**NOTES TO ARCHITECT/ENGINEER (A/E) & DAS/CS PROJECT MANAGER:**

This version of the Division 01 General Requirements is for **ALL** CT Department of Administrative Services (DAS) Construction Services (CS) **Design-Bid-Build (DBB) AND Construction Manager at Risk (CMR) Capital Construction Projects.**

**IMPORTANT NOTE:** This guide specification covers construction safety requirements and requirements for the protection of Government people, property, and resources. It is intended for use in construction, renovation, and demolition projects for the Department. All contracts require an Accident Prevention Plan (APP) with associated Activity Hazard Analysis. Some contracts may require additional special safety plans which should be included with respective sections of the specifications. For environmental remediation contracts, an APP is required with the overall contract and a site specific Health and Safety Plan is required for each task order. Contact the Safety Manager for applicability. Many states and municipalities have more stringent or additional requirements and this section should be modified as required to suit local conditions and regulations.

**Note:** Specifier shall update to the latest editions of the referenced standards.

**EDITING:** To Show the Editing Notes in this MS Word document the show/hide symbol (¶) button must be must turned on in the MS Word Toolbar. To print this document show/hide symbol (¶) must be turned off in the MS Word Toolbar, this will enable the document to indicate the correct number of total pages.

**TEXT:** The below **blue text** are project specific information that must be completed by the A/E as applicable to the specific project. When complete change **blue text** to **black text.** The ***bold and italicized text*** is for example purposes only and must be modified and edited by the A/E to make it project specific. For **text boxes**, left click on **Insert** and then insert project specific information over the word **Insert** in the underlined space.

**TABLES:** To view the Table Grid in this MS Word document, click inside any table, then go to the **Table Tools > Layout** tab, **Table** group, and click **View Gridlines.**

**HEADERS: The header** for each page of the Project Manual shall match the format, font (Arial), size (9 pt), font style (BOLD & CAPITALIZED) and line borders, of the header shown herein. The header of each page shall contain the Section Number, the Section Title, and the page number & number of pages as shown herein.

**FOOTERS: The footer** for each page of the Project Manual shall match the format, font (Arial), size (9 pt), font style (BOLD & CAPITALIZED) and line borders, of the footer shown herein. The footer shall contain the project number in the right hand side as shown herein. The revision date in the left side of the footer is to remain as it is for Department informational purposes only and should not be altered by the Architect/Engineer.

**SECTIONS AND PARAGRAPHS:** If a **Section** is not part of the project scope, **do not use** the Section in the General Requirements. Check “**NOT USED**” in the Table of Contents. **DO NOT delete** the Section title from the Table of Contents.

If a **Paragraph** is not applicable to the project, **delete the contents** of the Paragraph and renumber the subsequent Paragraphs. Edit **Paragraphs** carefully to reflect specific project requirements. DO NOT include Paragraphs or parts of Paragraphs in the project manual, which have no applicability to the specific project. KEEP IN NUMERICAL SEQUENCE and re-number as necessary.

**GENERAL CONDITIONS:** Please review the General Conditions carefully and coordinate the requirements of those Articles including the Definitions.

**DIVISION 01 SECTIONS** are the organizational key of the Project Manual. All revisions to this Division are the responsibility of the A/E. Division 01 must be closely coordinated with Division 00, Divisions 02 through 49, Division 50 (Project-Specific Available Information), the Drawings, and the Department’s Consultant Bid Data Statement (Form 6005, to be filled out by the A/E for bidding).

**IMPORTANT NOTE REGARDING “HIDDEN TEXT”:**

Each document contains Editing Notes in the form of “hidden text”. The Editing Notes assist the Architect in modifying and editing the document to make it project-specific. In order to show the “hidden text”, click the **Home** tab, and in the **Paragraph** group, click the **Show/Hide** symbol (¶). **Turn off** the Show/Hide symbol (¶) **before printing the document** in order to indicate the correct number of pages. **DELETE THIS NOTE.**

**IMPORTANT NOTE REGARDING FORMATTING:**

Insert a blank page at the end of all *odd numbered* specification sections that states “THIS PAGE INTENTIONALLY LEFT BLANK”. **DELETE THIS NOTE.**

**PART 1 GENERAL**

## 1.1 RELATED DOCUMENTS

**A.** Construction Documents and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section

**1.2 SUMMARY**

**A.** This guide specification covers construction safety requirements and requirements for the protection of people, property, and resources. It is intended for use in construction, renovation, and demolition projects for the State of Connecticut Department of Administrative Services (DAS) / Construction Services (CS).

1. **Related Sections:** The following Sections contain requirements that relate to this Section:
   1. Division 01 Section 01 33 00 Submittal Procedures specifies the requirements for submittal requirements;
   2. Division 01 Section 01 31 19 "Project Meetings" specifies requirements for submittal and distribution of meeting and conference minutes.
   3. **REFERENCES**

**NOTE:** The paragraph below is used to list the Publications cited in the text of the guide Specification. The publications are referred to in Section 01 35 26. The text by basic designation only and listed in this paragraph by organization, designation, date, and title, edit and update as required.

**A.** The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

|  |  |  |
| --- | --- | --- |
| **AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)**  [**www.asse.org/publications/**](http://www.asse.org/publications/) | | |
| ASSE/SAFE A10.32 | (2004) Fall Protection | |
| ASSE/SAFE A10.34 | (2001; R 2005) Protection of the Public on or Adjacent to Construction Sites | |
| ASSE/SAFE Z359.1 | (2007) Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components | |
|  | | |
| **AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)** [**www.asme.org/Codes/**](http://www.asme.org/Codes/) | | |
| ASME B30.22 | (2005) Articulating Boom Cranes | |
| ASME B30.3 | (2004) Construction Tower Cranes | |
| ASME B30.5 | (2004) Mobile and Locomotive Cranes | |
| ASME B30.8 | (2004) Floating Cranes and Floating Derricks | |
|  | | |
| **NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)**  [**www.nfpa.org/**](http://www.nfpa.org/) | | |
| NFPA 10 | (2007) Portable Fire Extinguishers | |
| NFPA 51B | (2009) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work | |
| NFPA 241 | (2004) Safeguarding Construction, Alteration, and Demolition Operations | |
| NFPA 70 | (2008) National Electrical Code | |
| NFPA 70E | Standard for Electrical Safety in the Workplace | |
|  | | |
| **CODE OF FEDERAL REGULATIONS (CFR)**  [**www.archives.gov/federal-register/cfr/**](http://www.archives.gov/federal-register/cfr/) | | |
| 10 CFR | | Standards for Protection Against Radiation |
| 29 CFR 1910 | | Occupational Safety and Health Standards |
| 29 CFR 1910.28 | | Safety Requirements For Scaffolding. |
| 29 CFR 1910.146 | | Permit-required Confined Spaces |
| 29 CFR1910.147 | | Control Of Hazardous Energy (Lockout/Tagout) |
| 29 CFR 1910.178 | | Powered industrial trucks. |
| 29 CFR 1915 | | Confined and Enclosed Spaces and Other |
| 29 CFR 1926 | | Safety and Health Regulations for Construction |
| 29 CFR 1926.500 | | Fall Protection |
| 29 CFR1926.550 | | Cranes and Derricks |
|  | | |
| **US Army Core of Engineers (USACE)**  [**www.iwr.usace.army.mil**](http://www.iwr.usace.army.mil) | | |
| EM 385-1-1 | | Safety, and Health Requirements Manual (2008), |
|  | | |

**1.3 SUBMITTALS**

**A.** An "O" followed by "A" indicates that the Owner acceptance; submittals not having an "O" designation are for Contractor Quality Control approval.

**NOTE:** Edit The Following List To Reflect Only The Submittals Required For The Project. Submittals Should Be Kept To The Minimum Required For Adequate Quality Control. Edit as required for the specific Project.

**B. Submittal Procedures:**

**1. Preconstruction Submittals:**

**a.** Accident Prevention Plan (APP): “O, A”;

**b.** Activity Hazard Analysis (AHA); “O, A”;

**c.** Crane Critical Lift Plan; “O, A”;

**d.** Proof of qualification for Crane Operators; O, A.

**2. Test Reports:** Submit reports as their incidence occurs, in accordance with the requirements of the paragraph entitled, "Reports."

1. Accident Reports;
2. Monthly Exposure Reports;
3. Crane Reports;
4. Regulatory Citations and Violations;
5. Gas Protection.

**3. Certificates:**

* 1. Confined Space Entry Permit;
  2. Hot work permit;
  3. License Certificates.
  4. Certificate of Compliance – Crane

**1.4 DEFINITIONS**

**A.** **Competent Person.** A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

**B. Competent Person for Fall Protection.** A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as their application and use with related equipment, and has the authority to take prompt corrective measures to eliminate the hazards of falling.

**C.** **Confined Space:** A space which by design has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces include, but are not limited to storage tanks, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.

**D. High Visibility Accident:** Any mishap which may generate publicity and/or high visibility.

**E.** **Medical Treatment;** Medical treatment includes treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

**F.** **Operating Envelope:** The area surrounding any crane. Inside this "envelope" is the crane, the operator, riggers and crane walkers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).

**G.** **Qualified Person for Fall Protection:** A person with a recognized degree or professional certificate and with extensive knowledge, training and experience in the field of fall protection; who is capable of performing design, analysis, and evaluation of fall protection systems and equipment.

**H.** **Recordable Injuries or Illnesses:** Any work-related injury or illness that results in:

**1.** Death, regardless of the time between the injury and death, or the length of the illness;

**2.** Days away from work (any time lost after day of injury/illness onset);

**3.** Restricted work;

**4.** Transfer to another job;

**5.** Medical treatment beyond first aid;

**6.** Loss of consciousness; or

**7.** A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

**I. Weight Handling Equipment (WHE) Accident:** A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and/or collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered an accident even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).]

* 1. **REGULATORY REQUIREMENTS**

**NOTE:** The specifier will other Federal, state and local laws, regulations and statutes as applicable to this project. The specifier should consult with the supporting local safety and occupational health office for assistance in identifying local requirements.

**A.** In addition to the detailed requirements included in the provisions of this Section see, **Division 01, Section 01 42 20 "Reference Standards and Definitions”** for other state laws, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, regulations, and referenced documents vary, the most stringent requirements govern.

**1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS**

**A. Personnel Qualifications:**

**NOTE:** Coordinate with the supporting local safety and occupational health office to determine the level of qualifications required for the Site Safety and Health Officer (SSHO) based on the hazards of the project. Select the appropriate competency level from those listed below. Guidance for selection of SSHO:

**Level 1** should be selected for small non-hazardous service or maintenance projects.

**Level 2** should be selected for minor construction, service, and maintenance projects. Normally will have a dollar value of less than $200,000. Sample projects include: minor re-roofing or window replacement.

**Level 3** should be selected for small to mid-size construction projects that have limited hazards with the potential to cause serious injury/illness. Normally will have a dollar value of less than $2 million. Sample projects include: aircraft wash racks, paving, two story buildings less that 30,000 sq ft or utility modifications.

**Level 4** should be selected for construction projects that may involve potential risk to life or cause serious injury or illness. Normally will have a dollar value less than $15 million. Sample projects include: buildings greater than 30,000 sq ft or large utility projects.

**Level 5** should be selected for medium to large construction projects that may involve potential risk to life, property, or environment. Any dollar value.

**Level 6** should be selected for large, complex, and high hazard construction and service projects, or any project that requires significant safety and health leadership, management and oversight activities. Any dollar value. Sample projects include: complex hospitals and environmental clean-ups.

**When levels 4, 5 or 6 are selected, select the required areas of competency necessary for the project. At least 4 must be identified.**

**B. Site Safety and Health Officer (SSHO):**

**NOTE:** When this safety specification allows the use of the QC person as the Site Safety and Health Officer (SSHO) in the following paragraph, tailor the QC specification section 01 45 00 Quality Control to ensure consistency.

Select one of the SSHO requirements in [brackets] below, DELETE THE OTHERS. ALSO, DELETE BRACKETS.

**1.** Provide a Site Safety and Health Officer (SSHO) at the work site at all times to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The Contractor Quality Control (QC) person **[cannot be the SSHO on this project, even though the QC has safety inspection responsibilities as part of the QC duties.]** **OR** **[can be the SSHO on this project**.**]** Meet the following requirements within the SSHO:

**[Level 1:** Worked on similar projects. 10-hour OSHA construction safety class or equivalent within last **three** (**3)** **years**. Competent person training as needed.**]**

**OR**

**OR**

**[Level 2:** A minimum of **three** (**3)** **years** safety work on similar project. 30-hour OSHA construction safety class or equivalent within last **3** years. Competent person training as needed.**]**

**OR**

**OR**

**[Level 3:** A minimum of **five** (**5)** **years** safety work on similar projects. 30-hour OSHA construction safety class or equivalent within the last **five** (**5)** **years**. An average of at least 24 hours of formal safety training each year for the past 5 years. Competent person training as needed.**]**

**OR**

**OR**

**[Level 4:** A minimum of **ten (10)** years safety work of a progressive nature with at least **5** years of experience on similar projects. 30-hour OSHA construction safety class or equivalent within the last **five** (**5)** years. An average of at least 24 hours of formal safety training each year for the past 5 years with training for competent person status for at least the following **[four] [4]** areas of competency: **[Excavation]**; **[Scaffolding];** **[Fall protection];** **[Hazardous energy]**; **[Confined space]**; **[Health hazard recognition, evaluation and control of chemical, physical and biological agents]**; **[Personal protective equipment and clothing to include selection, use and maintenance]**; **[** **Insert** **].]**

**OR**

**OR**

**[Level 5:** An Associate Safety Professional (ASP), Certified Safety Trained Supervisor (STS) and/or Construction Health & Safety Technician (CHST). A minimum of 10 years safety work of a progressive nature with at least 5 years of experience on similar projects. 30-hour OSHA construction safety class or equivalent within the last **five** (**5)** years. An average of at least **24** hours of formal safety training each year for the past **five** (**5)** years with training for competent person status for at least the following **[4]** areas of competency: **[Excavation]**; **[Scaffolding]**; **[Fall protection]**; **[Hazardous energy]**; **[Confined space]**; **[Health hazard recognition, evaluation and control of chemical, physical and biological agents]**; **[Personal protective equipment and clothing to include selection, use and maintenance]**; **[** **Insert** **].**.**]**

**OR**

**OR**

**[Level 6:** A Certified Safety Professional (CSP) and/or Certified Industrial Hygienist (CIH). A minimum of **ten** (**10)** years safety work of a progressive nature with at least **five** (**5)** years of experience on similar projects. 30-hour OSHA construction safety class or equivalent within the last **five** (**5)** years. An average of at least **24** hours of formal safety training each year for the past **5** years with training for competent person status for at least the following **four** **[4]** areas of competency: **[Excavation]**; **[Scaffolding]**; **[Fall protection]**; **[Hazardous energy]**; **[Confined space]**; **[Health hazard recognition, evaluation and control of chemical, physical and biological agents]**; **[**Personal protective equipment and clothing to include selection, use and maintenance**]**; **[** **Insert** **].]**

**NOTE:** Specify a Certified Safety Professional (CSP) and/or Certified Industrial Hygienist (CIH) only for very large or complex projects based on a preliminary or design analysis of the specific hazards to be encountered. Coordinate with the supporting local safety and occupational health office to determine if a CSP and/or CIH are required on the project. Delete section if not applicable. Select one of the CSP and/or CIH requirements in [brackets] below, delete the others. Also, delete brackets.

**[C.** **Certified Safety Professional (CSP) and/or Certified Industrial hygienist (CIH):**

**NOTE:** Specify an Associate Safety Professional (ASP), Certified Safety Trained Supervisor (STS), and/or Construction Health & Safety Technician (CHST) for complex projects as specified by the supporting local safety and health office.

Provide a **[Certified Safety Professional (CSP)]** **[and][or]** **[Certified Industrial Hygienist (CIH)]** at the work site to perform safety and occupational health management, surveillance, inspections, and safety enforcement for the Contractor. The **[CSP]** **[and][or]** **[CIH]** shall be the safety and occupational health "competent person" as defined by this section. **[The [CSP and/or CIH] shall have no other duties than safety and occupational health management, inspections, and/or industrial hygiene.]**

**[D.** **Associate Safety professional (ASP), Certified Safety Trained Supervisor (STS) and/or Construction Health and Safety Technician (CHST):**

**NOTE:** Specify an Associate Safety Professional (ASP), Certified Safety Trained Supervisor (STS), and/or Construction Health & Safety Technician (CHST) for complex projects as specified by the supporting local safety and health office.

Provide **[a/an] [Associate Safety Professional (ASP)] [Certified Safety Trained Supervisor (STS)] [and/or] [Construction Health & Safety Technician (CHST)]** at the work site to perform safety management, surveillance, inspections, and safety enforcement for the Contractor. The **[ASP][STS] [and/or] [CHST]** shall be the safety and occupational health "competent person" as defined by this section. The **[ASP][STS] [and/or] [CHST]** shall be at the work site at all times whenever work or testing is being performed and shall conduct and document daily safety inspections. The **[ASP][STS] [and/or] [CHST]** shall have no other duties other than safety and occupational health management, inspections, and enforcement on this contract.

**E. Crane Operators:**

Meet the Crane Operators and Crane Operation requirements of the Connecticut Bureau of License and Permits – Cranes, Department of Administrative Services, Office of State Fire Marshal pursuant to C.G.S § 29-221 through 29-230. Provide proof of current license and qualification. For more information visit the DAS website ([www.ct.gov/DAS](http://www.ct.gov/DAS)) > Licensing, Certification, Permitting and Codes > Cranes, or call **(860) 713-5580 or (860) 713-5529**.

**F. Personnel Duties:**

**1. Site Safety and Health Officer (SSHO):**

**NOTE:** Edit as required for the specific Project.

**a.** Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Contractors' daily **[production][quality control]** report.

**b.** Conduct mishap investigations and complete required reports. Maintain the **OSHA Form 300 and Daily Production** reports for prime and sub-contractors. For more information visit the OSHA website at [**www.osha.gov**](http://www.osha.gov)> Employers > Recordkeeping Requirements and Forms.

**c.** Maintain applicable safety reference material on the job site.

**d.** Attend the pre-construction conference, pre-work meetings including preparatory inspection meeting, and periodic in-progress meetings.

**e.** Implement and enforce accepted APPS and AHAs.

**f.** Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.

**g.** Ensure sub-contractor compliance with safety and health requirements.

Failure to perform the above duties will result in dismissal of the superintendent and/or SSHO, and a project work stoppage. The project work stoppage will remain in effect pending approval of a suitable replacement.

**[2.** **[Certified Safety Professional (CSP)][Certified Industrial Hygienist (CIH)][Associate Safety Professional (ASP)][Certified Safety Trained Supervisor (STS)][and/or][Certified Construction Health & Safety Technician (CHST)]:**

**NOTE:** When the requirement for a CSP, CIH, ASP, STS and/or CHST is included, also include this paragraph.

**a.** Perform safety and occupational health management, surveillance, inspections, and safety enforcement for the project.

**b.** Perform as the safety and occupational health "competent person" as defined by this section.

**c.** Be on-site **[at all times][at least weekly][at least monthly] [** **Insert** **].** whenever work or testing is being performed.

**d.** Conduct and document safety inspections.

**e.** Shall have no other duties other than safety and occupational health management, inspections, and enforcement on this contract.

If the **[CSP][CIH][ASP][STS][CHST]** is appointed as the SSHO all duties of that position shall also be performed.

**G. Meetings:**

**1. Preconstruction Conference:**

**a.** Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference. This includes the project superintendent, site safety and health officer, quality control supervisor, or any other assigned safety and health professionals who participated in the development of the **Accident Prevention Plan** (APP); (including the **Activity Hazard Analyses** (AHAs), and special plans, program and procedures associated with it).

**b.** Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Owner’s Representative(s) as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.

**c.** Deficiencies in the submitted APP will be brought to the attention of the Contractor at the preconstruction conference, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

**2. Safety Meetings:**

Safety meetings shall be conducted to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent safety and health training and motivation.

**a.** Meetings shall be conducted at least once a month for all supervisors on the project location and at least once a week for all workers by supervisors or foremen.

**b.** Meetings shall be documented, including the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Documentation shall be maintained and copies furnished to the Construction Administrator (CA) on request.

**c.** The Construction Administrator (CA) shall be informed of all scheduled meetings in advance and be invited to attend.

**1.7 ACCIDENT PREVENTION PLAN (APP):**

**A.** Use a qualified person to prepare the written site-specific APP.

**1.** Prepare the APP in accordance with the format and requirements of **US Army Core of Engineers (USACE), Safety, and Health Requirements Manual, EM 385-1-1,** or as approved by the CA and as supplemented herein. Cover all paragraphs and subparagraph elements in **USACE EM 385-1-1, Appendix A, "Minimum Basic Outline for Accident Prevention Plan"** or as approved by the CA. The USACE Safety, and Health Requirements Manual, EM 385-1-1 isavailable at the USACE Website [**www.iwr.usace.army.mil**](http://www.iwr.usace.army.mil)**.**

**2.** Specific requirements for some of the APP elements are described in **“B”** below. The APP shall be job-specific and address any unusual or unique aspects of the project or activity for which it is written.

**B.** The APP shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and made site-specific. The Owner considers the Prime General Contractor to be the "controlling authority" for all work site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract and the penalties for noncompliance, coordinating the work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP shall be signed by the person and firm (senior person) preparing the APP, the Contractor, the on-site superintendent, the designated site safety and health officer and any designated Certified Safety Professional (CSP) and/or Certified Industrial Hygienist (CIH).

* 1. Submit the APP to the DAS/CS Project Manager and Construction Administrator **Fourteen (14) Calendar Days** prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP. Once accepted by the DAS/CS Project Manager and Construction Administrator, the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the discretion of the DAS/CS Project Manager and Construction Administrator, until the matter has been rectified. Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the DAS/CS Project Manager and Construction Administrator, project superintendent, Site Safety and Health Officer **(**SSHO) and quality control manager. Should any hazard become evident, stop work in the area, secure the area, and develop a plan to remove the hazard. Notify the DAS/CS Project Manager and Construction Administrator within **Twenty (24)** hours of discovery. Eliminate/remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard onsite personnel, visitors, the public (as defined by **American Society of Safety Engineers**, **ASSE/SAFE A10.34 - Protection of the Public on or Adjacent to Construction Sites, see** [**www.asse.org**](http://www.asse.org)) and the environment.

Copies of the accepted plan will be maintained at the Construction Administrator‘s office at the job site. Continuously reviewed and amended the APP, as necessary, throughout the life of the contract. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered.

**D. APP Contents:**

The contents of the Accident Prevention Plan (APP) shall be in accordance with **Appendix A** of theUS Army Corps of Engineers, **EM 385-1-1** **Safety and Health Requirements Manual**, Appendix A, Minimum Basic Outline for Accident Prevention Plans or as approved by the CA. For more information visit the USACE Website at [**www.usace.army.mil/Library**](http://www.usace.army.mil/Library)**.**

**1.8 ACTIVITY HAZARD ANALYSIS (AHA):** Activity Hazard Analyses (AHAs) define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk. The Activity Hazard Analysis (AHA) format shall be in accordance with US Army Corps of Engineers, **EM 385-1-1** **Safety and Health Requirements Manual** or as approved by the CA.

1. Submittals:

**NOTE:** Edit as required for the specific Project.

* + 1. Submit initial AHA to CA for review at least **[15] [** **Insert** **]. Calendar Days** prior to the start of each phase. Format subsequent AHAs as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.

**2.** The AHA list will be reviewed monthly at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. Any activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier or subcontractor and provided to the prime contractor for submittal to the CA.

**.**

* 1. **DISPLAY OF SAFETY INFORMATION**

**NOTE: Edit as required for the specific Project.**

Within **one (1) Calendar Days** after commencement of work, erect a safety bulletin board at the job site. Include and maintain information on safety bulletin board as required by US Army Corps of Engineers, **EM 385-1-1** **Safety and Health Requirements Manual**, Section 01.A.06 or as approved by the CA. Additional items required to be posted include:

**A.** Confined space entry permit.

1. Hot work permit.
2. Crane permit
3. Street permit(s)
4. Others (as required)

**1.10 SITE SAFETY REFERENCE MATERIALS**

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturer's manuals.

**1.11 EMERGENCY MEDICAL TREATMENT**

Contractors will arrange for their own emergency medical treatment. The Owner has no responsibility to provide emergency medical treatment.

**1.12 REPORTS**

**A. Accident Reports**

**NOTE: Edit as required for the specific Project.**

**1.** Conduct an accident investigation for recordable injuries and illnesses, and property damage accidents resulting in at least **Two Thousand** **Dollars** **($2,000)** in damages, to establish the root cause(s) of the accident, complete “Accident Report Form”approved by the CA. Provide the report to the CA within **five (5) Calendar Days** of the accident.

1. **Accident Notification**

**NOTE: Edit as required for the specific Project.**

Notify the CA as soon as practical, but not later than **four hours (4),** after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than $2,000, or any weight handling equipment accident.

1. Within notification include the following:
2. contractor name;
3. contract title;
4. type of contract;
5. name of activity,
6. installation or location where accident occurred;
7. date and time of accident;
8. names of personnel injured**;**

**NOTE:** Edit as required for the specific Project.

1. extent of property damage, if any; extent of injury, if known, and brief description of accident **[to include type of construction equipment used, Personal Protective Equipment (PPE) used, etc.]**. Preserve the conditions and evidence on the accident site until the U.S. Department of Labor, Occupational Safety and Health Administration (USDOL-OSHA) investigation team arrives on-site and USDOL-OSHA investigation is conducted.

**C. Monthly Exposure Reports**

Monthly exposure reporting to the CA is required to be attached to the monthly Application for Payment request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. Provide on a form approved by the CA.

**D. Crane Reports**

Submit crane inspection reports on a form approved by the CA and as specified herein with Daily Reports of Inspections.

**E. HOT WORK**

Hot Work shall only be performed in accordance with the requirements of **NFPA 51B “Fire Prevention During Welding, Cutting and Other Hot Work Standard.**

**1.** **Definitions:**

**a. Hot Work: W**ork involving burning, welding, or a similar operation that is capable of initiating fires or explosions. Examples listed by NFPA include arc welding, oxygen- fuel gas welding, open-flame soldering, brazing, thermal spraying, oxygen cutting, and arc cutting.

**b. Permit Authorizing Individual (PAI).** Means the individual designated by the General Contractor to authorize hot work. The PAI is permitted to be, among others, the General Contractor’s project executive, supervisor, foreperson, or designated safety administrator. The PAI CANNOT be the hot work operator, except as permitted in **NFPA 51B**. The PAI is aware of the fire hazards involved and is familiar with the provisions of this standard.

1. **Permit:** Submit and obtain a written permit from the PAI prior to performing "Hot Work" (welding, cutting, etc.) or operating other flame-producing/spark producing devices, from the PAI. CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. The General Contractor will provide at least **two (2)** twenty (20) pound 4A:20 BC rated extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal.
2. **Fire Watch:** It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch shall be trained in accordance with **NFPA 51B Standard for Fire Prevention During Welding, Cutting, and Other Hot Work** and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit. When starting work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the local fire department emergency phone number(s). ANY FIRE, NO MATTER HOW SMALL, SHAL BE REPORTED TO THE LOCAL FIRE DEPARTMENT, GENERAL CONTRACTOR’S AUTHORIZED REPRESENTATIVE, AND OWNER’S CA IMMEDIATELY.

**1.13 FACILITY OCCUPANCY CLOSURE**

Streets, walks, and other facilities occupied and used by the state User Agency shall not be closed or obstructed without written permission from the CA.

**1.14 SEVERE STORM PLAN**

In the event of a severe storm warning, the Contractor must:

**A.** Secure outside equipment and materials and place materials that could be damaged in protected areas.

**B.** Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

1. Ensure that temporary erosion controls are adequate.

**PART 2 PRODUCTS**

NOT USED.

**PART 3 EXECUTION**

**3.1 CONSTRUCTION AND/OR OTHER WORK**

Comply with the Connecticut State Building and Fire Safety Codes, OSHA regulations, and other references regulations. The most stringent standard prevails.

**3.1.2 HAZARDOUS MATERIAL EXCLUSIONS**

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with **USACE EM 385-1-1** such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocynates, lead-based paint are prohibited. The CA, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials.

**3.1.3 UNFORESEEN HAZARDOUS MATERIAL**

**A.** Related Section: Division 01, Section 01 35 16, Alteration Project Procedures.

**3.2 PRE-OUTAGE COORDINATION MEETING**

**NOTE: Edit as required for the specific Project.**

Contractors are required to apply for utility outages at least **fifteen (15) Calendar Days** in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the CA, User Agency Representative, and Public Utilities representative to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

**3.3 SAFETY LOCKOUT/TAGOUT PROCEDURES**

**A.** The General Contractor shall ensure that each employee is familiar with and complies with these procedures and **OSHA 29 CFR 1910.147** Control Of Hazardous Energy (Lockout/Tagout)**.**

1. The General Contractor's “Authorized Employee” shallapply lockout/tagout tags and take other actions that, because of experience and knowledge, are known to be necessary to make the particular equipment safe to work on.

2. No person, regardless of position or authority, shall operate any switch, valve, or equipment that has an official lockout/tagout tag attached to it, nor shall such tag be removed except as provided in this section.

3. No person shall work on any equipment that requires a lockout/tagout tag unless he, his immediate supervisor, project leader, or a subordinate has in his possession the stubs of the required lockout/tagout tags. Only qualified personnel shall perform work on electrical circuits.

4. A supervisor who is required to enter an area protected by a lockout/tagout tag will be considered a member of the protected group provided he notifies the holder of the tag stub each time he enters and departs from the protected area.

5. Identification markings on building light and power distribution circuits shall not be relied on for established safe work conditions.

6. Before clearance will be given on any equipment other than electrical (generally referred to as mechanical apparatus), the apparatus, valves, or systems shall be secured in a passive condition with the appropriate vents, pins, and locks. Pressurized or vacuum systems shall be vented to relieve differential pressure completely. Vent valves shall be tagged open during the course of the work. Where dangerous gas or fluid systems are involved, or in areas where the environment may be oxygen deficient, system or areas shall be purged, ventilated, or otherwise made safe prior to entry.

**B. Tag Placement**

Lockout/tagout tags shall be completed in accordance with the regulations printed on the back thereof and attached to any device which, if operated, could cause an unsafe condition to exist. If more than one group is to work on any circuit or equipment, the employee in charge of each group shall have a separate set of lockout/tagout tags completed and properly attached. When it is required that certain equipment be tagged, the State of Connecticut Authority Having Jurisdiction will review the characteristics of the various systems involved that affect the safety of the operations and the work to be done; take the necessary actions, including voltage and pressure checks, grounding, and venting, to make the system and equipment safe to work on; and apply such lockout/tagout tags to those switches, valves, vents, or other mechanical devices needed to preserve the safety provided. This operation is referred to as "Providing Safety Clearance."

**C. Tag Removal**

When any individual or group has completed its part of the work and is clear of the circuits or equipment, the supervisor, project leader, or individual for whom the equipment was tagged shall turn in his signed lockout/tagout tag stub to the Contractor. That group's or individual's lockout/tagout tags on equipment may then be removed on authorization by the Contractor.

**3.4 FALL HAZARD PROTECTION AND PREVENTION PROGRAM**

Establish a fall protection and prevention program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures.

**A. Training**

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards. Provide training by a competent person for fall protection in accordance with **USACE EM 385-1-1**, Section 21.A.16.

**B. Fall Protection Equipment and Systems**

Enforce use of the fall protection equipment and systems designated for each specific work activity in the Fall Protection and Prevention Plan and/or AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in **USACE EM 385-1-1, section 21.** In addition to the required fall protection systems, safety skiff, personal floatation devices, life rings etc., are required when working above or next to water in accordance with **USACE EM 385-1-1, paragraphs 05.H. and 05.I**. Personal fall arrest systems are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall arrest systems are required when operating other equipment such as scissor lifts if the work platform is capable of being positioned outside the wheelbase. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, or travel. Fall protection must comply with **OSHA 29 CFR 1926.500, Fall Protection, Subpart M, and ASSE/SAFE A10.32, Fall Protection.**

**1. Personal Fall Arrest Equipment**

Personal fall arrest equipment, systems, subsystems, and components shall meet **ASSE/SAFE Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components.** Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. Body belts may only be used as a positioning device system (for uses such as steel reinforcing assembly and in addition to an approved fall arrest system). Harnesses shall have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Only locking snap

hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber. The maximum free fall distance when using fall arrest equipment shall not exceed 1.8 m 6 feet. The total fall distance and any swinging of the worker (pendulum-like motion) that can occur during a fall shall always be taken

**2. Fall Protection for Roofing Work**

Implement fall protection controls based on the type of roof being constructed and work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the projected loading.

**a.** Low Sloped Roofs:

**(i)** For work within 6 feet (6 feet (1.8 m) of an edge, on low-slope roofs, Protect personnel from falling by use of personal fall arrest systems, guardrails, or safety nets.

**(ii)** For work greater than (6 feet (1.8 m) from an edge, erect and install warning lines in accordance with **OSHA** **29 CFR 1926.500, Fall Protection**.

1. Steep-Sloped Roofs: Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

**3. Existing Anchorage**

Certified (or re-certified) by a qualified person for fall protection existing anchorages, to be used for attachment of personal fall arrest equipment in accordance with **ASSE/SAFE Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components.** Exiting horizontal lifeline anchorages must be certified (or re-certified) by a registered professional engineer with experience in designing horizontal lifeline systems.

**4. Horizontal Lifelines**

Design, install, certify and use under the supervision of a qualified person horizontal lifelines for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 **(OSHA** **29 CFR 1926.500 Fall Protection).**

**5. Guardrails and Safety Nets**

Design, install and use guardrails and safety nets in accordance with **29 CFR 1926, Safety and Health Regulations for Construction Subpart M.**

**6. Rescue and Evacuation Procedures**

When personal fall arrest systems are used, the contractor must ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP).

**3.5 SCAFFOLDING**

**A.** The Contractor shall provide all employees with a safe means of access to the work area on the scaffold in accordance with **OSHA 29 CFR** 1910.28 Safety Requirements For Scaffolding and as contained in this section.

1. Climbing of any scaffold braces or supports not specifically designed for access is prohibited.
2. Access scaffold platforms greater than 20 feet (6 m) maximum in height by use of a scaffold stair system.
3. Do not use vertical ladders commonly provided by scaffold system manufacturers for accessing scaffold platforms greater than 20 feet (6 m) maximum in height.
4. The use of an adequate gate is required.
5. Ensure that employees are qualified to perform scaffold erection and dismantling.
6. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection and prevention plan.
7. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.
8. Give special care to ensure scaffold systems are not overloaded. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited.
9. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base. Place work platforms on mud sills. Scaffold or work platform erectors shall have fall protection during the erection and dismantling of scaffolding or work platforms that are more than six feet. Delineate fall protection requirements when working above six feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

**B. Stilts**

The use of stilts for gaining additional height in construction, renovation, repair or maintenance work is **PROHIBITED**.

**3.6 EQUIPMENT**

**A. Material Handling Equipment**

Material Handling Equipment shall be in accordance with OSHA 29 CFR 1910.178 Powered Industrial Trucks and as contained in this section.

**1.** Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.

**2.** The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions.

**3.** Operators of forklifts or power industrial trucks shall be licensed in accordance with OSHA.

**B. Weight Handling Equipment**

**1.** Equip cranes and derricks as specified in **ASME B30.5** or **ASME B30.22** or **ASME B30.8** as applicable.

**2.** Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in **ASME B30.5**). Perform all testing in accordance with the manufacturer's recommended procedures.

**3.** Comply with **ASME B30.5** for mobile and locomotive cranes, **ASME B30.22** for articulating boom cranes, ASME B30.3 for construction tower cranes, and **ASME B30.8** for floating cranes and floating derricks.

**4.** Under no circumstance shall a Contractor make a lift at or above 90% of the cranes rated capacity in any configuration.

**5.** When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and follow the requirements of **ASME B30.5** or **ASME B30.22** as applicable.

**6.** Do not crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane.

**7.** Inspect, maintain, and recharge portable fire extinguishers as specified in **NFPA 10, Standard for Portable Fire Extinguishers.**

**8.** All employees must keep clear of loads about to be lifted and of suspended loads.

**9.** Use cribbing when performing lifts on outriggers.

**10.** The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

**11.** A physical barricade must be positioned to prevent personnel from entering the counterweight swing (tail swing) area of the crane.

**12.** Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall always be available for review by CA.

**13.** Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by CA.

**14.** Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

**C. USE OF EXPLOSIVES**

Explosives shall not be used or brought to the project site without prior written approval from the CA. Such approval shall not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations. Storage of explosives, when permitted on State property, shall be only where directed and in approved storage facilities. These facilities shall be kept locked at all times except for inspection, delivery, and withdrawal of explosives. Explosive work shall be performed in accordance with the requirements of C.G.S. § 29-343 through 29-355 and as required by the Office of State Fire Marshal, CT Department of Construction Services.

**3.7 EXCAVATIONS**

**A.** Perform soil classification by a competent person in accordance with **29 CFR 1926** **Safety and Health Regulations for Construction.**

**1. Utility Locations**

All underground utilities in the work area must be positively identified by and coordinated in accordance with **Division 00,** **General Conditions, Article 18 Surveys, Permits, And Regulations.** All underground utilities in the work area must be positively identified by a private utility locating service and coordinated with the public utility company. Any markings made during the utility investigation must be maintained by the General Contractor throughout the contract.

**2. Utility Location Verification**

The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Digging within **Two (2) feet** **(610 mm)** of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility expose the utility by hand digging every **100 feet** **(30.5 m)** if parallel within **Five (5) feet** **(1.5 m)** of the excavation.

**3. Shoring Systems**

Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding must have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

**4. Trenching Machinery**

Operate trenching machines with digging chain drives only when the spotters/laborers are in plain view of the operator. Provide operator and spotters/laborers training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Keep documentation of the training on file at the project site.

**3.8 UTILITIES WITHIN CONCRETE SLABS**

**A.** Utilities located within concrete slabs or pier structures, bridges, and the like, are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever contract work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with utility company in addition to a private locating service. Outages to isolate utility systems must be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the contractor from meeting this requirement.

**3.9 ELECTRICAL**

**A. Conduct of Electrical Work**

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the CA and utility company for identification. The CA will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers will be permitted to enter. When work requires Contractor to work near energized circuits as defined by the **NFPA 70**, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. In addition, provide electrical arc flash protection for personnel as required by **NFPA 70E**. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA.

**B. Portable Extension Cords**

Size portable extension cords in accordance with manufacturer ratings for the tool to be powered and protected from damage. Immediately remove from service all damaged extension cords. Portable extension cords shall meet the requirements of **NFPA 70.**

**3.10 WORK IN CONFINED SPACES**

**A.** Comply with the requirements in **OSHA 29 CFR 1910.146** and **OSHA 29 CFR 1926.21(b) (6).** Any potential for a hazard in the confined space requires a permit system to be used.

**1.** Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.

**2.** Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained to ensure exposure to any hazardous atmosphere is kept below its' action level.

**3.** Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

END OF SECTION 01 35 26