately with as much information that is available. The contractor must inform CDA Safety as the incident evolves or as more information becomes available.

The following information must be addressed in the contractor's written emergency action plan, as required by 29 CFD 1910.38(c):

- Means of reporting fires and other emergencies
- Evacuation procedures and emergency escape route assignments
- Procedures for employees who remain to operate critical plant operations before they evacuate
- Accounting for all employees after an emergency evacuation has been completed
- Rescue and Medical Duties for Employees Performing Them
- Names or job titles of persons who can be contacted

The following hazards, at a minimum, must be addressed in the contractor's written emergency action plan:

- Fire
- Serious injuries or fatalities
- Weather emergencies, such as tornados and other severe weather events
- Property damage
- Bomb threat
- Workplace violence
- Active threat
- Emergency evacuation routes, evacuation procedures, and methods to account for employees

All employees must be trained to understand the requirements of, how to participate in, and how to execute emergency action plans. All employees must be trained to call the O'Hare Communications Center at 773-894-9111 or the Midway Communications Center at 773-838-9111 for all emergencies.

Means of Egress

All contractors must maintain an adequate means of egress from building or structures that remains free and unobstructed while it is occupied. Locks or fastening devices shall not be installed that may inhibit the free escape from the buildings or structure's occupants.

Exit signs shall be prominently placed throughout the building or structure under construction to assist its occupants to escape. While exit signs can be temporary, it must be readable in the event of a power outage. Aisle ways or hallways leading to exits must remain unobstructed to facilitate quick evacuation. If hallway leads to a dead end or to a room without an exit to the outside, it must be marked with "No Exit" or something similar.

Hallways, aisle ways and exits must be properly illuminated and unobstructed to facilitate a safe exit from the structure.

Respirable Crystalline Silica

Respirable crystalline silica (RCS) is a known human carcinogen and contractors must be prepared to protect its workers from this hazard. Contractors must follow all the requirements of 29 CFR 1926.1153 – Respirable Crystalline Silica to reduce or eliminate these hazards.

Contractors can either follow the procedures in Table 1 of the standard or use alternative exposure control methods.

Using Table 1 – Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica (1926.1153(c)(1))

Table 1 of the RCS standard provides contractors an opportunity to reduce the level of respiratory protection or even eliminate its use without the need for exposure assessments. If a contractor elects to use Table 1, the engineering and work practice control methods must be followed as specifically detailed in the Table for the identified tasks only.

Alternative Exposure Control Methods

If the contractor elects to not use Table 1, or the contractor's activities are not specifically identified in Table 1, or the contractor cannot use the prescribed control methods as defined in Table 1, the contractor must use alternative exposure control methods to assure exposures are less that the action level of 25 micrograms per cubic meter of air and the permissible exposure limit (PEL) of 50 micrograms per cubic meter of air, calculated as an eight-hour time weightedaverage.

Additional Requirements

Contractors are required to demonstrate that representative air monitoring samples have been collected and analyzed to assure PELs have not been exceeded. Reassessment must occur on a regular basis as mandated in the OSHA standard.

- If employees are required to wear respiratory protection, 29 CFR 1910.134 – Respiratory Protection must be adhered to.
- A written exposure control plan must be developed for each task that generates RCS dust.
- A medical surveillance program is to be followed as specified in the RCS standard.
- Dry sweeping RCS or potential RCS-containing material is prohibited.
- The use of compressed air to clean surfaces that have or potentially have RCS-containing material is prohibited. This includes cleaning out concrete joints for sealing activities.

Training

All employees engaged in tasks generating RCS must be trained to understand the following topics:

- Health hazards associated with RCS
- Tasks that generate RCS
- Measures to be taken to prevent exposure
- Contents of the standard
- Identity of the competent person

Contractors are also required to amend its Hazard Communication Program to include RCS.

<u>Stretch and Flex Program</u>

To reduce soft tissue injuries, CMRs and/or contractors affiliated with an Owner Controlled Insurance Program are required to establish a stretch and flex program for all its employees and contractor employees. Stretch and flex exercises must be conducted daily before the beginning of work and be specific and effective for the type of work to be performed. Contractors should not require employees with medical exemptions or physical impairments to participate in stretch and flex exercises if it could result in an injury.

Project Security

Contractors are required to ensure their projects are secured from unauthorized personnel from entering their sites, lay-down areas, and storage yards.

The general contractor shall be responsible to ensure that all construction sites are always secured to prevent unauthorized personnel from entering the construction area. The General Contractor at minimum shall meet the following:

- Warning signs shall be posted prohibiting unauthorized personnel from accessing contract work sites and high hazard areas such as confined spaces, electrical exposure, fall exposures, scaffolding, etc. and secured airport areas where work is being performed.
- Contractor management is responsible to determine and provide a detailed plan of security measures inclusive of fencing, lighting, alarms, key control access, tools, and equipment securement.
- Contractor shall provide to CDA Safety & Security and the owners safety representative keys or access codes to all contractor-controlled access points.
- All access points utilizing ladders or scaffolds shall have control access measures. Control access means and methods are to be approved by the Chicago Department of Aviation Safety and Security.
- All job sites are to be maintained in such a manner that can be accessible and conducive for explosive detection equipment and animals to perform sweeps within the job site.
- All vehicles entering the airport airfield must have an active airfield vehicle permit or must be under escort at all times.
- All companies must be aware and must follow the escorting requirements and procedures of non-badged employees or contractors required to work on the airfield.

Please note, this is not a replacement for the security measures identified in the project's General Conditions.

All contactors are required to:

- Post warning signs where there is a direct interface with the public or other non-construction personnel. All warning signs must meet the specifications in 29 CFR 1926 – Subpart G.
- Post warning signs where highly hazardous areas exist to include but not limited to:
    - Confined spaces
    - Electrical hazards
    - Fall exposures
    - Scaffolds, ladders, and unfinished stairs
- Develop and provide a detailed security plan addressing:
    - Fencing
    - Lighting
    - Alarms
    - Key control access
    - Securing tools
    - Securing keys for heavy equipment during non-working hours

OSHA Inspections

Contractors are required to notify CDA Safety and/or their designee of any inspection conducted by the Occupational Safety and Health Administration.

Copies of all correspondence from OSHA relating to projects on Chicago Department of Aviation property must be forwarded to CDA Safety within 24 hours or receipt.

Substance Abuse Testing Program

All contractor employees working on CDA projects or on/in CDA property are required to be drug and alcohol free. To that end, contractors will require all workers to participate in a substance abuse testing program. This program and policy will apply to contractors at all tiers and will include all bargaining and non-bargaining unit employees.

The reasons for this program are obvious as substance abuse not only affects the user, but it can also affect his/her coworkers, other O'Hare International Airport employees as well as the traveling public. Contractor employees working on CDA projects or on/in CDA property will not be allowed to use, possess, dispense, receive, or sell prohibited substances on or in CDA facilities or CDA property.

A prohibited substance includes, but is not limited to:

- Any illegal drug
- Marijuana, both medicinal and recreational
- Controlled substances
- Look-alike drugs
- Designer drugs
- Synthetic drugs
- Unauthorized prescription drugs (without prescription)
- Prescription drugs not used for the prescribed use or purpose
- Alcohol

Any employee using prescription medication must inform their supervisor of its use if he/she has been advised by their prescribing healthcare provider or a warning is contained on the packaging that the medication can affect the employee's ability to safely work or operate equipment.

<u>Enforcement of Rules</u>

While working on any project, the CDA reserve the right to inspect any employee's personal belongings, vehicles, office, toolboxes, or work area if, and only if, there is a reasonable suspicion of drug or alcohol use. Law enforcement will be notified if prohibited substances are found, including alcohol and marijuana.

CDA reserves the right to ask any employee to obtain information concerning prescription medication, to include dosing requirements, medication strength and prescribed duration of use. If CDA believes the worker cannot perform his/her work duties safely, the employee must be removed from the project and CDA property.

Frequency of Substance Abuse Testing

All workers will be required to participate in substance abuse testing at the following intervals:

- Pre-employment
- Reasonable suspicion
- Post-accident

All costs associated with substance abuse testing will be paid by the employer and conducted at a medical facility. All substance abuse testing for prohibited substances will be conducted using appropriate

scientifically accepted methods. Alcohol testing will be performed using approved saliva devices, evidential breath testing devices (EBT), or equivalent, and be performed at a medical facility by a blood- alcohol technician.

Pre-employment testing must occur no later than 10 days before the employee's assignment.

Drug Testing Results

If the initial drug screen indicates a "non-negative" result, the medical facility will send the second sample to a testing facility to determine the presence and level of prohibited substances. If this test shows a positive result, the employee will not be allowed to work on CDA projects or in/on CDA property.

Alcohol Testing Results

If the result of the EBT test shows an alcohol level exceeding 0.02%, a second confirmation test shall be performed within a period of 15 – 20 minutes from when the initial test was performed. If that test confirms the initial test levels, the worker will not be allowed to work on CDA projects or in/on CDA property.

Disciplinary Actions or Rules Violations

The following actions will result in immediate removal and a permanent ban from working at any Chicago Department of Aviation facility:

- Anyone possessing, dispensing, using, or receiving prohibited substances on airport property
- Anyone failing a substance abuse test
- Refusal to submit to substance abuse testing
- Refusal to permit a search for prohibited substances by CDA
- Failure to report prescription medication to a supervisor or employer that may result in a diminished ability to perform his/her work safely.

If a contractor's substance abuse testing program is more stringent than this program, the contractor's program shall be followed. A copy of the program must be submitted to CDA Safety and/or their designees for review.

Drug and Alcohol-Free Policy

All projects associated with Chicago Department of Aviation (CDA) are drug and alcohol-free. To that end, all contractors are responsible for testing its employees assigned to and working on CDA projects or in/on CDA property. During orientation, the CDA Drug and Alcohol-Free Testing Consent Form will be completed by and collected from each employee, prior to before the employee begins work on the project.

All employees will receive a copy of this policy and understand the frequency of substance abuse testing as outlined below:

- Pre-employment testing must be completed 10 ten days prior to the employee's initial assignment. If the employer can verify and provide proof the employee has received negative test results for a 10-panel drug test and EBT test, this may be waived upon approval from CDA Safety and/or their designee.
- Reasonable suspicion
- Post-incident

All costs associated with substance abuse testing will be paid by the employer.

Screening Determination

Employees will be tested if there is reasonable suspicion and made by the CDA or the employer. Any employee involved in incident will be tested using the following parameters:

- The incident involves an on-the-job injury requiring medical attention
- The incident involves an on-the-job injury, but the employee refuses medical attention
- The incident involves another employee
- The incident causes property damage, or
- The incident is classified as a "near-miss"

Screening Locations

All screenings will be performed at licensed medical facilities. Post-incident screenings will be performed at the facility where the employee was brought to if transport was required.

Denial of, or Removal from Project Assignment

Employees will not be allowed to work on CDA projects if any of the following conditions exists:

- The employee refuses to submit to the required tests at the required frequencies
- Any of the employee's 10-panel test results are positive during any of the testing frequencies
- Blood-alcohol concentrations above 0.02%
- The employee refuses to comply with the substance abuse program

Drug and Alcohol Testing Consent Form

I understand that compliance with the Chicago Department of Aviation (CDA) Drug and Alcohol-Free Jobsite policy is a condition of my initial and continued assignment to the project. I give my consent to authorize any screening or medical procedures necessary to determine the presence and/or level of alcohol and other prohibited substances in my system.

I also give the testing facilities the authority to release information regarding negative test results to CDA. Positive and non-negative test results will be provided to the employer and employee in accordance with current HIPAA privacy laws.

I further acknowledge that I have received a copy of the CDA Drug and Alcohol-Free Jobsite Policy and consent to providing the necessary samples for pre-employment, reasonable suspicion, and post-accident/ incident testing.

By refusing to sign this document, I will not be able to work on any CDA project. I also understand that a positive drug or alcohol test during pre-employment, post-accident or for reasonable suspicion will result in my denial to work on, or removal from CDA projects or in/on CDA facilities.

Chicago Department of Aviation (CDA), the insurance company or any individual acting on their behalf from all liability of claims in connection with all actions taken in accordance with the CDA Substance Abuse Policy.

☐ I agree to the terms listed above.

☐ I do not agree to the terms listed above and will further agree to not seek employment on CDA projects. I will not hold CDA and the City of Chicago, or the company that may employ me accountable in any way for this decision.

Employee Signature	**Print Employee Name**
Badge Number	**Employer Name**
Witness Signature	**Print Witness Name**
Date	