
USACE / NAVFAC / AFCEC UFGS-01 35 26 (May 2024)

Preparing Activity: NAVFAC

Superseding
UFGS-01 35 26 (November 2020)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2025

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SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS 05/24

NOTE: This guide specification covers the requirements for safety and occupational health requirements for the protection of Contractor and Government personnel, property, and resources.

This guide specification is intended for use in Contracts that specify FAR 52.236-13 Accident Prevention, or its Alternate I, to include Contracts for construction, dismantling, renovation and demolition; dredging; environmental restoration (investigation, design, remediation); asbestos abatement or lead hazard control; projects in the continental U.S. and overseas.

The requirements of this guide specification are a supplement to the U.S. Army Corps of Engineers (USACE) Safety and Occupational Health Requirements, EM 385-1-1 and clarify safety concerns for high-risk construction activities.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

All additions to the specification by the designers, must be written in accordance with the Plain Writing Act of 2010.

Remove information and requirements not required in respective project, whether or not brackets are present.

The Contractor Safety Self-Evaluation Checklist is

available for download on the Whole Building Design Guide at [UFGS 01 35 26](#) and [UFGS Forms, Graphics, and Tables](#).

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a [Criteria Change Request \(CCR\)](#).

NOTE: This guide specification includes tailoring for DESIGN-BUILD, DESIGN-BID-BUILD, ARMY, NAVY, NAVFAC MAR, NAVFAC HI, NAVFAC PAC, INDOOR AIR QUALITY, and DREDGING projects. Where an Editor's Note states a paragraph is tailored for a Service or project type, the content of the paragraph, or a portion of the paragraph, is suited specifically to be included only for that Service or project type.

NOTE: Include other referenced sections in the Contract where work, such as environmental restoration, asbestos abatement, or lead hazard control, requires additional safety and health plans to be made part of and appended to the APP. These sections include Section [01 35 29.13](#) HEALTH, SAFETY, AND EMERGENCY RESPONSE PROCEDURES FOR CONTAMINATED SITES for environmental restoration project; Section [02 82 00](#) ASBESTOS REMEDIATION, for asbestos abatement; Section [02 83 00](#) LEAD REMEDIATION for lead hazard control activities; and Section [02 85 00](#) MOLD REMEDIATION. For NAVY environmental restoration 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 FEAD Safety Manager for applicability).

Many states and municipalities have more stringent or additional requirements; modify this section as required to meet local requirements and regulations.

PART 1 GENERAL

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also

**use the Reference Wizard's Check Reference feature
to update the issue dates.**

**References not used in the text will automatically
be deleted from this section of the project
specification when you choose to reconcile
references in the publish print process.**

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

Note: Regardless of the publication years listed below, use the current version of reference standards in effect at commencement of contract.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS (ASHRAE)

ASHRAE 52.2 (2017; Addenda B 2020; Errata 1
2020; Addenda C 2022; Errata 2
2024; Addenda D 2025) Method of Testing
General Ventilation Air-Cleaning Devices
for Removal Efficiency by Particle Size

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ANSI/ASSP A10.34 (2021) Protection of the Public on or
Adjacent to Construction Sites

ANSI/ASSP A10.44 (2020) Control of Energy Sources
(Lockout/Tagout) for Construction and
Demolition Operations

ASTM INTERNATIONAL (ASTM)

ASTM D6245 (2012) Using Indoor Carbon Dioxide
Concentrations to Evaluate Indoor Air
Quality and Ventilation

ASTM D6345 (2010) Standard Guide for Selection of
Methods for Active, Integrative Sampling
of Volatile Organic Compounds in Air

ASTM F855 (2020) Standard Specifications for
Temporary Protective Grounds to Be Used on
De-energized Electric Power Lines and
Equipment

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 1048 (2016) Guide for Protective Grounding of
Power Lines

IEEE C2 (2023) National Electrical Safety Code

INTERNATIONAL SAFETY EQUIPMENT ASSOCIATION (ISEA)

ANSI/ISEA Z89.1 (2014; R 2019) American National Standard

for Industrial Head Protection

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA Z535.2 (2011; R 2017) Environmental and Facility
Safety Signs

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 51B (2024) Standard for Fire Prevention During
Welding, Cutting, and Other Hot Work

NFPA 70 (2026) National Electrical Code

NFPA 70E (2024) Standard for Electrical Safety in
the Workplace

NFPA 241 (2022; ERTA 22-1) Standard for
Safeguarding Construction, Alteration, and
Demolition Operations

NFPA 306 (2024) Standard for the Control of Gas
Hazards on Vessels

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION
(SMACNA)

ANSI/SMACNA 008 (2007) IAQ Guidelines for Occupied
Buildings Under Construction, 2nd Edition

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2024) Safety -- Safety and Occupational
Health (SOH) Requirements

EM 385-1-86 (2021) USACE Dive Program

EM 385-1-95 (2014) Safety and Requirements for
Operations and Activities involving
Munitions and Explosives of Concern

EM 385-1-97 (2013) Explosives Safety and Health
Requirements Manual

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1915 Confined and Enclosed Spaces and Other
Dangerous Atmospheres in Shipyard
Employment

29 CFR 1926 Safety and Health Regulations for
Construction

CPL 2.100 (1995) Application of the Permit-Required
Confined Spaces (PRCS) Standards, 29 CFR
1910.146

1.2 DEFINITIONS

The following definitions are for the convenience of the reader. If there is a referenced document in the text of this specification section, that is the document that should define terms for that paragraph. If further clarification is needed, contact the Contracting Officer.

1.2.1 Site Safety and Health Officer (SSHO)

A Contractor Employee that is responsible for overseeing and ensuring implementation of the prime Contractor's Safety and Occupational Health (SOH) program according to the Contract, EM 385-1-1, applicable federal, state, and local requirements.

1.2.1.1 Level One SSHO

A designated employee with full-time SOH responsibility that meets and follows the requirements of EM 385-1-1.

1.2.1.2 Level Two SSHO

A designated employee with Level Two SSHO responsibility that meets and follows the requirements of EM 385-1-1. Level Two SSHOs cannot be assigned to projects that have a residual Risk Assessment Code (RAC) of high or extremely high.

1.2.1.3 Level Three SSHO

A designated Qualified Person or Competent Person with SOH responsibility that meets and follows the requirements of EM 385-1-1. Level 3 SSHOs cannot be assigned to projects that have a residual RAC of high or extremely high.

1.2.1.4 Alternate SSHO

An employee that meets the definition of the contract-required level SSHO, but is not the primary SSHO.

1.2.2 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing existing and predictable hazards in the working environment or working conditions that are unsanitary, hazardous, or dangerous to personnel, and who has authorization to take prompt corrective measures to eliminate them.

1.2.3 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the work, or the project.

1.3 SUBMITTALS

**NOTE: Review Submittal Description (SD) definitions
in Section 01 33 00 SUBMITTAL PROCEDURES and edit**

the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy and Air Force projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy and Air Force projects, or choose the second bracketed item for Army projects.

Government Acceptance or Approval does not remove responsibility from the Contractors for their actions or liability.

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

NOTE: For NAVFAC PAC Area of Responsibility, select the "G" designation for Accident Prevention Plan (APP) and remove the "G" designation for Indoor Air Quality (IAQ) Management Plan, under the SD-01 Preconstruction Submittals.

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G

ENG Form 6282 Site Safety and Health Officer (SSHO) Designation Letter; G

ENG Form 6293 Accident Prevention Plan (APP) Worksheet; G

NOTE: Choose the bracketed item for construction projects operated within USAG Humphreys Desiderio Army Airfield perimeter fence.

[Airfield Construction Safety Phasing Plan (CSPP); G

] *****
NOTE: The following two submittal items are tailored for INDOOR AIR QUALITY. Include the following submittal when required by Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING, IAQ requirements.

[Final IAQ Management Plan; S

] Indoor Air Quality (IAQ) Management Plan; G

SD-06 Test Reports

Accident Reports; G

LHE Inspection Reports

Monthly Exposure Reports; G

SD-07 Certificates

Activity Hazard Analysis (AHA); G

Certificate of Compliance

Hot Work Permit

Standard Lift Plan; G

1.4 PUBLIC HEALTH EMERGENCIES

In the event of a declared public health emergency, follow safety precautions as required by the Occupational Safety and Health Administration (OSHA) www.osha.gov, the Centers for Disease Control and Prevention (CDC) www.cdc.gov, and as required by federal, state and local requirements.

1.5 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report by the fifth of each month. This report is a compilation of employee-hours worked each month for all site workers, both Prime and subcontractor. The Contracting Officer will provide copies of any special forms. Monthly exposure reporting procedures may vary from Resident or Project Office. Verify monthly exposure reporting requirements with the Resident or Project Office prior to the start of work.

1.6 REGULATORY REQUIREMENTS

NOTE: Edit to include any additional requirements which apply to the work to be performed including Federal, state and local laws, regulations and statutes; Host Nation requirements; and NAVY, AIR FORCE and ARMY installation or US Army Corps of Engineers District requirements by authority and document number. Consult with the supporting local Safety and Occupational Health Office (SOHO) for assistance in identifying local requirements.

Choose the bracketed item for construction projects operated within USAG Humphreys Desiderio Army Airfield perimeter fence.

In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of USACE EM 385-1-1, EM 385-1-86, EM 385-1-95, EM 385-1-97, [USAG Humphreys Desiderio Army Airfield Construction Safety Phasing Plan (CSPP),] and the host nation (Republic of Korea) Ministry of Employment and Labor laws, ordinances, criteria, rules and regulations at the date of the Solicitation for this Contract. 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, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.

1.6.1 Drug Prevention Program

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal drugs or consumes alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine, or saliva specimens and test the injured and involved employees for the influence of drugs and alcohol. A copy of the test must be made available to the Contracting Officer upon request.

1.6.2 Subcontractor Safety Requirements

1.6.2.1 OSHA Days Away from Work, Restricted Duty, or Job Transfer (DART) Rate

Contractor must track and document all days away from work, restricted duty, or job transfer and report these number annually to the Resident Engineer no later than 31 December of each year.

Subcontractors on this Contract must have a DART rate, calculated from the most recent, complete calendar year, less than or equal to 3.4 when entering into a subcontract agreement with the Prime Contractor or a subcontractor at any tier. The OSHA Dart Rate is calculated using the following formula:

$$(N/EH) \times 200,000$$

Where:

N = number of injuries and illnesses with days away, restricted work, or job transfer

EH = total hours worked by all employees during most recent, complete calendar year

200,000 = base for 100 full-time equivalent workers (working 40-hours per week, 50 weeks per year)

The Prime Contractor may submit a written request for additional consideration to the Contracting Officer where the specified acceptable OSHA Dart rate range cannot be achieved for a particular subcontractor. Relaxation of the OSHA DART rate range will only be considered for approval on a case-by-case basis for special conditions and must not be anticipated as tacit approval. Contractor's Site Safety and Health Officer (SSHO) must collect and maintain self-certified OSHA DART rates for all subcontractors on the project and make them available to the Government at the Government's request.

1.7 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.7.1 Site Safety and Health Officer (SSHO)

1.7.1.1 Qualifications of SSHO

All SSHOs will have met the training, experience requirements identified in the [EM 385-1-1](#) and this Contract including the following:

1.7.1.1.1 Additional Requirements for Host Nation Site Safety Health Officer(s) (SSHO)

A person certified by the Ministry of Employment and Labor Republic of Korea with Construction Safety Engineer License, Class 1 or 2 has met the above requirement of minimum 1 year safety work on similar projects, but must maintain (periodic refresher) safety competency training in accordance with requirements set forth by [EM 385-1-1](#), applicable government safety requirement specifications, and the Ministry of Employment and Labor Republic of Korea Occupational Safety Health Agency (KOSHA), the Construction Temporary Equipment Association of Korea, or similar host nation designated agency.

KOSHA Training Center and Construction Temporary Equipment Association of Korea provide in-country training and the following link or point of contact (POC) will be provided for additional information:

- a) KOSHA: <https://www.koshats.or.kr>; and
- b) Construction Temporary Equipment Association of Korea: <https://www.kaseol.or.kr> Ph# 02-3283-7321

1.7.1.1.2 30 Hour Construction Safety Awareness Course

The training requirements for Host Nation SSHO(s) must include successful completion of the course entitled "30 Hour Construction Safety Awareness Course" provided by FED or a web-based OSHA Standards for Construction/General Industry 30 Hour Course as stated in [EM 385-1-1](#). If the SSHO does not have a certificate issued within the most recent five years, they must obtain the course certification within sixty (60) calendar days from award. This course will be periodically offered by FED.

1.7.1.1.3 US Site Safety and Health Officer (SSHO)

US Contractor SSHOs must meet the training requirements stated in [EM 385-1-1](#).

1.7.1.1.4 Contractor Quality Control (QC) Manager

The Contractor Quality Control Manager cannot be the SSHO on this project, even though the QC has safety inspection responsibilities as part of the QC duties.

1.7.1.2 Duties of SSHO

All SSHOs will carry out the roles and responsibilities as identified in this Contract and the [EM 385-1-1](#). All SSHOs will be designated on an [ENG Form 6282](#), provided by the Contracting Officer. Superintendent, QC Manager, and SSHO are subject to dismissal if their required duties are not being effectively carried out. If either the Superintendent, QC Manager, or SSHO are dismissed, project work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.7.1.3 Safety Meetings

Conduct safety meetings 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 Occupational Health (SOH) training and motivation. Conduct meetings at least once a month for all supervisors at the project location. The SSHO, supervisors, or foremen must conduct meetings at least once a week for the trade workers. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request. Notify the Contracting Officer of all scheduled meetings 7 calendar days in advance.

1.7.2 Roles and Responsibilities of Prime Contractor and SSHO

The Prime Contractor and SSHO must ensure that the requirements of all applicable OSHA and [EM 385-1-1](#) are met for the project. The Prime Contractor must ensure an SSHO or an equally qualified Alternate SSHO(s) is at the worksite at all times to implement and administer the Contractor's safety program and Government accepted Accident Prevention Plan. If the required SSHO has to temporarily (that is, up to 24 hours / 1 day) leave the site of work due to unforeseen or emergency situations, a Level One, Two, or Three SSHO may be used in the interim and must be on the site of work at all times when work is being performed.

If the SSHO must be off-site for a period longer than 24 hours / 1 day, a qualified alternate that meets the contract requirements must be onsite.

a. Prime contractor must ensure all SSHOs will:

(1) Are designated on an [ENG Form 6282](#).

(2) Meet minimum training and experience requirements identified in [EM 385-1-1](#).

(3) Execute roles and responsibilities identified in EM 385-1-1.

[1.7.3 Contract Site Safety And Health Officer(s)(SSHOs) Minimum Requirements

Provide a minimum of one Level One SSHO that meets the requirements of EM 385-1-1 for this project.

][1.7.4 Contract Site Safety and Health Officer(s)(SSHOs) Minimum Requirements for Projects with[Multiple Work Sites,][Multiple Shifts,][Limited Scope,][or Maintenance, or Service Contracts].

NOTE: Insert this paragraph when a contract has:

- 1) More than one worksite or multiple shifts that require a separate full-time SSHO.
- 2) A limited Scope.
- 3) Maintenance and Service Contracts.

Fill in the worksite locations below and the required level of SSHO when a project has more than one worksite that requires a dedicated full-time SSHO. Just because a project has more than one worksite does not automatically mean additional full-time SSHOs are required. Only consider specifying additional full-time SSHOs when the contract includes separate projects and each project is uniquely different from one another usually having separate plans and specifications or large geographical distances. This is very rare and should only be specified after careful consideration and consultation with the KO, SOHO, and administering construction office. This is very rare and should only be specified after careful consideration and consultation with the FEAD/OICC/ROICC.

Provide a separate full-time Level [One][Two][Three] SSHO at each of the following worksites:

- a. [INDICATE WORKSITE LOCATION] Level [One][Two][Three] SSHO
- b. [INDICATE WORKSITE LOCATION] Level [One][Two][Three] SSHO
- c. [INDICATE WORKSITE LOCATION] Level [One][Two][Three] SSHO

The SSHOs for the worksites listed above must each have the required training, experience, and qualifications in accordance with EM 385-1-1.

Each SSHO is responsible for implementing and managing the Safety and Occupational Health (SOH) program at the worksite indicated, while ensuring that the 29 CFR 1926, EM 385-1-1, Contracts, and all applicable federal, state, and Local requirements are met.

11.7.5 Competent Person for Confined Space Entry

Provide a CP for Confined Space Entry who meets the requirements of EM 385-1-1 and herein. The CP for Confined Space Entry must supervise the entry into each confined space in accordance with EM 385-1-1.

**NOTE: Use this paragraph for operations involving
combustible or hazardous materials.**

Since this work involves operations that handle combustible or hazardous materials, this person must have the ability to understand and follow through on the air sampling, Personal Protective Equipment (PPE), and instructions of a Marine Chemist, Coast Guard authorized persons, or Certified Industrial Hygienist. Confined space and enclosed space work must comply with NFPA 306, 29 CFR 1915, "Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment", 29 CFR 1926, Subpart AA, "Confined Spaces in Construction", or as applicable in 29 CFR 1910 for general industry, 29 CFR 1926 for construction.

1.7.6 Qualified Trainer Requirements

**NOTE: Subparagraph Item "a" below with reference to
NAVFAC is tailored for NAVFAC Marianas projects only.**

Individuals qualified to instruct the 30-hour contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer as defined in the EM 385-1-1, and, at a minimum, possess a working knowledge of the following subject areas: EM 385-1-1, Electrical Standards, Lockout/Tagout, Fall Protection, Confined Space Entry for Construction; Excavation, Trenching and Soil Mechanics, and Scaffolds in accordance with 29 CFR 1926.

Instructors are required to:

- a. Prepare class presentations that cover construction-related safety requirements.
- b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least 5 years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.
- c. Update training course materials whenever an update of the EM 385-1-1 becomes available.
- d. Provide a written exam of at least 50 questions. Students are required to answer 80 percent correctly to pass.
- e. Request, review and incorporate student feedback into a continuous course improvement program.

1.7.7 Preconstruction Conference

NOTE: Choose the bracketed item for construction projects operated within USAG Humphreys Desiderio Army Airfield perimeter fence.

- a. Contractor representatives who have a responsibility or significant role in accident prevention on the project must attend the preconstruction conference. This includes the project superintendent, Site Safety and Occupational Health Officer, quality control manager, or any other assigned safety and health professionals who participated in the development of the APP (including the [USAG Humphreys Airfield Construction Safety Phasing Plan (CSPP),] 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 and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude project delays. The creation of the APP and Schedule will be created after being given Notice to Proceed.
- c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.8 ACCIDENT PREVENTION PLAN (APP)

NOTE: Contracts that include FAR 52.236-13 Accident Prevention require the Contractor to prepare and execute a written Accident Prevention Plan (APP) in accordance with EM 385-1-1 to include Activity Hazard Analyses (AHA). For Design-Build projects a Design Submittal of an APP is also required.

ENG Form 6293 Accident Prevention Plan (APP) Worksheet is attached to the Accident Prevention Plan (APP), not a replacement of the APP.

1.8.1 Accident Prevention Plan (APP) for Design-Build Projects

NOTE: This paragraph is tailored for DESIGN-BUILD, use for DESIGN-BUILD projects only.

Provide a site-specific Accident Prevention Plan (APP), including Activity Hazard Analyses (AHA), in accordance with EM 385-1-1, ENG Form 6293, for the design team to follow during site visits and investigations. For subsequent visits, update the plan if there are changes in the personnel

who will be attending, or the tasks to be performed. Submit the APP for review and acceptance by the Government at least 15 calendar days prior to the start of the design field work after being given Notice to Proceed. Field work must not begin until the design APP is accepted by the Contracting Officer. Prior to the start of construction incorporate the Design APP into the Construction APP so that one site specific APP exists for the project and submit to the Contracting Officer for acceptance.

If the design scope includes borings or other subsurface investigations, include in the APP the type of field investigation and verification techniques, such as visual, local utility locating service scanning and third party subcontractor scanning, potholing, or hand digging within two feet of a known utility that will be required. Mark underground utilities before starting any ground-disturbing actions. Notify the Contracting Officer 15 days prior to the start of soil borings or sub-surface investigations.

1.8.2 Accident Prevention Plan (APP) for Construction

NOTE: Second paragraph includes tailoring for ARMY projects. In second paragraph, choice of bracketed options are for ARMY projects only.

Submit the Accident Prevention Plan (APP) for review and acceptance by the Government at least 15 calendar days prior to the start, after being given Notice to Proceed. A competent person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of [EM 385-1-1](#), [ENG Form 6293](#), and herein. The APP must be job-specific and address any unusual or unique aspects of the project or activity for which it is written. The APP must interface with the Contractor's overall safety and occupational health program referenced in the APP in the applicable APP element, and made site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Government considers the Prime Contractor to be the "controlling employer" for all worksite 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 must be signed in accordance with the APP and ENG Form 6293 Accident Prevention Plan Worksheet. The SSO must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

NOTE: For projects in the NAVFAC PAC Area of Responsibility, DESIGN-BUILD projects select the first set of brackets and edit the sentence by selecting "15" calendar days. For DESIGN-BID-BUILD projects, select the second set of brackets.

[Submit the APP to the Contracting Officer 30 calendar days prior to the date of the preconstruction conference for acceptance.] [Submit the APP to the Contracting Officer within 30 calendar days of Contract award and not less than 10 calendar days prior to the date of the preconstruction conference for acceptance.] Work cannot proceed without an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments will be enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP is cause for stopping of work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, project superintendent, SSHO and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (i.e., imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and 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 ANSI/ASSP A10.34), and the environment.

1.8.3 Names and Qualifications

Provide plans in accordance with the requirements outlined in EM 385-1-1, including the following:

- a. Names and qualifications (resumes including education, training, experience and certifications) of site safety and health personnel designated to perform work on this project to include the designated Site Safety and Health Officer and other competent and qualified personnel to be used. Specify the duties of each position.
- b. As a minimum, designate and submit qualifications of Competent Persons (CP) for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance. Designate and submit qualifications for additional CPs as applicable to the work performed under this Contract.

1.8.4 Plans

Provide plans in the APP in accordance with the requirements outlined in EM 385-1-1, including the following:

**NOTE: The following subparagraphs are tailored for
construction projects operated within USAG Humphreys
Desiderio Army Airfield perimeter fence.**

[1.8.4.1 Airfield Construction Safety Phasing Plan (CSPP)]

Conforms to the latest Construction Safety Phasing Plan (CSPP) issued by USAG Humphreys Directorate of Plans, Training, Mobilization and Security (DPTMS) - Airfield Operation Division. Develop a project-specific

Airfield Construction Safety Phasing Plan (CSPP) to ensure uniform operating procedures for accident prevention, safety, and security requirements at Desiderio Army Airfield.

]1.8.4.2 Lead, Cadmium, and Chromium Compliance Plan

NOTE: Include this bracketed subparagraph and the following subparagraphs when project is expected to involve these hazardous materials or contaminated sites.

Identify the safety and health aspects of work involving lead, cadmium and chromium, and prepare in accordance with Section 02 83 00 LEAD REMEDIATION, and applicable requirements by Republic of Korea Ministry of Employment and Labor.

]1.8.4.3 Asbestos Hazard Abatement Plan

Identify the safety and health aspects of asbestos work, and prepare in accordance with Section 02 82 00 ASBESTOS REMEDIATION, and applicable requirements by Republic of Korea Ministry of Employment and Labor.

]1.8.4.4 Site Safety and Health Plan

Identify the safety and health aspects, and prepare as specified herein.

]1.8.4.5 Polychlorinated Biphenyls (PCB) Plan

Identify the safety and health aspects of Polychlorinated Biphenyls work, and prepare in accordance with Sections 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBs) and 02 61 23 REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS.

]1.8.4.6 Site Demolition Plan

NOTE: Include this subparagraph when the project includes demolition or deconstruction activities. This paragraph includes NAVY tailoring - include the last tailored sentence on NAVY projects only. Refer to the other sections of the Contract for the types of surveys needed.

Identify the safety and health aspects, and prepare in accordance with Section 02 41 00 DEMOLITION AND DECONSTRUCTION and referenced sources.

]1.8.4.7 Crane Work Plan

Provide a crane work plan to the Contracting Officer or Resident Engineer for acceptance. The crane work plan must include the specific model of each crane and a drawing identifying their locations (exact), the dimensions, wheel sizes, number of wheels, wheel spacing, tire pressure(s), number of axles, axle spacing, minimum wheel load to be exerted during operations and maximum outrigger load to be exerted during operations. Allow at least 10 working days for acceptance/non-acceptance of the crane work plan. No crane operations must begin prior to written

acceptance of the crane work plan by the Government.

1.8.4.8 Unexploded Ordnance (UXO)

Provide a UXO plan complying with EM 385-1-97 and EM 385-1-95 to the Contracting Officer or Resident Engineer for acceptance. Contracting Officer or Resident Engineer will verify for the existence of UXO at the project site and provide relevant information about UXO notification procedures, handling, or any other UXO safety requirements to the contractor prior to start of work.

1.8.4.9 Health Hazard Control Program

Designate a competent and qualified person to establish and oversee a Health Hazard Control Program in accordance with USACE EM 385-1-1. The program must ensure that employees, on-site Government representatives, and others, are not adversely exposed to chemical, physical and biological agents and that necessary controls and protective actions are instituted to ensure health.

1.8.4.10 Alcohol and Drug Abuse Plan

- (1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."
- (2) Description of the on-site prevention program.

1.9 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of work presenting hazards not experienced in previous project operations, or where a new work crew or subcontractor is to perform the work, the Contractor(s) performing that work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the SSHO, Superintendent, QC Manager and the subcontractor Foreman performing the work. Format the AHA in accordance with EM 385-1-1 or as directed by the Contracting Officer. Non-mandatory ENG Form 6206, Activity Hazard Analysis may be used. Submit the AHA for review at least 15 working days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the work sequences, specific anticipated hazards, site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, trenching, electrical work, fall protection, and scaffolding. Verification of competence must be submitted with the AHA.

1.9.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the SSHO to ensure the implementation and effectiveness of the required

safety and health controls for that work activity.

1.9.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOV must review the AHA for that work and sign a signature log specifically maintained for that AHA prior to starting work on that activity. The SSHO must maintain a signature log on site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.10 SITE SAFETY REFERENCE MATERIALS

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

1.11 EMERGENCY MEDICAL TREATMENT

Contractors must arrange for their own emergency medical treatment in accordance with **EM 385-1-1**. The Government has no responsibility to provide emergency medical treatment.

1.12 NOTIFICATIONS AND REPORTS

1.12.1 Accident Notification

Notify the Contracting Officer in accordance with the **EM 385-1-1** Accident Reporting Timeline.

Table Accident Reporting Required Timeline		
Accident Type	Notify KO or COR	Complete Final Accident Report on ENG 3394 and provide to KO or COR
Fatality, in-patient hospitalization, amputation, eye loss, or property damage over \$600,000.	Immediately, no later than (NLT) 8 Hours	Within 7 Days
All other accidents and near misses	Immediately, no later than (NLT) 24 Hours	Within 7 Days

Within notification include Contractor name; Contract title; type of Contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any accident or near miss.

1.12.2 Accident Reports

NOTE: The following subparagraphs include tailoring for NAVY and ARMY projects. The sentences referring to ESAMS are tailored for use on NAVY projects. The sentences referring to ENG Form 3394 are tailored for use on ARMY projects.

- a. Conduct an accident investigation for injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. All accidents are reportable, regardless of whether or not it is recordable. Complete the applicable USACE Accident Report, ENG Form 3394, and provide the report to the Contracting Officer within 7 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms. All accidents are reportable, regardless of whether or not it is recordable.

NOTE: The following subparagraph includes tailoring for ARMY and NAVY projects. The first set of sentences is tailored for use on NAVY projects only, and the second set is tailored for use on ARMY projects only.

- b. Near Misses: For Army projects, report all "Near Misses" to the COR, using local accident reporting procedures using ENG Form 3394. The COR will provide the Contractor the required forms. Near miss reports are considered positive and proactive Contractor safety management actions.

1.12.3 LHE Inspection Reports

Submit LHE inspection reports required in accordance with EM 385-1-1 and as specified herein with Daily Reports of Inspections.

[1.12.4 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

NOTE: Include the following paragraph for all NAVY projects; paragraph is optional for ARMY projects.

Provide a Certificate of Compliance for LHE entering an activity under this Contract and in accordance with EM 385-1-1. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with EM 385-1-1 and using Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval at least 15 calendar days in advance of planned lift.

]1.13 HOT WORK PERMIT

1.13.1 Permit and Personnel Requirements

Submit and obtain a written permit prior to performing "Hot Work" (i.e., welding or cutting) or operating other flame-producing/spark producing devices, from the Fire Division or Authority having jurisdiction. A permit is required from the Explosives Safety Office for work in and around where explosives are processed, stored, or handled. Contractors are required to meet all criteria before a permit is issued. Provide at least two 9 kg 4A:20 BC rated extinguishers for normal "Hot Work". The extinguishers must be current inspection tagged, and contain an approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch must be trained in accordance with NFPA 51B and EM 385-1-1 requirements and remain on-site for a minimum of 1 hour 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 emergency Fire Division phone number. Report any fire, no matter how small, to the responsible Fire Division immediately.

- a. Oil painting materials (paint, brushes, empty paint cans, etc.), and all flammable liquids must be removed from the facility at quitting time. All painting materials and flammable liquids must be stored outside in a suitable metal locker or box and will require re-submittal with non-hazardous materials.
- b. Accumulation of trays, paper, shavings, sawdust, boxes and other packing materials must be removed from the facility at the close of each workday and such material disposed of in the proper containers located away from the facility.
- c. The storage of combustible supplies must be a safe distance from structures.
- d. Area outside the facility undergoing work must be cleaned of trash, paper, or other discarded combustibles at the close of each workday.
- e. All portable electric devices (saws, sanders, compressors, extension chord, lights, etc.) must be disconnected at the close of each workday. When possible, the main electric switch in the facility must be deactivated.

1.13.2 Work Around Flammable Materials

Obtain permit approval from a NFPA Certified Marine Chemist, or Certified authority representative of Republic of Korea Ministry of Employment and Labor qualified to perform specific type services for "Hot Work" within or around flammable materials (such as fuel systems or welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, or vaults) that have the potential for flammable or explosive atmospheres.

Whenever these materials, except beryllium and chromium (VI), are encountered in indoor operations, local mechanical exhaust ventilation systems that are sufficient to reduce and maintain personal exposures to within acceptable limits must be used and maintained in accordance with manufacturer's instruction and supplemented by exceptions noted in

EM 385-1-1.

1.14 CONFINED SPACE ENTRY REQUIREMENTS

**NOTE: The following paragraph includes tailoring
for NAVY projects. Include the last bracketed
sentence for NAVY projects only as applicable.**

Contractors entering and working in either non-permit required confined spaces (NPRCS) or permit-required confined spaces (PRCS) must comply with EM 385-1-1, 29 CFR 1926, 29 CFR 1910, and Directive CPL 2.100. Any potential for a hazard in the confined space requires a permit system to be used.

1.14.1 GAS Protection

Contractor must have one or more employees properly trained and experienced in operations and calibration of atmospheric testing equipment and formally qualified as atmospheric hazards inspectors who must be on duty during times workers are in either (NPRCS) or (PRCS). Their primary functions must be to test for hazardous atmosphere including oxygen deficiency, flammability, and toxicity using testing equipment. Surveillance and monitoring must be required in these types of work spaces by both Contractor and contracting officer.

1.14.2 Tests

Unless equipment of constant supervisory type with automatic alarm is employed, tests must be made at least every 2 hours or more often when character of ground or experience indicates gas may be encountered. Tests must be made before workmen are permitted to enter the (NPRCS) or (PRCS) after an idle period exceeding one-half hour. Readings must be permanently recorded daily, indicating the concentration of gas, point of test, and time of test. Submit copies of the test readings to the Contracting Officer at the end of each work day.

1.14.3 Rescue Procedures and Coordination with Local Emergency Responders

Develop and implement an on-site rescue and recovery plan and procedures. The rescue plan must not rely on local emergency responders for rescue from a confined space.

1.15 CONSTRUCTION INDOOR AIR QUALITY (IAQ) MANAGEMENT PLAN

**NOTE: This paragraph and subsequent subparagraphs
are tailored for INDOOR AIR QUALITY.**

**NOTE: Preventing indoor air quality problems
resulting from the construction process sustains the
comfort and health of construction workers and
building occupants. Include last bracketed sentence
when required by Section 01 33 29 SUSTAINABILITY
REQUIREMENTS AND REPORTING, IAQ requirements.**

For projects in the NAVFAC PAC Area of Responsibility, select the second set of brackets, "not less than 10 calendar days before the preconstruction conference."

The following paragraph contains tailoring for DESIGN-BUILD and DESIGN-BID-BUILD.

Submit an IAQ Management Plan [within [15][_____] calendar days after design[Contract award][notice to proceed] and not less than 10 calendar days before the preconstruction conference.][not less than 10 calendar days before the preconstruction conference.] Revise and resubmit Plan as required by the Contracting Officer. Make copies of the final plan available to all workers on site. Include provisions in the Plan to meet the requirements specified below and to ensure safe, healthy air for construction workers and building occupants.[Submit [Final IAQ Management Plan](#) for inclusion in the Sustainability eNotebook, in accordance with Section 01 33 29 SUSTAINABILITY REQUIREMENTS AND REPORTING.]

1.15.1 Requirements During Construction

Provide for evaluation of indoor Carbon Dioxide concentrations in accordance with [ASTM D6245](#). Provide for evaluation of volatile organic compounds (VOCs) in indoor air in accordance with [ASTM D6345](#). Use filters with a Minimum Efficiency Reporting Value (MERV) of 8 in permanently installed air handlers during construction.

1.15.1.1 Control Measures

Meet or exceed the requirements of [ANSI/SMACNA 008](#) to help minimize contamination of the building from construction activities. The five requirements of this manual which must be adhered to are described below:

- a. HVAC protection: Isolate return side of HVAC system from surrounding environment to prevent construction dust and debris from entering the duct work and spaces.
- b. Source control: Use low emitting paints and other finishes, sealants, adhesives, and other materials as specified. When available, cleaning products must have a low VOC content and be non-toxic to minimize building contamination. Utilize cleaning techniques that minimize dust generation. Cycle equipment off when not needed. Prohibit idling motor vehicles where emissions could be drawn into building. Designate receiving/storage areas for incoming material that minimize IAQ impacts.
- c. Pathway interruption: When pollutants are generated use strategies such as 100 percent outside air ventilation or erection of physical barriers between work and non-work areas to prevent contamination.
- d. Housekeeping: Clean frequently to remove construction dust and debris. Promptly clean up spills. Remove accumulated water and keep work areas dry to discourage the growth of mold and bacteria. Take extra measures when hazardous materials are involved.
- e. Scheduling: Control the sequence of construction to minimize the absorption of VOCs by other building materials.

1.15.1.2 Moisture Contamination

- a. Remove accumulated water and keep work dry.
- b. Use dehumidification to remove moist, humid air from a work area.
- c. Do not use combustion heaters or generators inside the building.
- d. Protect porous materials from exposure to moisture.
- e. Remove and replace items which remain damp for more than a few hours.

1.15.2 Requirements After Construction

After construction ends and prior to occupancy, conduct a building flush-out or test the indoor air contaminant levels. Flush-out must be a minimum 2 weeks with MERV-13 filtration media as determined by ASHRAE 52.2 at 100 percent outside air. Air contamination testing must be consistent with EPA's current Compendium of Methods for the Determination of Air Pollutants in Indoor Air. After building flush-out or testing and prior to occupancy, replace filtration media. Filtration media must have a MERV of 13 as determined by ASHRAE 52.2.

1.16 SEVERE STORM PLAN

In the event of a severe storm warning, the Contractor must comply with the applicable Storm Plan and:

- 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.
- c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

NOTE: Use this tailored paragraph for ARMY projects only.

Not Used

2.1 CONFINED SPACE SIGNAGE

Provide signs for non-permit required confined spaces (NPRCS) and permit required confined spaces (PRCS). Signs for confined spaces must comply with NEMA Z535.2. Provide signs with wording: "DANGER--NON-PERMIT-REQUIRED CONFINED SPACE" or "DANGER--PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" in bold letters a minimum of 25 mm in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" must be red and readable from 1520 mm.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Comply with [EM 385-1-1](#), [NFPA 70](#), [NFPA 70E](#), [NFPA 241](#), the APP, the AHA, Federal and local OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

PPE is governed in all areas by the nature of the work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Mandatory PPE includes:

- a. Head Protection that meets [ANSI/ISEA Z89.1](#)
- b. Long Pants
- c. Appropriate Safety Footwear
- d. Appropriate Class Reflective Vests

3.1.1 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (i.e., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the start of work to verify that it effectively operates in the area/environment. Develop an employee check-in/check-out communication procedure to ensure employee safety.

3.1.2 Hazardous Material Use

Each hazardous material must receive approval from the Contracting Office or their designated representative (post/base installation safety office/FED safety office) prior to being brought onto the job site or prior to any other use in connection with this Contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

3.1.3 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 [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-isocyanates, lead-based paint, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval. Notify the Radiation Safety Officer (RSO) or safety office prior to any/all items of radioactive material and devices being brought on base.

3.1.4 Unforeseen Hazardous Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (i.e., 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during demolition, repair, renovation, or construction operations. Stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Contracting Officer will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification.

3.2 UTILITY OUTAGE REQUIREMENTS

**NOTE: Consult with local Installation on notice
required for utility outage.**

Refer to Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS, AND MISCELLANEOUS PROVISIONS for advanced notice requirements of utility outages. At a minimum, the written request must include the location of the outage, utilities being affected, duration of outage, any necessary sketches, and a description of the means to fulfill energy isolation requirements in accordance with EM 385-1-1. In accordance with EM 385-1-1, where outages involve Government or Utility personnel, coordinate with the Government on all activities involving the control of hazardous energy.

These activities include, but are not limited to, a review of Hazardous Energy Control Program (HECP) and HEC procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with EM 385-1-1 and NFPA 70E, work on energized electrical circuits must not be performed without prior Government authorization. Government permission is considered through the permit process and submission of a detailed AHA. Energized work permits are considered only when de-energizing introduces additional or increased hazard or when de-energizing is infeasible.

3.3 OUTAGE COORDINATION MEETING

**NOTE: For bracketed items, choose representative
required for the Installation.**

After the utility outage request is approved and prior to beginning work on the utility system requiring shut-down, conduct a pre-outage coordination meeting in accordance with EM 385-1-1. This meeting must include the Prime Contractor, the Prime and subcontractors performing the work, the Contracting Officer, and the Public Utilities representative. All parties must fully coordinate HEC activities with one another. During the coordination meeting, all parties must discuss and coordinate on the scope of work, HEC procedures (specifically, the lock-out/tag-out procedures for worker and utility protection), the AHA, assurance of trade personnel qualifications, identification of competent persons, and compliance with HECP training in accordance with EM 385-1-1. Clarify when personal protective equipment is required during switching operations,

inspection, and verification.

3.4 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with EM 385-1-1, 29 CFR 1910, 29 CFR 1915, ANSI/ASSP A10.44, NFPA 70E.

3.4.1 Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Prime Contractor and the subcontractor performing the work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer's Representative, and required by EM 385-1-1. The meeting will occur immediately preceding the start of work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must occur prior to conducting the outage and commencing with lockout/tagout procedures.

3.4.2 Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before any work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA and required by EM 385-1-1. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1.

3.4.3 Lockout/Tagout Removal

Upon completion of work, conduct lockout/tagout removal procedure in accordance with the HECP. In accordance with EM 385-1-1, each lock and tag must be removed from each energy isolating device by the authorized individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer's Representative), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's work will not be removed until the authorized Government employee receives the formal notification.

3.5 FALL PROTECTION PROGRAM

Establish a fall protection program, for the protection of all employees exposed to fall hazards. Within the program include company policy, identify roles and 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 in accordance with EM 385-1-1.

3.5.1 Fall Protection Equipment and Systems

Enforce use of personal fall protection equipment and systems designated

(to include fall arrest, restraint, and positioning) for each specific work activity in the Site Specific Fall Protection and Prevention Plan and AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in EM 385-1-1.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1 and 29 CFR 1926.

3.5.1.1 Additional Personal Fall Protection Measures

In addition to the required fall protection systems, other protective measures such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with EM 385-1-1. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing work.

3.5.1.2 Personal Fall Protection Equipment

Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must 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. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 1633 kg in all directions. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 1.8 m, unless the proper energy absorbing lanyard is used. Always take into consideration the total fall distance and any swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. Equip all full body harnesses with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance in accordance with EM 385-1-1.

3.6 EQUIPMENT

3.6.1 Use of Explosives

Explosives must not be used or brought to the project site without prior written approval from the Contracting Officer. Such approval does 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 Government property, must be only where directed and in approved storage facilities. These facilities must be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

3.7 ELECTRICAL

Perform electrical work in accordance with EM 385-1-1.

3.7.1 Electrical Work

As described in [EM 385-1-1](#), electrical work is to be conducted in a de-energized state unless there is no alternative method for accomplishing the work. In those cases obtain an energized work permit from the [Contracting Officer][Commanding Officer]. The energized work permit application must be accompanied by the AHA and a summary of why the equipment/circuit needs to be worked energized. 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. Attach temporary grounds in accordance with [ASTM F855](#) and [IEEE 1048](#). 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 is 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 are permitted to enter. When work requires work near energized circuits as defined by [NFPA 70](#), high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety footwear, insulating gloves and 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. Ensure that each employee is familiar with and complies with these procedures and [29 CFR 1910](#).

3.7.2 Qualifications

Electrical work must be performed by QP with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman/Apprentice ratio must be in accordance with State, Local[and Host Nation] requirements applicable to where work is being performed.

3.7.3 Arc Flash

Conduct a hazard analysis/arc flash hazard analysis whenever work on or near energized parts greater than 50 volts is necessary, in accordance with [NFPA 70E](#).

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in [NFPA 70E](#) requirements and procedures. Unless permitted by [NFPA 70E](#), no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.7.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with [[NFPA 70](#)][and][[IEEE C2](#)] to provide a permanent, continuous and effective path to ground unless otherwise noted by [EM 385-1-1](#).

3.7.5 Testing

Temporary electrical distribution systems and devices must be inspected, tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI) protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

ATTACHMENTS:

Number 1 Machinery and Mechanized Equipment Certification Form

Number 2 Certificate of Compliance

Number 3 Contractor Crane Operation Checklist

Number 4 Mishap Reporting Forms (OSHA's Form 300)

Number 5 USACE Mishap Notification and Investigation (ENG Form 3394)

ATTACHMENT NUMBER 1

MACHINERY & MECHANIZED EQUIPMENT CERTIFICATION FORM

From: (Contractor) _____

(Sub-Contractor) _____

Contract No. _____ Title: _____

To: CONTRACTING OFFICER/FED/RE/PE/QAR/CONREP/ROK-US DCA/MND INSP/K-PMC
SAFETY

Subj: SAFETY CERTIFICATION OF MACHINERY AND MECHANIZED EQUIPMENT

Ref: (a) U. S. Army Corps of Engineers, EM 385-1-1 Safety and Health
Requirements Manual, Section 18

1. Inspection and certification of machinery and mechanized equipment, as
required by reference (a) has been made as shown below:

a. Identification of equipment (Make, Model, and Serial Number):

(1) _____ Date _____

(2) _____ Date _____

(3) _____ Date _____

(4) _____ Date _____

(5) _____ Date _____

2. The above listed equipment is CERTIFIED TO BE IN SAFE OPERATING
CONDITION BY A COMPETENT PERSON and as outlined in reference (a).

Name, Title, and signature of competent mechanic or employer designated
competent person representative making the inspection:

Name _____ Title _____

Firm _____

Signature _____

Copy to:
Contract File

ATTACHMENT NUMBER 2

CERTIFICATE OF COMPLIANCE	
<p>This certificate shall be signed by an official of the company that provides cranes for any application under this contract. Post a completed certificate on each crane brought onto government FED/ROK-US DCA contracts.</p>	
CONTRACTING OFFICER'S POINT OF CONTACT	PHONE
PRIME CONTRACTOR/PHONE	CONTRACT NUMBER
CRANE SUPPLIER/PHONE (if different from prime contractor)	CRANE NUMBER (i.e., ID number)
CRANE MANUFACTURER/TYPE/CAPACITY	
CRANE OPERATOR'S NAME(S)	
<p>I certify that,</p> <ol style="list-style-type: none"> 1. Above noted crane and associated rigging gear conform to applicable OSHA regulations (Ministry of Labor Republic of Korea) and applicable ASME B30 standards. The following regulations and standards apply: EM 385-1-1 Section 16 and Appendices F, G and H to include host nation regulations. 2. Operator(s) noted above has been trained and qualified for the operation of above noted crane. 3. Operator(s) noted above have been trained not to bypass safety devices during lifting operations. 	
COMPANY OFFICIAL SIGNATURE (Prime Contractor)	DATE
COMPANY OFFICIAL NAME/TITLE	
<p>POST ON CRANE (IN CAB OR VEHICLE LOWER FRONT WINDSHIELD)</p>	

ATTACHMENT NUMBER 3

CONTRACTOR CRANE OPERATION CHECKLIST			YES	NO
1	Is Certification of Compliance, P-1, in operator's cab with current operator's name listed?			
2	Does operator know weight of load to be lifted?			
3	Is load to be lifted within crane manufacture's rated capacity in its Present configuration?			
4	Is crane level and on firm ground?			
5	Are outriggers required?			
6	If so, are outriggers fully extended and down, and crane load off wheels?			
7	If blocking is required, is entire surface of outrigger pad supported and is blocking material of sufficient strength to safely support loaded outrigger pad?			
8	If outriggers are not used, is crane rated for on-rubber lifts by manufacturer's load chart?			
9	Is swing radius of crane counterweight clear of people and obstructions and accessible areas within swing area barricaded to prevent injury or damage?			
10	Has hook been centered over load in such a manner to minimize swing?			
11	Is load well secured and balanced in sling or lifting device before it is lifted more than a few inches?			
12	Is lift and swing path clear of obstructions?			
13	If rotation of load being lifted is hazardous, is a tag or restraint line being used?			
14	Are personnel prevented from standing or passing under a suspended load?			
15	Is crane operator's attention diverted?			
16	Are proper signals being used at all times?			
17	Do operations ensure that side loading is prohibited?			
18	Are personnel prevented from riding on a load?			

ATTACHMENT NUMBER 3 (cont)

CONTRACTOR CRANE OPERATION CHECKLIST			
		YES	NO
19	Are start and stop motions in a smooth fluid motion (no sudden acceleration or deceleration)?		
20	If operating near electric power lines, are rules and guidelines understood and adhered to?		
21	Is lift a critical lift?		
22	If so, are all regulations understood and check-off sheets initialed and signed off?		
23	Is rigging gear undamaged and acceptable for the application?		
24	Does crane have a copy of the manufacture instructions or specifications (Operator's manual)?		
25	Does the contractor have a copy of "MACHINERY & MECHANIZED EQUIPMENT CERTIFICATION FORM" to include documentation that required manufacturer daily inspection or tests have been conducted prior to use?		
Contractor:		Subcontractor:	
Location:		Date:	
Notes:			
Signature of Government Contractor/ROK-US DCA Representative:			

-- End of Section --