

Area of Operations, Savannah District

US Army Corps Of Engineers Savannah District

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> U.S. ARMY ENGINEER DISTRICT, SAVANNAH CORPS OF ENGINEERS 100 WEST OGLETHORPE AVENUE SAVANNAH, GEORGIA 31401-3640

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## SECTION 01 11 00

# SUMMARY OF WORK 08/15

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY (DA)

DA TM 5-818-8

(1995) Engineering Use Of Geotextiles {AFJMAN 32-1030}

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02	(2016, with Change 4, 2019) High Performance and Sustainable Building Requirements
UFC 3-120-10	(2018) Interior Design
UFC 3-410-01	(2013; Change 6 2020) Heating, Ventilating, and Air Conditioning Systems

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD

(2015) Manual on Uniform Traffic Control Devices

# 1.2 DESCRIPTION

a. Upon receipt of a Task Order, provide the labor, materials, supplies, parts (to include system components), supervision, equipment, and related services, (except when specified as Government furnished), to repair, construct, and maintain facilities and structures primarily at Federal facilities within the geographic boundaries of the U.S. Army Corps of Engineers, South Atlantic Division (SAD), as specified.

b. Investigate the site or area as directed or indicated in the Task Order. Review existing as-built drawings, maintenance records, and other pertinent documentation, as required to become familiar with the site. Interview on-site maintenance personnel and staff to determine the existing conditions of the area. Investigate and determine whether environmental surveys (asbestos, lead based paint) are required in the work site/area. During this site visit, gather data required to prepare a site description, a hazard and risk analysis, and a site control document. Investigate access to areas where field efforts may occur. Develop a basis to prepare budget proposal costs for the proposed work. c. The following list of discussion topics is provided to assist in gathering the necessary information during the site visit to prepare a work plan. It is not a comprehensive list of topics to discuss at the site visit meeting. Some of the topics may not be applicable to all Task Orders. Additional criteria and information may be required to fully determine the Task Order scope of work.

Environmental issues Functional layout - how does the customer plan to use the project? Unusual details pertaining to the project Site improvements (i.e. parking, grading, drainage, etc.) ADA accessibility Anti-terrorism/force protection requirements Sustainable design and construction Fire protection Plumbing, water and sewer requirements Electrical, interior and exterior requirements Occupancy during construction Phasing requirements Schedule requirements Availability of as-built drawings

d. Provide related services such as preparing and submitting required reports, performing administrative work, and submitting necessary information as specified under this Contract and within each Task Order. Ensure that the work provided meets the scope of work, specifications, drawings, and other documents for each Task Order.

e. The Government will provide a scope of work to the Contractor detailing the work to be accomplished. The detail provided will vary from a general idea of what is required with no drawings to complete design documents, depending on the complexity of the project. Use the information provided by the Government and submit a complete proposal, regardless of how much information is provided by the Government. The proposal must include the method, labor, and materials necessary for performing the work required.

f. Complete the work and services under this Contract in accordance with schedules established in each Task Order. Types and numbers of submittals and dates and places for review meetings must be established by each Task Order.

# 1.2.1 Description Of Work

Single Award Task Order Contract (SATOC) for General Construction and Design-Build Construction is intended to provide cost-effective, rapid response for:

- \* new construction
- \* renovation
- \* upgrades
- \* improvement
- \* maintenance or repair of conditions related, but not limited to:
  site work
  - exterior and architectural finishes
  - architectural woodwork
  - electrical systems
  - mechanical systems
  - plumbing systems

- fire suppression systems
- anti-terrorism and force protection of Government facilities

The facility types may include, but are not limited to:

- \* medical
- \* administrative
- \* educational
- \* training
- \* weapons training
- \* animal training
- \* storage
- \* religious
- \* recreational
- \* dining
- \* vehicle maintenance
- \* aircraft maintenance
- \* air traffic control
- \* barracks
- \* ranges
- \* access control
- \* sensitive compartmented information

Work that requires the use of civil funds is not within the scope of this Contract. Work requiring the use of civil funds is not allowed. Task orders for design only or demolition only will not be placed against the Contract. Work may include, but is not limited to:

1.2.1.1 General Construction

New construction, renovation, repair, alterations and improvements of facilities and facility components including:

a. exterior and architectural finishes (e.g., floors, ceilings, doors, windows, paint, siding)

b. architectural woodwork (e.g., molding, cabinets)

c. electrical systems (e.g., conduit, wire, breakers, panels, transformers, emergency generators, interior/exterior high and low voltage electrical power lines, interior/exterior lighting, emergency shut-offs, lighting protection)

d. mechanical systems (e.g., HVAC instrumentation and controls, HVAC control systems, commissioning, decommissioning, retro-commissioning, total building commissioning, gas lines, insulation, acoustical systems, underground high temperature lines, boilers, chillers and chilled water distribution systems, variable frequency controls on HVAC systems)

e. plumbing systems (e.g., sanitary sewer, domestic water lines, backflow preventers, pumps, water coolers)

f. fire suppression systems (fire alarm systems, sprinkler system)

g. communication systems (e.g., mass notification system, IT lines, telephone and data lines)

h. renewable energy systems (e.g., solar panels, ground source heat

pumps)

i. roofing systems (e.g., various roof types and components, including gutters, downspouts, flashing, fascia, soffits)

- j. structural systems
- k. foundations
- 1. fencing
- m. gates
- n. conduit and cables for security systems
- 1.2.1.2 Anti-Terrorism and Force Protection (ATFP)

New construction, renovation, repair, alterations, and improvements of ATFP facilities, facility components, and systems (e.g., site layout, security design, building construction, threat development, level of protection, design constraints and communications) and other appurtenances necessary to provide a complete and usable facility.

1.2.1.3 Horizontal And Other Construction

New construction, renovation, repairs and improvements of pavements, surfaces, transportation facilities, earthwork, landscaping, sitework, and stormwater management systems, including highways; roads; streets; airfield pavements, taxiways, aprons and pads; highway bridges, excluding bridges that span major waterways; parking lots; traffic signage, signals and markings; detection loops; pedestrian bridges; sidewalks; decorative pavers; athletic and recreational surfaces; landscaping and irrigations systems; seeding and sodding.

Work may also include, but is not limited to: site preparation, earthwork, grading, excavation and filling, clearing and grubbing, surveying, traffic and signalization and traffic studies. Storm water management, storm drainage systems and erosion control.

# 1.2.1.4 Incidental Work

a. New construction, renovation, temporary facilities, rehabilitation, repair, and other work and services that are incidental to tasks performed in the above paragraphs. This includes, but is not limited to demolition; carpentry; lighting; and minor electrical work that may be required to provide a complete, safe and usable facility during and after the course of roofing, mechanical, plumbing or painting services; and swing space and temporary and relocatable facilities for occupancy, during construction.

b. Remediation and disposal of lead, asbestos, and mold incidental to any task performed in any of the above paragraphs.

c. Testing, reports, and surveys associated with new construction, renovation, repair, alterations and improvements of facilities, facility components and other tasks performed in the above paragraphs, including lead and asbestos testing, structural testing, transportation surveys (including traffic and pedestrian patterns)

## 1.3 EXISTING WORK

In addition to FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.
- 1.4 SERVICES TO BE PERFORMED
- 1.4.1 General Services

Upon issuance of a Task Order, supply all personnel, tools, equipment, transportation, materials, and supervision (except as otherwise noted or provided) to safely and efficiently perform the Contract requirements.

Task Orders to be completed under this Contract must be performed in accordance with:

EM 385-1-1 UFC 1-200-02 UFC 3-120-10 UFC 3-410-01 DA TM 5-818-8 MUTCD

# 1.4.2 Overall Responsibility

Provide site surveys, calculations, work plans, construction, equipment startups, testing, repair, and training required for satisfactory completion of the Contract as required by each individual Task Order. This includes, but is not limited to, providing labor, equipment, materials, applicable engineering documentation, and other necessary services and products for the implementation or testing that may be required by the individual Task Order.

# 1.4.3 Codes and Standards

Adhere to codes and standards as specified and in the individual Task Orders. Code and standard requirements must be as listed in Paragraph REFERENCES, unless superseded by a later edition in the Task Order.

1.4.4 Documentation

Implement, maintain, and control a system for identification, preparation, reproduction, distribution, and maintenance of all documentation, dates and information necessary for its internal management as well as for Government management of the individual projects and the total program.

Contract Manpower Reporting Application (CMRA) reporting will be required as part of the scope of work of individual task orders associated with this Contract.

# 1.4.5 Site Visits and Meetings

Times and locations of site visits and meetings must be identified in each Task Order.

1.4.6 Permits

Identify and obtain the permits, identified in each Task Order, from Federal, State, local, and Installation agencies.

### 1.5 DESIGN SERVICES

If design services are required, they will be indicated in the Task Order Scope of Work. Design services must be prepared in accordance with Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD).

#### 1.5.1 Design Team

The A/E Firm must maintain a design staff with comparable ability and experience to the staff listed in the technical proposal. Do not change the design staff without Government approval. Unless specified by the Task Order, the design staff must consist of the following, at a minimum:

1.5.1.1 Technical Design Staff

The technical design staff must consist of professional architects and engineers, (civil, mechanical, electrical, and topographic survey crew and associated sub-professionals). The professional architects and engineers must be licensed as applicable.

# 1.5.1.2 Senior Architect/Engineer

The Architect/Engineer must have an accredited 4- or 5-year college degree in architecture, engineering, or related technical fields, have a professional architect or engineering license, and a minimum of 3 years design experience in his/her respective discipline.

1.5.1.3 Sub-Professional Architect/Engineer

The Architect/Engineer must have an accredited 4- or 5-year college degree in architecture, engineering, or related technical fields and a minimum of 3 years design experience in his/her respective discipline.

1.5.1.4 Topography Surveyor and Crew

The Topography Surveyor must have a recognized 4-year college degree in land surveying, or equivalent education and experience, have a registered land surveyor license, a minimum of 3 years land surveying experience, and knowledge of permitting requirements, licensing, and platting procedures for states within the boundaries of the U.S. Army Corps of Engineers, South Atlantic Division. The crew must consist of a minimum of 2 instrument technicians, each with a high school diploma or equivalent and 2 years directly-related field experience.

1.5.2 Design Team Travel And Material Cost

a. Travel Cost will be computed separate. Cost associated with travel must be in accordance with the Joint Travel Regulation (JTR). All mark-ups with the exception of profit will not be applied to travel cost.

b. Subsistence will be computed separate. Cost associated with subsistence must be in accordance to the Government Per Diem Rate. All mark-ups with the exception of profit will not be applied to subsistence cost.

c. All materials (i.e. drawings, prints, disk, plots, etc.) will be negotiated on a Task Order by Task Order basis. All mark-ups with the exception of profit will not be applied to materials.

# 1.6 MANAGEMENT STAFF, RESPONSIBILITIES, QUALIFICATIONS

Maintain a management staff with comparable ability and experience to the staff listed below. Submit the personnel's identification and contact information, including resumes, for Government approval. Changes from the proposed and accepted management staff must be approved by the Contracting Officer. A request for a change to the approved staff, including identification, contact information, and resumes, must be submitted in writing for Government approval.

Resumes that have been previously submitted to the Government need not be a part of the individual Task Order proposal.

Do not employ military members or other Government employees to perform work under this Contract, regardless of their work or leave status.

# 1.6.1 Program Manager

This is the individual who has direct responsibility for Contract execution. This individual must serve as the single point of contact and liaison between the Contracting Officer and the Contractor.

# 1.6.2 Project Manager

This is the individual who has the direct responsibility for site operations. This individual must have a recognized 4-year college degree in engineering, related technical field, or business/management, minimum experience of 5 years (or minimum experience of 10 years in lieu of a 4-year degree) in managing and supervising engineering for projects similar in scope of the Task Order. Professional(s) must be familiar and conversant with the various codes and standards applicable to tasks covered by the scope of work. The Project Manager for a Task Order must oversee task accomplishment, administer instructions, and answer questions from the Contracting Officer pertaining to the tasks during the life of the Task Order. The full-time on-site Project Manager must be designated in writing (listing name, address, local telephone number, and home telephone number). The Project Manager must report directly to the Program Manager and to the Contracting Officer for their Task Order. The Project Manager must ensure that adequate internal controls and review procedures are followed, in order to eliminate conflicts, errors, and omissions, and ensure that the technical requirements are met. Another individual may be designated to temporarily act for the Project Manager, however 48 hours advance notice in writing of such change must be provided to the Contracting Officer.

## 1.6.3 Safety Manager

This individual must be directly responsible for the Safety Program.

1.6.4 Additional Staff

Provide specialized safety and quality control people (i.e. fire protection, mechanical controls, HVAC balancing, etc.) as required by individual Task Orders.

Provide outside laboratories (i.e. concrete testing, HTRW testing, welding testing) as required by each Task Order.

#### 1.7 ACTIVITIES UNDER CONSTRUCTION OR DESIGN-BUILD PROJECTS

## 1.7.1 Task Orders

a. The activities to be performed by the Contractor under this Contract and subsequent Task Orders will be identified in each Task Order.

b. The Government reserves the right to modify duties and time periods in the task. At the completion of each approved Task Order, the results, documented and conceptual, become the property of the Government.

c. The Contracting Officer will decide whether or not to award Task Orders.

### 1.7.1.1 Normal Conditions

Under normal conditions, the Contractor must review the scope of work for completeness and biddability and then provide a proposal for the work. The Government will evaluate the proposal and determine price reasonableness, negotiate with the Contractor, and issue a Firm Fixed Price Task Order.

# 1.7.1.2 Unusual Conditions

In unusual cases when work must commence almost immediately and there is insufficient time to fully definitize the price, the Government will have, as a minimum, a fully definitized scope of work and an IGE completed. The Contractor will prepare and submit his proposal in the same manner as under normal conditions. The Government will compare the IGE to the Contractor's proposal and establish a most realistic not to exceed limit for use in issuing the Task Order. Immediately after Task Order issuance, the Government will complete the evaluation of the proposal, ensure competition is present and sufficient, determine price reasonableness, negotiate with the Contractor, and issue a modification to the Firm Fixed Price Task Order providing final definitization of price.

1.7.2 Work Plan (Design)

Unless otherwise approved by the Contracting Officer, prepare and submit a work plan (Contractor's engineering-related services and price proposal) for Government approval prior to beginning construction on site. Submit the work plan for 2 reviews: preliminary and final.

The Government will accept the work plan and continue through final review, or reject the work plan. The final review will be to ascertain that the Government review comments from the preliminary review have been incorporated.

1.7.3 Construction Price Proposal

Prepare a price proposal for construction and submit it to the Contracting

Officer within the time period stipulated in the Task Order. Failure to submit the proposal on time could result in an interim unsatisfactory performance rating.

1.7.4 Negotiations for Construction

When required, negotiations between the Contracting Officer and the Contractor will begin at a time prescribed by the Government and convenient to the Contractor. Details covered in negotiations must include, but not necessarily be limited to:

Scope of Work Plan (Design) Period of Contract Technical Details of Work Plan Management of Work Plan Cost of Price Proposal for Work Plan (If Applicable) and Construction

Construction must not begin until the Contractor and the Government are in

1.7.5 Awarded Action

Once the Task Order has been awarded:

agreement on the above items.

a. Adhere to the Task Order scope of work/work plan.

b. Prepare and certify a comprehensive work schedule based on the proposed work plan in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE.

- c. Construct the facility in accordance with the approved work plan.
- d. Certify computer media.

The Government may assess liquidated damages and issue an interim unsatisfactory performance rating if the Contractor fails to complete the construction in the time period stipulated.

#### 1.8 SUBMITTED SURVEYS, STUDIES, PROPOSALS, AND WORK PLANS

Surveys, studies, proposals, and work plans submitted to the Contracting Officer become the property of the Government.

1.9 ASBESTOS AND LEAD-BASED PAINT

If work is in areas suspected of containing asbestos or lead-based paint, notify the Contracting Officer immediately. If asbestos or lead-based paint is encountered, cease work immediately and notify the Contracting Officer.

# 1.10 PUBLIC AFFAIRS

Do not disclose data generated or reviewed under this Contract. Refer requests for information concerning site conditions to the Contracting Officer for comment.

# 1.11 COMPUTING PROFIT

See Attachment A "Weighted Guidelines Method For Determining Profit".

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

# SECTION 01 30 00

# ADMINISTRATIVE REQUIREMENTS 08/15

PART 1 GENERAL

#### 1.1 REFERENCES

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

## 1.2 SUBMITTALS

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

SD-01 Preconstruction Submittals

View Location Map; G, RO

Progress and Completion Pictures; G, RO

## 1.3 VIEW LOCATION MAP

Submit, prior to or with the first digital photograph submittals, a sketch or drawing indicating the required photographic locations. Update as required if the locations are moved.

1.4 PROGRESS AND COMPLETION PICTURES

The requirements for digital photographs of the work will be covered by each Task Order.

1.5 MINIMUM INSURANCE REQUIREMENTS

Provide the minimum insurance coverage required by FAR 28.307-2 Liability, during the entire period of performance under this contract. Provide other insurance coverage as required by State law.

- 1.6 UNAUTHORIZED INSTRUCTIONS FROM GOVERNMENT PERSONNEL
- 1.6.1 Unauthorized Personnel

Only the Contracting Officer and the Contracting Officer's Representative (COR), acting within the limits of their authorities, are authorized to provide instructions concerning the work. Do not accept isntructions from anyone else and report such persons to the Contracting officer. The COR, and the scope of its authority, will be designated in writing and identified to the Contractor.

# 1.6.2 Unauthorized Instructions

Only information contained in a Task Order or an authorized amendment or modification to the Contract, duly issued by the Contracting Officer, may be considered by the Contractor as grounds for deviation from the Contract. No information received from anyone other than the Contracting Officer shall be considered as grounds for deviations from the specified stipulations.

## 1.7 SUPERVISION

#### 1.7.1 Minimum Communication Requirements

Have at least one qualified superintendent, or competent alternate, capable of reading, writing, and conversing fluently in the English language, on the job-site during the performance of contract work. In addition, if a Quality Control (QC) representative is required on the contract, then that individual must also have fluent English communication skills.

# 1.7.2 Superintendent Qualifications

The project superintendent must have a minimum of 10 years experience in construction with at least 5 of those years as a superintendent on projects similar in size and complexity. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and construction drawings. The qualification requirements for the alternate superintendent are the same as for the project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the project if the performance of the superintendent is in question.

For routine projects where the superintendent is permitted to also serve as the Quality Control (QC) Manager as established in Section 01 45 00 QUALITY CONTROL, the superintendent must have qualifications in accordance with that Section.

# 1.7.2.1 Duties

The project superintendent is primarily responsible for managing and coordinating day-to-day production and schedule adherence on the project. The superintendent is required to attend partnering meetings, and quality control meetings. The superintendent or qualified alternative must be on-site at all times during the performance of this contract until the work is completed and accepted.

## 1.7.3 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the contract and for failure to manage the project to insure timely completion. Furthermore, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders is acceptable as the subject of claim for extension of time for excess costs or damages by the Contractor.

## 1.8 PRECONSTRUCTION CONFERENCE

After award of the Contract but prior to commencement of work at the site, meet with the Contracting Officer to discuss and develop a mutual understanding relative to the administration of the value engineering and safety program, preparation of the schedule of prices or earned value report, shop drawings, and other submittals, scheduling programming, prosecution of the work, and clear expectations of the "Interim DD Form 1354" Submittal. Ensure that major subcontractors, who will engage in the work, attend.

#### 1.9 PARTNERING

To most effectively accomplish this Contract, the Government requires the formation of a cohesive partnership within the Project Team whose members are from the Government, the Contractor and their Subcontractors. Key personnel from the Supported Command, the End User (who will occupy the facility), the Government Design and Construction team and Subject Matter Experts, the Installation, the Contractor and Subcontractors, and the Designer of Record will be invited to participate in the Partnering process. The Partnership will draw on the strength of each organization in an effort to achieve a project that is without any safety mishaps, conforms to the Contract, and stays within budget and on schedule.

The Contracting Officer will provide Information on the Partnering Process and a list of key and optional personnel who should attend the Partnering meeting.

## 1.10 MANAGING TASK ORDERS

## 1.10.1 Scheduling

Performance time will be negotiated for each task order considering that task orders issued shall be accomplished and performed concurrently. Some task orders may require phased completion times. Completion times for individual phases of such task orders will be determined by mutual agreement during project proposal negotiations.

# 1.10.2 Commencement and Completion

The performance period for a task order shall begin when Notice to Proceed (NTP) is issued. A task order is considered complete upon final acceptance of all completed work to include, but not limited to, delivery of acceptable, required as-builts, drawings, Government forms, O&M training and manuals, and warranty information.

## 1.10.3 Estimating Completion

Plan, perform, and manage work to comply with specified completion dates without resort to other Task Orders or other actions which would result in additional cost to the Government. Use the following categories as a basis for estimating completion dates:

- a. Proper crew sizes and equipment
- b. Use of subcontractors
- c. Required phasing

d. Concrete curing

e. Government delay of access to work site

f. Testing and evaluation of work site conditions which require extra days

g. Documented unavailability of materials or equipment

h. Full compliance with applicable laws, regulations, and safety requirements which delay time beyond the number of days allowed by other elements

i. Extensive coordination required for use of utilities and digging permits

j. Factors beyond the Contractor's control delay work

k. Negotiate a completion time which would appear sooner than normal based on priority and criticality work completion

1.10.4 Notice Of Completion Of Task Orders

Notify the Government upon completion of each individual task order. Give a minimum advance notice of 2 working days of the date the work shall be fully completed and ready for final inspection.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

## SECTION 01 32 01

# PROJECT SCHEDULE 02/15

#### PART 1 GENERAL

#### 1.1 REFERENCES

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.

AACE INTERNATIONAL (AACE)

AACE	29R-03	(2011) Forensic Schedule Analysis
AACE	52R-06	(2006) Time Impact Analysis - As Applied
		in Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1-1-11	(1995) Administration Progress,			ss,	
	Schedules,	and	Network	Analysis	Systems

#### 1.2 SUBMITTALS

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

SD-01 Preconstruction Submittals

Project Scheduler Qualifications; G, RO

Preliminary Project Schedule; G, RO

Initial Project Schedule; G, RO

Periodic Schedule Update; G, RO

#### 1.3 PROJECT SCHEDULER QUALIFICATIONS

Designate an authorized representative to be responsible for the preparation of the schedule and all required updating and production of reports. The authorized representative must have a minimum of 2-years experience scheduling construction projects similar in size and nature to this project with scheduling software that meets the requirements of this specification. Representative must have a comprehensive knowledge of CPM scheduling principles and application.

## PART 2 PRODUCTS

2.1 SOFTWARE

The scheduling software utilized to produce and update the schedules required herein must be capable of meeting all requirements of this specification.

2.1.1 Government Default Software

The Government intends to use Primavera P6.

2.1.2 Contractor Software

Scheduling software used by the contractor must be commercially available from the software vendor for purchase with vendor software support agreements available. The software routine used to create the required sdef file must be created and supported by the software manufacturer.

## 2.1.2.1 Primavera

If Primavera P6 is selected for use, provide the "xer" export file in a version of P6 importable by the Government system.

# 2.1.2.2 Other Than Primavera

If the Contractor chooses software other than Primavera P6, that is compliant with this specification, provide for the Government's use two licenses, two computers, and training for two Government employees in the use of the software. These computers must be stand-alone and not connected to Government network. Computers and licenses will be returned at project completion.

## PART 3 EXECUTION

#### 3.1 GENERAL REQUIREMENTS

Prepare for approval a Project Schedule, as specified herein, pursuant to FAR Clause 52.236-15 Schedules for Construction Contracts. Show in the schedule the proposed sequence to perform the work and dates contemplated for starting and completing all schedule activities. The scheduling of the entire project is required. The scheduling of design and construction is the responsibility of the Contractor. Contractor management personnel must actively participate in its development. Designers, Subcontractors and suppliers working on the project must also contribute in developing and maintaining an accurate Project Schedule. Provide a schedule that is a forward planning as well as a project monitoring tool. Use the Critical Path Method (CPM) of network calculation to generate all Project Schedules. Prepare each Project Schedule using the Precedence Diagram Method (PDM).

## 3.2 BASIS FOR PAYMENT AND COST LOADING

The schedule is the basis for determining contract earnings during each update period and therefore the amount of each progress payment. The aggregate value of all activities coded to a contract CLIN must equal the value of the CLIN.

## 3.2.1 Activity Cost Loading

Activity cost loading must be reasonable and without front-end loading. Provide additional documentation to demonstrate reasonableness if requested by the Contracting Officer.

## 3.2.2 Withholdings / Payment Rejection

Failure to meet the requirements of this specification may result in the disapproval of the preliminary, initial or periodic schedule updates and subsequent rejection of payment requests until compliance is met.

In the event that the Contracting Officer directs schedule revisions and those revisions have not been included in subsequent Project Schedule revisions or updates, the Contracting Officer may withhold 10 percent of pay request amount from each payment period until such revisions to the project schedule have been made.

## 3.3 PROJECT SCHEDULE DETAILED REQUIREMENTS

## 3.3.1 Level of Detail Required

Develop the Project Schedule to the appropriate level of detail to address major milestones and to allow for satisfactory project planning and execution. Failure to develop the Project Schedule to an appropriate level of detail will result in its disapproval. The Contracting Officer will consider, but is not limited to, the following characteristics and requirements to determine appropriate level of detail:

## 3.3.2 Activity Durations

Reasonable activity durations are those that allow the progress of ongoing activities to be accurately determined between update periods. Less than 2 percent of all non-procurement activities may have Original Durations (OD) greater than 20 work days or 30 calendar days.

# 3.3.3 Design and Permit Activities

Include design and permit activities with the necessary conferences and follow-up actions and design package submission dates. Include the design schedule in the project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific contract period. Provide at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Also include review and correction periods associated with each item.

# 3.3.4 Procurement Activities

Include activities associated with the critical submittals and their approvals, procurement, fabrication, and delivery of long lead materials, equipment, fabricated assemblies, and supplies. Long lead procurement activities are those with an anticipated procurement sequence of over 90 calendar days.

## 3.3.5 Mandatory Tasks

Include the following activities/tasks in the initial project schedule and all updates.

- a. Submission, review and acceptance of SD-01 Preconstruction Submittals (individual activity for each).
- b. Submission, review and acceptance of design packages.
- c. Submission of mechanical/electrical/information systems layout

drawings.

- d. Long procurement activities
- e. Submission and approval of O & M manuals.
- f. Submission and approval of as-built drawings.
- g. Submission and approval of DD1354 data and installed equipment lists.
- h. Submission and approval of testing and air balance (TAB).
- i. Submission of TAB specialist design review report.
- j. Submission and approval of fire protection specialist.
- k. Submission and approval of Building Commissioning Plan, test data, and reports: Develop the schedule logic associated with testing and commissioning of mechanical systems to a level of detail consistent with the contract commissioning requirements. All tasks associated with all building testing and commissioning will be completed prior to submission of building commissioning report and subsequent contract completion.
- 1. Air and water balancing.
- m. Building commissioning Functional Performance Testing.
- n. Controls testing plan submission.
- o. Controls testing.
- p. Performance Verification testing.
- q. Other systems testing, if required.
- r. Contractor's pre-final inspection.
- s. Correction of punch list from Contractor's pre-final inspection.
- t. Government's pre-final inspection.
- u. Correction of punch list from Government's pre-final inspection.
- v. Final inspection.

# 3.3.6 Government Activities

Show Government and other agency activities that could impact progress. These activities include, but are not limited to: acceptance, design reviews, environmental permit approvals by State regulators, inspections, utility tie-in, Government Furnished Equipment (GFE) and Notice to Proceed (NTP) for phasing requirements.

3.3.7 Standard Activity Coding Dictionary

Use the activity coding structure defined in the Standard Data Exchange Format (SDEF) in ER 1-1-11. This exact structure is mandatory. Develop and assign all Activity Codes to activities as detailed herein. A

template SDEF compatible schedule backup file is available on the QCS web site: <a href="http://rms.usace.army.mil">http://rms.usace.army.mil</a>.

Field	Activity Code	Length	Description			
1	WRKP	3	Workers per day			
2	RESP	4	Responsible party			
3	AREA	4	Area of work			
4	MODF	6	Modification Number			
5	BIDI	6	Bid Item (CLIN)			
6	PHAS	2	Phase of work			
7	CATW	1	Category of work			
8	FOW	20	Feature of work*			
*Some systems require that FEATURE OF WORK values be placed in several activity code fields. The notation shown is for Primavera P6. Refer to the specific software guidelines with respect to the FEATURE OF WORK field requirements.						

The SDEF format is as follows:

# 3.3.7.1 Workers Per Day (WRKP)

Assign Workers per Day for all field construction or direct work activities, if directed by the Contracting Officer. Workers per day is based on the average number of workers expected each day to perform a task for the duration of that activity.

3.3.7.2 Responsible Party Coding (RESP)

Assign responsibility code for all activities to the Prime Contractor, Subcontractor(s) or Government agency(ies) responsible for performing the activity.

- a. Activities coded with a Government Responsibility code include, but are not limited to: Government approvals, Government design reviews, environmental permit approvals by State regulators, Government Furnished Property/Equipment (GFP) and Notice to Proceed (NTP) for phasing requirements.
- b. Activities cannot have more than one Responsibility Code. Examples of acceptable activity code values are: DOR (for the designer of record); ELEC (for the electrical subcontractor); MECH (for the mechanical subcontractor); and GOVT (for USACE).

# 3.3.7.3 Area of Work Coding (AREA)

Assign Work Area code to activities based upon the work area in which the activity occurs. Define work areas based on resource constraints or space constraints that would preclude a resource, such as a particular trade or craft work crew from working in more than one work area at a time due to restraints on resources or space. Examples of Work Area Coding include different areas within a floor of a building, different floors within a building, and different buildings within a complex of buildings. Activities cannot have more than one Work Area Code.

Not all activities are required to be Work Area coded. A lack of Work Area coding indicates the activity is not resource or space constrained.

3.3.7.4 Modification Number (MODF)

Assign a Modification Number Code to any activity or sequence of activities added to the schedule as a result of a Contract Modification, when approved by Contracting Officer. Key all Code values to the Government's modification numbering system. An activity can have only one Modification Number Code.

3.3.7.5 Bid Item Coding (BIDI)

Assign a Bid Item Code to all activities using the Contract Line Item Schedule (CLIN) to which the activity belongs, even when an activity is not cost loaded. An activity can have only one BIDI Code.

3.3.7.6 Phase of Work Coding (PHAS)

Assign Phase of Work Code to all activities. Examples of phase of work are design phase, procurement phase and construction phase. Each activity can have only one Phase of Work code.

- a. Code proposed fast track design and construction phases proposed to allow filtering and organizing the schedule by fast track design and construction packages.
- b. If the contract specifies phasing with separately defined performance periods, identify a Phase Code to allow filtering and organizing the schedule accordingly.
- 3.3.7.7 Category of Work Coding (CATW)

Assign a Category of Work Code to all activities. Category of Work Codes include, but are not limited to design, design submittal, design reviews, review conferences, permits, construction submittal, procurement, fabrication, weather sensitive installation, non-weather sensitive installation, start-up, and testing activities. Each activity can have no more than one Category of Work Code.

3.3.7.8 Feature of Work Coding (FOW)

Assign a Feature of Work Code to appropriate activities based on the Definable Feature of Work to which the activity belongs based on the approved QC plan.

Definable Feature of Work is defined in Section 01 45 00 QUALITY CONTROL. An activity can have only one Feature of Work Code.

# 3.3.8 Contract Milestones and Constraints

Milestone activities are to be used for significant project events including, but not limited to, project phasing, project start and end activities, or interim completion dates. The use of artificial float constraints such as "zero free float" or "zero total float" are prohibited.

Mandatory constraints that ignore or effect network logic are prohibited. No constrained dates are allowed in the schedule other than those specified herein. Submit additional constraints to the Contracting Officer for approval on a case by case basis.

#### 3.3.8.1 Project Start Date Milestone and Constraint

The first activity in the project schedule must be a start milestone titled "NTP Acknowledged," which must have a "Start On" constraint date equal to the date that the NTP is acknowledged.

3.3.8.2 End Project Finish Milestone and Constraint

The last activity in the schedule must be a finish milestone titled "End Project."

Constrain the project schedule to the Contract Completion Date in such a way that if the schedule calculates an early finish, then the float calculation for "End Project" milestone reflects positive float on the longest path. If the project schedule calculates a late finish, then the "End Project" milestone float calculation reflects negative float on the longest path. The Government is under no obligation to accelerate Government activities to support a Contractor's early completion.

## 3.3.8.3 Interim Completion Dates and Constraints

Constrain contractually specified interim completion dates to show negative float when the calculated late finish date of the last activity in that phase is later than the specified interim completion date.

# 3.3.8.3.1 Start Phase

Use a start milestone as the first activity for a project phase. Call the start milestone "Start Phase X" where "X" refers to the phase of work.

3.3.8.3.2 End Phase

Use a finish milestone as the last activity for a project phase. Call the finish milestone "End Phase X" where "X" refers to the phase of work.

## 3.3.9 Calendars

Schedule activities on a Calendar to which the activity logically belongs. Develop calendars to accommodate any contract defined work period such as a 7-day calendar for Government Acceptance activities, concrete cure times, etc. Develop the default Calendar to match the physical work plan with non-work periods identified including weekends and holidays. Develop sSeasonal Calendar(s) and assign to seasonally affected activities as applicable. If an activity is weather sensitive assign it to a calendar showing non-work days on a monthly basis, with the non-work days selected at random across the weeks of the calendar, using the anticipated adverse weather delay work days provided in the Special Contract Clauses. Assign non-work days over a seven-day week as weather records are compiled on seven-day weeks, which may cause some of the weather-related non-work days to fall on weekends.

# 3.3.10 Open Ended Logic

Only two open ended activities are allowed: the first activity "NTP Acknowledged" may have no predecessor logic, and the last activity -"End Project" may have no successor logic.

Predecessor open ended logic may be allowed in a time impact analyses upon the Contracting Officer's approval.

#### 3.3.11 Default Progress Data Disallowed

Actual Start and Finish dates must not automatically update with default mechanisms included in the scheduling software. Updating of the percent complete and the remaining duration of any activity must be independent functions. Disable program features that calculate one of these parameters from the other. Activity Actual Start (AS) and Actual Finish (AF) dates assigned during the updating process must match those dates provided in the Contractor Quality Control Reports. Failure to document the AS and AF dates in the Daily Quality Control report will result in disapproval of the Contractor's schedule.

#### 3.3.12 Out-of-Sequence Progress

Activities that have progressed before all preceding logic has been satisfied (Out-of-Sequence Progress) will be allowed only on a case-by-case basis subject to approval by the Contracting Officer. Propose logic corrections to eliminate out of sequence progress or justify not changing the sequencing for approval prior to submitting an updated project schedule. Address out of sequence progress or logic changes in the Narrative Report and in the periodic schedule update meetings.

# 3.3.13 Added and Deleted Activities

Do not delete activities from the project schedule or add new activities to the schedule without approval from the Contracting Officer. Activity ID and description changes are considered new activities and cannot be changed without Contracting Officer approval.

#### 3.3.14 Original Durations

Activity Original Durations (OD) must be reasonable to perform the work item. OD changes are prohibited unless justification is provided and approved by the Contracting Officer.

## 3.3.15 Leads, Lags, and Start to Finish Relationships

Lags must be reasonable as determined by the Government and not used in place of realistic original durations, must not be in place to artificially absorb float, or to replace proper schedule logic.

a. Leads (negative lags) are prohibited.

b. Start to Finish (SF) relationships are prohibited.

#### 3.3.16 Retained Logic

Schedule calculations must retain the logic between predecessors and successors ("retained logic" mode) even when the successor activity(s) starts and the predecessor activity(s) has not finished (out-of-sequence progress). Software features that in effect sever the tie between predecessor and successor activities when the successor has started and the predecessor logic is not satisfied ("progress override") are not be allowed.

## 3.3.17 Percent Complete

Update the percent complete for each activity started, based on the realistic assessment of earned value. Activities which are complete but for remaining minor punch list work and which do not restrain the initiation of successor activities may be declared 100 percent complete to allow for proper schedule management.

## 3.3.18 Remaining Duration

Update the remaining duration for each activity based on the number of estimated work days it will take to complete the activity. Remaining duration may not mathematically correlate with percentage found under paragraph entitled Percent Complete.

#### 3.3.19 Cost Loading of Closeout Activities

Cost load the "Correction of punch list from Government pre-final inspection" activity(ies) not less than 1 percent of the present contract value. Activity(ies) may be declared 100 percent complete upon the Government's verification of completion and correction of all punch list work identified during Government pre-final inspection(s).

# 3.3.19.1 As-Built Drawings

If there is no separate contract line item (CLIN) for as-built drawings, cost load the "Submission and approval of as-built drawings" activity not less than \$35,000 or 1 percent of the present contract value, which ever is greater, up to \$200,000. Activity will be declared 100 percent complete upon the Government's approval.

# 3.3.19.2 O & M Manuals

Cost load the "Submission and approval of O & M manuals" activity not less than \$20,000. Activity will be declared 100 percent complete upon the Government's approval of all O & M manuals.

# 3.3.20 Early Completion Schedule and the Right to Finish Early

An Early Completion Schedule is an Initial Project Schedule (IPS) that indicates all scope of the required contract work will be completed before the contractually required completion date.

a. No IPS indicating an Early Completion will be accepted without being fully resource-loaded (including crew sizes and manhours) and the Government agreeing that the schedule is reasonable and achievable.

b. The Government is under no obligation to accelerate work items it is responsible for to ensure that the early completion is met nor is it responsible to modify incremental funding (if applicable) for the project to meet the contractor's accelerated work.

## 3.4 PROJECT SCHEDULE SUBMISSIONS

Provide the submissions as described below. The data CD/DVD, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS. If the Contractor fails or refuses to furnish the information and schedule updates as set forth herein, then the Contractor will be deemed not to have provided an estimate upon which a progress payment can be made.

Review comments made by the Government on the schedule(s) do not relieve the Contractor from compliance with requirements of the Contract Documents.

# 3.4.1 Preliminary Project Schedule Submission

Within 15 calendar days after the NTP is acknowledged submit the Preliminary Project Schedule defining the planned operations detailed for the first 90 calendar days for approval. The approved Preliminary Project Schedule will be used for payment purposes not to exceed 90 calendar days after NTP. Completely cost load the Preliminary Project Schedule to balance the contract award CLINS shown on the Price Schedule. The Preliminary Project Schedule may be summary in nature for the remaining performance period. It must be early start and late finish constrained and logically tied as specified. The Preliminary Project Schedule forms the basis for the Initial Project Schedule specified herein and must include all of the required plan and program preparations, submissions and approvals identified in the contract (for example, Quality Control Plan, Safety Plan, and Environmental Protection Plan) as well as design activities, planned submissions of all early design packages, permitting activities, design review conference activities, and other non-construction activities intended to occur within the first 90 calendar days. Government acceptance of the associated design package(s) and all other specified Program and Plan approvals must occur prior to any planned construction activities. Activity code any activities that are summary in nature after the first 90 calendar days with Bid Item (CLIN) code (BIDI), Responsibility Code (RESP) and Feature of Work code (FOW).

# 3.4.2 Initial Project Schedule Submission

Submit the Initial Project Schedule for approval within 42 calendar days after notice to proceed is issued. The schedule must demonstrate a reasonable and realistic sequence of activities which represent all work through the entire contract performance period. Include in the design-build schedule detailed design and permitting activities, including but not limited to identification of individual design packages, design submission, reviews and conferences; permit submissions and any required Government actions; and long lead item acquisition prior to design completion. Also cover in the initial design-build schedule the entire construction effort with as much detail as is known at the time but, as a minimum, include all construction start and completion milestones, and detailed construction activities through the dry-in milestone, including all activity coding and cost loading. Include the remaining construction, including cost loading, but it may be scheduled summary in nature. As the design proceeds and design packages are developed, fully detail the remaining construction activities concurrent with the monthly schedule updating process. Constrain construction activities by Government acceptance of associated designs. When the design is complete, incorporate into the then approved schedule update all remaining detailed construction activities that are planned to occur after the dry-in milestone. No payment will be made for work items not fully detailed in the Project Schedule.

# 3.4.2.1 Design Package Schedule Submission

With each design package submitted to the Government, submit a fragnet schedule extracted from the then current Preliminary, Initial or Updated schedule which covers the activities associated with that Design Package including construction, procurement and permitting activities.

# 3.4.3 Periodic Schedule Updates

Update the Project Schedule on a regular basis, monthly at a minimum. Provide a draft Periodic Schedule Update for review at the schedule update meetings as prescribed in the paragraph PERIODIC SCHEDULE UPDATE MEETINGS. These updates will enable the Government to assess Contractor's progress. Update the schedule to include detailed construction activities as the design progresses, but not later than the submission of the final un-reviewed design submission for each separate design package. The Contracting Officer may require submission of detailed schedule activities for any distinct construction that is started prior to submission of a final design submission if such activity is authorized.

- a. Update information including Actual Start Dates (AS), Actual Finish Dates (AF), Remaining Durations (RD), and Percent Complete is subject to the approval of the Government at the meeting.
- AS and AF dates must match the date(s) reported on the Contractor's Quality Control Report for an activity start or finish.

#### 3.5 SUBMISSION REQUIREMENTS

Submit the following items for the Preliminary Schedule, Initial Schedule, and every Periodic Schedule Update throughout the life of the project:

# 3.5.1 Data CD/DVDs

Provide two sets of data CD/DVDs containing the current project schedule and all previously submitted schedules in the format of the scheduling software (e.g. .xer). Also include on the data CD/DVDs the Narrative Report and all required Schedule Reports. Label each CD/DVD indicating the type of schedule (Preliminary, Initial, Update), full contract number, Data Date and file name. Each schedule must have a unique file name and use project specific settings.

# 3.5.2 Narrative Report

Provide a Narrative Report with each schedule submission. The Narrative Report is expected to communicate to the Government the thorough analysis of the schedule output and the plans to compensate for any problems, either current or potential, which are revealed through that analysis. Include the following information as minimum in the Narrative Report:

a. Identify and discuss the work scheduled to start in the next update

period.

- b. A description of activities along the two most critical paths where the total float is less than or equal to 20 work days.
- c. A description of current and anticipated problem areas or delaying factors and their impact and an explanation of corrective actions taken or required to be taken.
- d. Identify and explain why activities based on their calculated late dates should have either started or finished during the update period but did not.
- e. Identify and discuss all schedule changes by activity ID and activity name including what specifically was changed and why the change was needed. Include at a minimum new and deleted activities, logic changes, duration changes, calendar changes, lag changes, resource changes, and actual start and finish date changes.
- f. Identify and discuss out-of-sequence work.

## 3.5.3 Schedule Reports

The format, filtering, organizing and sorting for each schedule report will be as directed by the Contracting Officer. Typically, reports contain Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float, Actual Start Date, Actual Finish Date, and Percent Complete. Provide the reports electronically in .pdf format. The following lists typical reports that will be requested:

3.5.3.1 Activity Report

List of all activities sorted according to activity number.

3.5.3.2 Logic Report

List of detailed predecessor and successor activities for every activity in ascending order by activity number.

## 3.5.3.3 Total Float Report

A list of all incomplete activities sorted in ascending order of total float. List activities which have the same amount of total float in ascending order of Early Start Dates. Do not show completed activities on this report.

# 3.5.3.4 Earnings Report by CLIN

A compilation of the Total Earnings on the project from the NTP to the data date, which reflects the earnings of activities based on the agreements made in the schedule update meeting defined herein. Provided a complete schedule update has been furnished, this report serves as the basis of determining progress payments. Group activities by CLIN number and sort by activity number. Provide a total CLIN percent earned value, CLIN percent complete, and project percent complete. The printed report must contain the following for each activity: the Activity Number, Activity Description, Original Budgeted Amount, Earnings to Date, Earnings this period, Total Quantity, Quantity to Date, and Percent Complete (based on cost).

## 3.5.3.5 Schedule Log

Provide a Scheduling/Leveling Report generated from the current project schedule being submitted.

#### 3.5.4 Network Diagram

The Network Diagram is required for the Preliminary, Initial and Periodic Updates. Depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

## 3.5.4.1 Continuous Flow

Show a continuous flow from left to right with no arrows from right to left. Show the activity number, description, duration, and estimated earned value on the diagram.

3.5.4.2 Project Milestone Dates

Show dates on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

## 3.5.4.3 Critical Path

Show all activities on the critical path. The critical path is defined as the longest path.

## 3.5.4.4 Banding

Organize activities using the WBS or as otherwise directed to assist in the understanding of the activity sequence. Typically, this flow will group activities by major elements of work, category of work, work area and/or responsibility.

3.5.4.5 Cash Flow / Schedule Variance Control (SVC) Diagram

With each schedule submission, provide a SVC diagram showing 1) Cash Flow S-Curves indicating planned project cost based on projected early and late activity finish dates, and 2) Earned Value to-date.

### 3.6 PERIODIC SCHEDULE UPDATE

3.6.1 Periodic Schedule Update Meetings

Conduct periodic schedule update meetings for the purpose of reviewing the proposed Periodic Schedule Update, Narrative Report, Schedule Reports, and progress payment. Conduct meetings at least monthly within five days of the proposed schedule data date. Provide a computer with the scheduling software loaded and a projector which allows all meeting participants to view the proposed schedule during the meeting. The Contractor's authorized scheduler must organize, group, sort, filter, perform schedule revisions as needed and review functions as requested by the Contractor and/or Government. The meeting is a working interactive exchange which allows the Government and Contractor the opportunity to review the updated schedule on a real time and interactive basis. The meeting will last no longer than 8 hours. Provide a draft of the proposed narrative report and schedule data file to the Government a minimum of two workdays in advance of the meeting. The Contractor's Project Manager and scheduler must attend the meeting with the authorized representative of the Contracting Officer. Superintendents, foremen and major subcontractors must attend the meeting as required to discuss the project schedule and work. Following the periodic schedule update meeting, make corrections to the draft submission. Include only those changes approved by the Government in the submission and invoice for payment.

## 3.6.2 Update Submission Following Progress Meeting

Submit the complete Periodic Schedule Update of the Project Schedule containing all approved progress, revisions, and adjustments, pursuant to paragraph SUBMISSION REQUIREMENTS not later than 4 work days after the periodic schedule update meeting.

## 3.7 WEEKLY PROGRESS MEETINGS

Conduct a weekly meeting with the Government (or as otherwise mutually agreed to) between the meetings described in paragraph entitled PERIODIC SCHEDULE UPDATE MEETINGS for the purpose of jointly reviewing the actual progress of the project as compared to the as planned progress and to review planned activities for the upcoming two weeks. Use the current approved schedule update for the purposes of this meeting and for the production and review of reports. At the weekly progress meeting, address the status of RFIS, RFPs and Submittals.

#### 3.8 REQUESTS FOR TIME EXTENSIONS

Provide a justification of delay to the Contracting Officer in accordance with the contract provisions and clauses for approval within 10 days of a delay occurring. Also prepare a time impact analysis for each Government request for proposal (RFP) to justify time extensions.

#### 3.8.1 Justification of Delay

Provide a description of the event(s) that caused the delay and/or impact to the work. As part of the description, identify all schedule activities impacted. Show that the event that caused the delay/impact was the responsibility of the Government. Provide a time impact analysis that demonstrates the effects of the delay or impact on the project completion date or interim completion date(s). Evaluate multiple impacts chronologically; each with its own justification of delay. With multiple impacts consider any concurrency of delay. A time extension and the schedule fragnet becomes part of the project schedule and all future schedule updates upon approval by the Contracting Officer.

# 3.8.2 Time Impact Analysis (Prospective Analysis)

Prepare a time impact analysis for approval by the Contracting Officer based on industry standard AACE 52R-06. Utilize a copy of the last approved schedule prior to the first day of the impact or delay for the time impact analysis. If Contracting Officer determines the time frame between the last approved schedule and the first day of impact is too great, prepare an interim updated schedule to perform the time impact analysis. Unless approved by the Contracting Officer, no other changes may be incorporated into the schedule being used to justify the time impact.

# 3.8.3 Forensic Schedule Analysis (Retrospective Analysis)

Prepare an analysis for approval by the Contracting Officer based on industry standard AACE 29R-03.

#### 3.8.4 Fragmentary Network (Fragnet)

Prepare a proposed fragnet for time impact analysis consisting of a sequence of new activities that are proposed to be added to the project schedule to demonstrate the influence of the delay or impact to the project's contractual dates. Clearly show how the proposed fragnet is to be tied into the project schedule including all predecessors and successors to the fragnet activities. The proposed fragnet must be approved by the Contracting Officer prior to incorporation into the project schedule.

## 3.8.5 Time Extension

The Contracting Officer must approve the Justification of Delay including the time impact analysis before a time extension will be granted. No time extension will be granted unless the delay consumes all available Project Float and extends the projected finish date ("End Project" milestone) beyond the Contract Completion Date. The time extension will be in calendar days.

Actual delays that are found to be caused by the Contractor's own actions, which result in a calculated schedule delay will not be a cause for an extension to the performance period, completion date, or any interim milestone date.

## 3.8.6 Impact to Early Completion Schedule

No extended overhead will be paid for delay prior to the original Contract Completion Date for an Early Completion IPS unless the Contractor actually performed work in accordance with that Early Completion Schedule. The Contractor must show that an early completion was achievable had it not been for the impact.

# 3.9 FAILURE TO ACHIEVE PROGRESS

Should the progress fall behind the approved project schedule for reasons other than those that are excusable within the terms of the contract, the Contracting Officer may require provision of a written recovery plan for approval. The plan must detail how progress will be made-up to include which activities will be accelerated by adding additional crews, longer work hours, extra work days, etc.

#### 3.9.1 Artificially Improving Progress

Artificially improving progress by means such as, but not limited to, revising the schedule logic, modifying or adding constraints, shortening activity durations, or changing calendars in the project schedule is prohibited. Indicate assumptions made and the basis for any logic, constraint, duration and calendar changes used in the creation of the recovery plan. Any additional resources, manpower, or daily and weekly work hour changes proposed in the recovery plan must be evident at the work site and documented in the daily report along with the Schedule Narrative Report.

#### 3.9.2 Failure to Perform

Failure to perform work and maintain progress in accordance with the supplemental recovery plan may result in an interim and final unsatisfactory performance rating and may result in corrective action directed by the Contracting Officer pursuant to FAR 52.236-15 Schedules for Construction Contracts, FAR 52.249-10 Default (Fixed-Price Construction), and other contract provisions.

## 3.9.3 Recovery Schedule

Should the Contracting Officer find it necessary, submit a recovery schedule pursuant to FAR 52.236-15 Schedules for Construction Contracts.

## 3.10 OWNERSHIP OF FLOAT

Except for the provision given in the paragraph IMPACT TO EARLY COMPLETION SCHEDULE, float available in the schedule, at any time, may not be considered for the exclusive use of either the Government or the Contractor including activity and/or project float. Activity float is the number of work days that an activity can be delayed without causing a delay to the "End Project" finish milestone. Project float (if applicable) is the number of work days between the projected early finish and the contract completion date milestone.

# 3.11 TRANSFER OF SCHEDULE DATA INTO RMS/QCS

Import the schedule data into the Quality Control System (QCS) and export the QCS data to the Government. This data is considered to be additional supporting data in a form and detail required by the Contracting Officer pursuant to FAR 52.232-5 "Payments under Fixed-Price Construction Contracts". The receipt of a proper payment request pursuant to FAR 52.232-27 "Prompt Payment for Construction Contracts" is contingent upon the Government receiving both acceptable and approvable hard copies and matching electronic export from QCS of the application for progress payment.

#### 3.12 PRIMAVERA P6 MANDATORY REQUIREMENTS

If Primavera P6 is being used, request a backup file template (.xer) from the Government, if one is available, prior to building the schedule. The following settings are mandatory and required in all schedule submissions to the Government:

- a. Activity Codes must be Project Level, not Global or EPS level.
- b. Calendars must be Project Level, not Global or Resource level.
- c. Activity Duration Types must be set to "Fixed Duration & Units".
- d. Percent Complete Types must be set to "Physical".
- e. Time Period Admin Preferences must remain the default "8.0 hr/day, 40 hr/week, 172 hr/month, 2000 hr/year". Set Calendar Work Hours/Day to 8.0 Hour days.
- f. Set Schedule Option for defining Critical Activities to "Longest Path".

- g. Set Schedule Option for defining progressed activities to "Retained Logic".
- h. Set up cost loading using a single lump sum labor resource. The Price/Unit must be \$1/hr, Default Units/Time must be "8h/d", and settings "Auto Compute Actuals" and "Calculate costs from units" selected.
- i. Activity ID's must not exceed 10 characters.
- j. Activity Names must have the most defining and detailed description within the first 30 characters.

-- End of Section --

# SECTION 01 33 00

# SUBMITTAL PROCEDURES 08/18

#### PART 1 GENERAL

#### 1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

# 1.1.2 Project Type

The Contractor and the Designer of Record (DOR), if applicable, are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

## 1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

## 1.2 DEFINITIONS

#### 1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

#### SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates Of Insurance

Surety Bonds List Of Proposed Subcontractors List Of Proposed Products Baseline Network Analysis Schedule (NAS) Submittal Register Schedule Of Prices Or Earned Value Report Accident Prevention Plan Work Plan Quality Control (QC) plan Environmental Protection Plan

# SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

# SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

## SD-05 Design Data

Design calculations, mix designs, analyses or other data pertaining to a part of work.

Design submittals, design substantiation submittals and extensions of design submittals.

## SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.

Report that includes findings of a test required to be performed on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report that includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily logs and checklists

Final acceptance test and operational test procedure

## SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer or Subcontractor through Contractor. The document purpose is to further promote the orderly progression of a portion of the work by documenting procedures, acceptability of methods, or personnel qualifications.

Confined space entry permits

Text of posted operating instructions

## SD-08 Manufacturer's Instructions

Preprinted material describing installation of a product, system or material, including special notices and (SDS)concerning impedances, hazards and safety precautions.

# SD-10 Operation and Maintenance Data

Data provided by the manufacturer, or the system provider, including manufacturer's help and product line documentation, necessary to maintain and install equipment, for operating and maintenance use by facility personnel.

Data required by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

Data incorporated in an operations and maintenance manual or control system.

## SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).
Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

#### 1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

#### 1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register; G

- 1.4 SUBMITTAL CLASSIFICATION
- 1.4.1 Government Approved (G)

Government approval is required for any variations from the Solicitation or the Accepted Proposal and for other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

- 1.4.2 Design-Build Submittal Classifications
- 1.4.2.1 Designer of Record Approved (DA)

Designer of Record (DOR) approval is required for extensions of design; critical materials; any variations from the Solicitation, the Accepted Proposal, or the completed design; equipment whose compatibility with the entire system must be checked; and other items as designated by the Contracting Officer. Provide the Government with the number of copies designated hereinafter of all DOR approved submittals. The Government may review any or all Designer of Record approved submittals for conformance with the Solicitation, the Accepted Proposal, and the completed design. The Government will review all submittals designated as varying from the Solicitation or Accepted Proposal, as described below. Provide design submittals in accordance with Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD). Generally, list design submittals under SD-05 Design Data. 1.4.2.2 Government Conformance Review of Design (CR)

The Government will review all intermediate and final design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Review will be only for conformance with the applicable codes, standards, and contract requirements. Design data includes the design documents described in Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD).

#### 1.4.2.3 Designer of Record Approved/Government Conformance Review (DA/CR)

# 1.4.2.3.1 Variations from the Accepted Design

DOR approval and the Government's concurrence are required for any proposed variation from the accepted design that still complies with the contract before the Contractor is authorized to proceed with material acquisition or installation. If necessary to facilitate the project schedule, before official submission to the Government, the Contractor and the DOR may discuss with the Contracting Officer's Representative a submittal proposing a variation. However, the Government reserves the right to review the submittal before providing an opinion. In any case, the Government will not formally agree to or provide a preliminary opinion on any variation without the DOR's approval or recommended approval. The Government reserves the right to reject any design, variation that may affect furniture, furnishings, equipment selections, or operational decisions that were made, based on the reviewed and concurred design.

#### 1.4.2.3.2 Substitutions

Unless prohibited or otherwise provided for elsewhere in the contract, where the Accepted Proposal named products, systems, materials or equipment by manufacturer, brand name, model number, or other specific identification, and the Contractor desires to substitute a manufacturer or model after award, submit a requested substitution for Government concurrence. Include substantiation, through identifying information and the DOR's approval, that the substitute meets the contract requirements and that it is equal in function, performance, quality, and salient features to that in the accepted contract proposal. If the contract otherwise prohibits substitutions of equal named products, systems, materials or equipment by manufacturer, brand name, model number or other specific identification, the request is considered a "variation" to the contract. Variations are discussed below in paragraphs: "DESIGNER OF RECORD APPROVED/GOVERNMENT APPROVED" and VARIATIONS.

# 1.4.2.4 Designer of Record Approved/Government Approved (DA/GA)

In addition to the above-stated requirements for proposed variations to the accepted design, both DOR and Government Approval and, where applicable, a contract modification are required before the Contractor is authorized to proceed with material acquisition or installation for any proposed variation to the contract (the Solicitation or the Accepted Proposal), that constitutes a change to the contract terms. The Government reserves the right to accept or reject any such proposed variation.

#### 1.4.3 For Information Only

Submittals not requiring Government approval will be for information only. For Design-build construction all submittals not requiring DOR or

Government approval will be for information only. Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings."

#### 1.5 PREPARATION

## 1.5.1 Transmittal Form

Use the ENG Form 4025-R transmittal form for submitting both Government-approved and information-only submittals. Submit in accordance with the instructions on the reverse side of the form. These forms are included in the RMS CM software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

- 1.5.2 Submittal Format
- 1.5.2.1 Format of SD-01 Preconstruction Submittals

Unless otherwise specified, submit two sets of administrative submittals. When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

- a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
- b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Submit an electronic copy of drawings in PDF format.

#### 1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing. Reserve a blank space, no smaller than two inches on the right-hand side of each sheet for the Government disposition stamp.

# 1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

# 1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

# 1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

# 1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

# 1.5.2.4 Format of SD-04 Samples

#### 1.5.2.4.1 Number of SD-04 Samples

- a. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples will be retained by the approving authority and one will be returned to the Contractor.
- b. Submit one sample panel or provide one sample installation where

directed. Include components listed in the technical section or as directed.

- c. Submit one sample installation, where directed.
- d. Submit one sample of nonsolid materials.

1.5.2.4.2 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.
- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: 4 by 4 feet.
- h. Sample Installation: 100 square feet.

1.5.2.4.3 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.4 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style,

for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.6 Format of SD-06 Test Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

- 1.5.3 Source Drawings for Shop Drawings
- 1.5.3.1 Source Drawings

The entire set of source drawing files (DWG) will not be provided to the Contractor. Request the specific Drawing Number for the preparation of shop drawings. Only those drawings requested to prepare shop drawings will be provided. These drawings are provided only after award.

# 1.5.3.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

#### 1.5.4 Electronic File Format

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.

E-mail electronic submittal documents smaller than 10MB to an e-mail address as directed by the Contracting Officer. Provide electronic documents over 10 MB on an optical disc or through an electronic file sharing system such as the AMRDEC SAFE Web Application located at the following website: https://safe.amrdec.army.mil/safe/.

#### 1.6 INFORMATION ONLY SUBMITTALS

Submittals without a "G" designation must be certified by the QC manager and submitted to the Contracting Officer for information-only. Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Government reserves the right to return unsatisfactory submittals and require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

#### 1.7 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications is provided as "Appendix A - Submittal Register."

#### 1.7.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 00.15 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE(RMS CM). The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is

only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

Thereafter, track the submittals by maintaining a complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Government.

# 1.7.2 Design-Build Submittal Register

The Designer of Record develops a complete list of submittals during design and identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the contract. Complete the submittal register and submit it to the Contracting Officer for approval within 30 calendar days after Notice to Proceed. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. Coordinate the submit dates and need dates with dates in the Contractor prepared progress schedule. Submit monthly or until all submittals have been satisfactorily completed, updates to the submittal register showing the Contractor action codes and actual dates with Government action codes. Revise the submittal register when the progress schedule is revised and submit both for approval.

# 1.7.3 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

## 1.7.4 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (1) Date submittal transmitted.

Column (q) Date approval was received.

# 1.7.5 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (1) Date submittal was received.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

# 1.7.6 Action Codes

1.7.6.1 Contractor Action Codes

	DESIGN BUILD	) SUBMITTALS	
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires	G	GA
BLANK	Submittal is For Information Only(FIO)	BLANK	FIO
DA	Submittal requires Designer of Record Approval	D	DA
CR	Submittal requires Government Conformance Review	С	CR
DA/CR	Submittal requires Designer of Record Approval and Government Conformance Review	R	DA/CR

	DESIGN BUILD	SUBMITTALS	
DA/GA	Submittal requires Designer of Record Approval and Government Approval	A	DA/GA

#### 1.7.7 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

#### 1.8 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction, and will be considered where advantageous to the Government.

#### 1.8.1 Considering Variations

Discussion of variations with the Contracting Officer before submission will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation that results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from contract requirements in transmittal letters. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government.

#### 1.8.2 Proposing Variations

When proposing variation, deliver a written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. Include the DOR's written analysis and approval. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

#### 1.8.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

#### 1.8.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar days will be allowed for the Government to consider submittals with

variations.

#### 1.9 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."
- c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

Contracting Officer review will be completed within 15 calendar days after the date of submission.

1.9.1 Government Reviewed Design

The Government will review design submittals for conformance with the technical requirements of the Solicitation. Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD) covers the design submittal and review process in detail. Government review is required for variations from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the DOR's design documents do not include enough detail to ascertain contract compliance. The Government may, but is not required to, review extensions of design such as structural steel or reinforcement shop drawings.

#### 1.10 GOVERNMENT APPROVING AUTHORITY

When the approving authority is the Contracting Officer, the Government will:

- a. Note the date on which the submittal was received.
- b. Review submittals for approval within the scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date submittals. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be identified and returned, as described above.

# 1.10.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
- b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
- c. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.
- d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
- e. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

#### 1.11 DISAPPROVED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, make such revisions and resubmit in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

# 1.12 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that the design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.

Approval or acceptance by the Government for a submittal does not relieve

the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained with in each submittal accurately conforms with the requirements of the contract documents.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

#### 1.13 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Government reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

# 1.14 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made unless all required DOR approvals or required Government approvals have been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information-only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.15 STAMPS

Certify the submittal data as follows on Form ENG 4025: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

\_\_\_\_\_NAME OF CONTRACTOR \_\_\_\_\_ SIGNATURE OF CONTRACTOR

PART 2 PRODUCTS

Not used.

# PART 3 EXECUTION

Not used

-- End of Section --

TITLE	AND	LOCATION				CONTRAC	TOR										
MA	ГОС	Phase 1 Area o	f Operations Savannah District														
					G	C SC	ONTRACTO	R: TES	CON	NTRACTOR ACTION		APF	ROVING AU	THOR	RITY		
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		01 30 00	SD-01 Preconstruction Submittals														
			View Location Map	1.3	G RO												
			Progress and Completion	1.4	G RO												
			Pictures														
		01 32 01	SD-01 Preconstruction Submittals														
			Project Scheduler Qualifications	1.3	G RO												
			Preliminary Project Schedule	3.4.1	G RO												
			Initial Project Schedule	3.4.2	G RO												
			Periodic Schedule Update	3.6.2	G RO												
		01 33 00	SD-01 Preconstruction Submittals														
			Submittal Register	1.7	G												
		01 33 16	SD-01 Preconstruction Submittals														
			Design Quality Control Plan	1.7.1	G RO												
			SD-02 Shop Drawings														
			Perspective Sketch	3.5.1	G RO												
			SD-05 Design Data														
			Design And Code Checklists	1.7.20	C RO												
			Sustainable Design	2.5	C RO												
			SD-11 Closeout Submittals														
			Dd Form 1354	3.12	A RO												
		01 35 26	SD-01 Preconstruction Submittals														
			Accident Prevention Plan (APP)	1.7	G RO												
			SD-06 Test Reports														
			Monthly Exposure Reports	1.4													
			Notifications and Reports	1.12													
			Accident Reports	1.12.2	G RO												

TITLE	AND I	LOCATION				CONTRACT	FOR										
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		01 35 26	LHE Inspection Reports	1.12.3													
			SD-07 Certificates														
			Crane Operators/Riggers	1.6.1.4													
			Standard Lift Plan	1.7.2.2	G RO												
			Critical Lift Plan	1.7.2.3	G RO												
			Naval Architecture Analysis	1.7.2.4	G RO												
			Activity Hazard Analysis (AHA)	1.8													
			Confined Space Entry Permit	1.9.1													
			Hot Work Permit	1.9.1													
			Certificate of Compliance	1.12.4													
			License Certificates	1.14													
			Radiography Operation Planning	1.14.1	G RO												
			Work Sheet														
			Portable Gauge Operations	1.14.1	G RO												
			Planning Worksheet														
		01 45 00	SD-01 Preconstruction Submittals														
			Contractor Quality Control (CQC)	3.2	G RO												
			Plan														
			Additional Requirements for	3.2.2	G DO												
			Design Quality Control (DQC) Pla	in													
			SD-05 Design Data														
			Discipline-Specific Checklists	3.2.2													
			Design Quality Control	3.9.1													
			SD-06 Test Reports														
			Verification Statement	3.9.2													
		01 50 00	SD-01 Preconstruction Submittals														

TITLE	AND	LOCATION				CONTRACT	OR										
MAT	OC	Phase 1 Area o	f Operations Savannah District														
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		01 50 00	Construction Site Plan	1.3	G RO												
			Traffic Control Plan	3.4.1	G RO												
			Haul Road Plan	2.2.1	G RO												
			Contractor Computer	1.6.1.4	G RO												
			Cybersecurity Compliance														
			Statements														
			Contractor Temporary Network	1.6.6	G RO												
			Cybersecurity Compliance														
			Statements														
			SD-06 Test Reports														
			Backflow Preventer Tests	2.5													
			SD-07 Certificates														
			Backflow Tester	1.4.1													
			Backflow Preventers	1.4													
		01 57 19	SD-01 Preconstruction Submittals														
			Preconstruction Survey	1.5.1													
			Solid Waste Management Permit	1.10	G RO												
			Regulatory Notifications	1.5.2	G RO												
			Environmental Protection Plan	1.6	G RO												
			Dirt and Dust Control Plan	1.6.9.1	G RO												
			Environmental Manager	1.5.4	G RO												
			Qualifications														
			SD-06 Test Reports														
			Laboratory Analysis	3.7.1.1.2													
			Solid Waste Disposal Report	1.10	G RO												
			SD-07 Certificates														

TITLE	AND	LOCATION				CONTRACT	FOR										
MAT	гос	Phase 1 Area o	f Operations Savannah District														
					G	C SCI	ONTRACTO	R: TES		NTRACTOR ACTION		APF	ROVING AU	THOR	RITY		
ACT-V-TY NO	TRANSMITTAL NO	S P E C S E C T	DESCRIPTION ITEM SUBMITTED	P A R A G R A P H	OVT OR A/E REVYR CLASS-F-CAT-OR	SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	A C T I O N C O D E	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACT-OZ CODE	DATE OF ACTION	MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
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		01 57 19	Employee Training Records	1.5.5	G RO												
			Certificate of Competency	1.5.5.1													
			SD-11 Closeout Submittals														
			Waste Determination	3.7.1	G RO												
			Documentation														
			Disposal Documentation for	3.7.3.6	G RO												
			Hazardous and Regulated Waste														
			Assembled Employee Training	1.5.5	G RO												
			Records														
			Solid Waste Management Permit	1.10	G RO												
			Project Solid Waste Disposal	3.7.2.1	G RO												
			Documentation Report														
			Hazardous Waste/Debris	3.7.3.1	G RO												
			Management														
			Regulatory Notifications	1.5.2	G RO												
			Sales Documentation	3.7.2.1	G RO												
		01 74 19	SD-01 Preconstruction Submittals														
			Construction Waste Management	1.6	G RO												
			Plan														
			SD-06 Test Reports														
			Quarterly Reports	1.8.2													
			Annual Report	1.8.3													
			SD-11 Closeout Submittals														
			Final Construction Waste	1.9	S												
			Diversion Report														
		01 78 00	SD-03 Product Data														

TITLE	AND	LOCATION				CONTRACT	FOR										
MA	гос	Phase 1 Area o	f Operations Savannah District														
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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(I)	(m)	(n)	(0)	(p)	(q)	(r)
		01 78 00	Warranty Management Plan	1.7.1													
			Warranty Tags	1.7.5													
			Spare Parts Data	1.5													
			SD-08 Manufacturer's Instructions														
			Instructions	1.7.1													
			SD-11 Closeout Submittals														
			As-Built Drawings	3.1	G RO												
			Record Drawings	3.3	G RO												
			Final Approved Shop Drawings	3.4													
			Construction Contract	3.5													
			Specifications														
			Certification of EPA Designated	2.2	G RO												
			Items														
			Certification Of USDA Designated	2.3	G RO												
			Items														
			As-Built Record Of Equipment	1.7.1													
			And Materials														
			Checklist For Dd Form 1354	3.7.2	G RO												
			Interim Dd Form 1354	3.7.1	G RO												
		01 78 23	SD-10 Operation and Maintenance														
			Data														
			O&M Database	1.3	G RO												
			Training Plan	3.1.1	G RO												
			Training Outline	3.1.3	G RO												
			Training Content	3.1.2	G RO												
			SD-11 Closeout Submittals														

TITLE	AND	LOCATION				CONTRACT	OR										
MA	гос	Phase 1 Area o	f Operations Savannah District														
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(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(I)	(m)	(n)	(o)	(p)	(q)	(r)
		01 78 23	Training Video Recording	3.1.4	G RO												
			Validation of Training Completion	3.1.6	G RO												

# SECTION 01 33 16

#### DESIGN DATA (DESIGN AFTER AWARD) 05/16

#### PART 1 GENERAL

#### 1.1 SUMMARY

As required per Task Order, develop the accepted proposal into the completed design, as described herein. Use a collaborative, integrated design process for all stages of project delivery with comprehensive performance goals for site development, energy, water, material selection, indoor environmental quality, and waste diversion. Ensure incorporation of these goals in project delivery. Consider all stages of the building lifecycle, including deconstruction, rehabilitation, re-purposing, or demolition.

In order to maintain maximum flexibility in establishing construction specifications while at the same time avoiding unnecessarily restrictive descriptions, the designer shall comply with the following standards when specifying a product by trade name, make or catalog number:

a. List the salient characteristics of the named products which establish the "standard of quality" required by the Government. These characteristics shall be listed in the form of physical, functional, and performance characteristics.

b. Conduct a market survey to identify manufacturers whose products meet the Government's requirements.

c. Provide the names and model numbers of manufacturers' products which meet the "standard of quality" and list these manufacturers and products in the Specifications or Drawings.

#### 1.2 REFERENCES

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.

#### INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO	19005-3	(2012) Document Management Electronic Document File Format for Long-Term Preservation Part 3: Use of ISO 32000-1 with Support for Embedded Files (PDF/A-3)
ISO	32000-1	(2008) Document Management Portable Document Format Part 1: PDF 1.7
	II S	ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT (CESAS)

U.S. ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT (CESAS)

SAS Des Manl

(2015) Savannah District Design Manual for Military Construction

#### U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02

(2016, with Change 4, 2019) High

Performance and Sustainable Building Requirements

UFC 4-010-01

(2018) DoD Minimum Antiterrorism Standards for Buildings

# 1.3 DEFINITIONS

# 1.3.1 Designer of Record (DOR)

Professional Registered members of the Contractor's Design-Build team that check, approve, sign, date, and certify, prior to submitting the deliverables to the Government, that the D-B design submittals comply with the contract requirements.

If required per task order, the DORs stamp, sign, and date each design drawing and other design deliverables under their responsible discipline at each design submittal stage. The DORs are responsible for maintaining the integrity of the design and for compliance with the contract requirements through construction and documentation of the as-built condition by coordination, review and approval of extensions of design, material, equipment and other construction submittals, review and approval or disapproval of requested deviations to the accepted design or to the contract, coordination with the Government of the above activities, and by performing other typical professional design responsibilities.

# 1.3.2 Government Furnished Material (GFM)

Government material that may be incorporated into, or attached to, an end item to be delivered under a contract or which may be consumed in the performance of a contract. It includes, but is not limited to, raw and processed material, parts, components, assemblies, and small tools and supplies.

#### 1.3.3 Computerized Design Analysis

The Contractor is encouraged to use computer calculations as part of the design analysis whenever possible and shall refer to the SAS Des Manl and the Specific Instructions for additional information as to approved programs and the requirement for electronic media submittal. As a minimum, unless the programs are listed as approved, the Contractor shall provide:

a. The name of the program.

b. A description of the program. This description shall be sufficient to verify the validity of methods, assumptions, theories, and formulas, but does not require source code documentation or other information that would compromise the proprietary rights. Verify the results of programs and that programs are used correctly.

A benchmark run validating the program that includes both a computer analysis and hand analysis of a typical or representative problem.

#### 1.4 ORDER OF PRECEDENCE

In the event of a conflict or inconsistency between any of the requirements within the Contract, precedence is applied:

- a. Any portions of the accepted proposal which both conform to and exceed the requirements of the solicitation.
- b. The provisions of the solicitation.
- c. All other provisions of the accepted proposal.
- d. Any design products including, but not limited to, plans, specifications, engineering studies and analyses, shop drawings, and equipment installation drawings. These are "deliverables" under the contract are not part of the contract itself. Design products must conform to all provisions of the contract, in the order of precedence.

#### 1.5 DESIGN CONFERENCES

The Govenrment anticipates that preliminary design review and final design review conferences will be held for each task order that requires design. The Contractor shall be appropriately represented at each conference. The design instructions furnished at or prior to the conference form a part of this Contract and the task order. Take notes and prepare the reports for conferences after Contract award. Conference and visit notes shall be prepared in typed form, signed by the Project Manager or Project Engineer, and the original furnished to the Savannah District office within 5 days of the conference for concurrence and distribution to the attendees. This report shall include the following items as a minimum:

a. The date and place the conference was held with a list of attendees. The roster of attendees shall include name, organization, and telephone number.

b. Written review comments presented by attendees shall be attached to each report with the conference action noted. Conference action shall be "A" for an approved comment, "D" for a disapproved comment, "W" for a comment that has been withdrawn, "N" for noted, and "E" for a comment that has an exception noted.

Comments made during the conference, or decisions affecting criteria changes, shall be coordinated with the Contracting Officer's Representative (COR) and recorded in the basic conference notes. The conference notes shall also document augmentation of written comments.

#### 1.6 SUBMITTALS

Each submittal includes an associated approval level designation as defined in the following table:

Approval Level Designation	Definition
G	Government approval
no designation	for information only
D	Designer of Record approval
С	Government Conformance Review of Design

Approval Level Designation	Definition
R	Designer of Record Approval and Government Conformance Review
A	Designer of Record Approval and Government Approval

When used, a designation following the approval level designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Design Quality Control Plan; G, RO

SD-02 Shop Drawings

Perspective Sketch; G, RO

SD-05 Design Data

Design And Code Checklists; C, RO

Sustainable Design; C, RO

SD-11 Closeout Submittals

Dd Form 1354; A, RO

- 1.7 DESIGN QUALITY CONTROL
- 1.7.1 Design Quality Control Plan

Develop a design quality control plan in accordance with Section 01 45 00 QUALITY CONTROL and submit this plan with the fee proposal for each task order that includes design. Do not proceed with design until the plan has been approved. The quality control plan must include the following:

a. Project number, description, and location.

b. A listing of the design team members, noting their responsibilities, phone numbers, and E-mail addresses.

c. A CPM or bar chart schedule prepared using an off the shelf NAS software package fully compatible with Microsoft Windows environment (i.e. Microsoft Project or similar software) indicating the required design activities and proposed submission dates.

d. Brief outline description of the Contractor's quality procedures for ensuring a coordinated design between disciplines, coordination between Drawings and Specifications, internal processes, and conformance with SAS deliverables requirements as defined in the SAS Des Manl.

1.7.2 Communications Connectivity Requirements

The Contractor must have Internet access (MS Explorer or Netscape) to access design criteria on the SAS web page

(http://www.sas.usace.army.mil). Also, the Contractor must have electronic mail with the capability to attach and transfer design documents.

1.7.3 Adapt Government Designs

When appropriate, adapt Government designs, drawings, specifications, and standards for buildings and other structures as necessary to meet the requirement of the approved layout of the proposed project, and prepare detailed designs, specifications, and drawings in the required form for buildings and other structures for which Government designs are incomplete or unavailable. Such drawings and specifications shall be corrected to reflect the latest criteria requirements in effect during the project design. Facilities to be used as a basis of design will be identified in the Specific Instructions for each task order.

1.7.4 Adjacent Projects

Ongoing projects located adjacent to, or near a proposed project site will be identified in the specific instructions for each task order. Completely and thoroughly coordinate the proposed project and how it interrelates with surrounding facilities.

1.7.5 Military Installation Aesthetic Improvement Guidance

Consider aesthetic design in accordance with the SAS Des Manl.

1.7.6 Work

The design portion of the work shall consist of performing the services necessary in preparation of Contract Drawings and Specifications, including supporting design analyses, cost estimates, narratives, etc., as required for the specific project. The scope of the respective projects is as defined in the task order.

#### 1.7.7 Contract Drawings

Create the Contract Drawings using Computer Aided Design and Drafting (CADD) technology. As a final product, provide the Contract drawing files in MicroStation graphics software in use by the Savannah District at the time of Contract award. The drawing files may require translation to a format compatible with the Installation's file system. If required, this will be specified with each task order. The project files shall be delivered on compact disk (CD) with a physical label as to the project location and project name. The CD shall conform to ISO 9660-file standard. The ISO convention restricts filenames to the characters A-Z (uppercase only), 0-9, and \_ (underscore). Filenames including extensions are restricted to 11 characters. Drawing numbers will be assigned following the award of each task order (if applicable).

#### 1.7.8 Design Analysis

Develop the Design Analysis according to the criteria specified within task orders and SAS Des Manl. The Design Analysis shall include the features with the necessary calculations, tables, methods, and sources used in determining equipment and material sizes and capacities, and shall provide sufficient information to support the design.

# 1.7.9 Specifications

Develop the specifications utilizing the Unified Facilities Guide Specifications (UFGS). The project Specifications must be in SpecsIntact format and be in sufficient detail to fully describe and demonstrate the quality of materials, the installation and performance of equipment, and quality of workmanship. Detailing and installation of equipment and materials shall comply with the manufacturer's recommendations.

# 1.7.10 Documentation

Drawings, design analyses, estimates, resume of utility loads, etc., which are submitted to the Government, shall be appropriately dated with the current date of the latest revision.

#### 1.7.11 Photographs

Submit photographs showing, where possible, the field conditions influencing the design and a narrative report detailing the general conditions and special conditions for which it is impractical to submit specific photographs. Each photograph shall be specifically labeled to identify the subject and how it is applicable to the design. The report and photographs shall be organized by design discipline with each design submittal as required. The Government will return photographs submitted with the preliminary design submittal to the Contractor for use in subsequent submittals. Photographs shall be original prints or copies of such quality (size and clarity) to clearly show field conditions and verify quantity of work required. Digital photographs are preferred.

# 1.7.12 Consultant Coordination

Ensure copies of the instructions, manuals, ETLs, and other documents pertaining to the design requirements are furnished to consultants in order to ensure a completely coordinated design.

# 1.7.13 Cost Estimates

The construction cost limit (CCL) of a project can change between the time the project is negotiated and the time final design is completed. The Government will advise the Contractor of changes in the CCL. A change in the CCL will not categorically constitute a change in scope nor justify a change in the Contractor's fee. The Contractor is required to design the project at the full scope as indicated in the DD Form 1391, DD 4283, etc., by specific instructions in each task order as originally negotiated, and changes incorporated by Contract modification, regardless of the fluctuation in the CCL, in accordance with FAR 52-236.22. During the design process, if it becomes apparent that the construction cost of the project will exceed the amounts set forth in the specific instructions for each task order, immediately provide written notice to the Contracting Officer.

# 1.7.14 Site Inspections

When making site inspection visits at the Installation, make the necessary arrangements for such visits with the point of contact at the Installation, and inform the Savannah District of scheduled dates. Determine existing site conditions and coordinate the proposed new work with existing conditions and other proposed work. As-built drawings for typical facilities furnished by the Government may not necessarily reflect the true existing conditions; field-check each facility and revise drawings to indicate the true existing conditions.

# 1.7.15 Verification of Design Conditions

Upon completion of each design, review the design and correct the specifications, codes, etc. to ensure the specifications are up to date. Changes required in the design to conform to code or other criteria changes shall be reported to the Contracting Officer for consideration. Such design changes may be the basis for a Contract modification if a change in the design is directed. Revisit the site, verify the field conditions on which the design is based, and advise the Contracting Officer of changes in field conditions affecting the design. Complete this verification before submitting the corrected final design.

# 1.7.16 Permits

Ensure that designs comply with the Clean Air Act, as amended; the Federal Water Pollution Control Act, as amended; and the Safe Drinking Water Act. During final design and after consultation with the Installation Engineering staff, obtain the necessary permits, licenses, and approvals from local, state, and federal authorities.

#### 1.7.17 Ingress or Egress

If it becomes necessary for the Contractor to secure the right of ingress and egress to accomplish work required for the performance of various planning, survey, comprehensive interior design, and design services related to new construction, upgrade, improvement and repair on properties not owned or controlled by the Government, secure the consent of the owner or its representative or agent prior to entering the property.

# 1.7.18 Record of Discussions

Provide a record of discussions, verbal directions, telephone conversations, etc., participated in by the Contractor or its representatives on matters relative to this Contract and the work.

# 1.7.19 Report of Field Visit

Submit a report of field visit each time a visit is made to an Installation. In addition, for the purpose of accurate safety records, maintain a record and report to the Contracting Officer by the 20th of each month, "exposure data" (total number of man-days spent at the Installation) for the previous month. This applies to fieldwork accomplished on Government property. The report of exposure data shall be made by letter.

# 1.7.20 Design And Code Checklists

Develop and utilize appropriate discipline-specific checklists during the design and quality control of each submittal. Submit these completed checklists with each design submittal, as applicable, as part of the project documentation. See Section 01 45 00 QUALITY CONTROL and Attachment A "Fire Protection And Life Safety Code RevieW" for a sample checklist.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

1.8.1 Electronic Design Submittal

Provide identical copies of discs for approval, for each submittal required. Provide quantities and sizes indicated in Section 01 33 00 SUBMITTAL PROCEDURES.

1.8.1.1 Malicious Content

Scan all electronic files for malicious viruses using commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.8.1.2 Storage Media

Provide project data on disc-based (DVD $\pm$ R/RW) media. Provide the full submittal on one single disc whenever possible. When separation of the submittal is required separate deliverables onto separate media. Document any media divisions in the PxP for approval by the Contracting Officer.

- a. Directly print identification of contents onto storage media. Do not provide adhesive labels. Include the name of the submittal, project, project location, Contract number, Designer of Record firm/Prime Contractor company's name, title of submission, and security classification (in accordance with the applicable security classification labeling regulations) on the label. If multiple discs are provided, clearly document the contents of each disc on the label.
- b. Include the name and contact information of the individual who produced the final data disc to ensure that any problems with the data or media can be easily resolved.
- c. When browsed on any computer, the disc displays the following folders and their associated content:
  - (1) Submittal files (containing all submittal data)
  - (2) All supporting documents associated with the submittal
  - (3) Readme containing one TXT, PDF, or HTML file with general use information, organizational instructions, and basic preparer contact information.
- 1.8.2 File Packaging

Execute the following actions for all design drawing and modeling files:

1.8.2.1 Bentley AECOsim, InRoads, MicroStation

Compress files with all options.

- 1.8.2.2 Autodesk Revit, Civil3D, AutoCAD
  - a. Purge unused
  - b. Audit
  - c. Compress

#### 1.8.3 PDF File Packaging

Utilize PDF file format in accordance with ISO 32000-1 and ISO 19005-3. Provide files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution whenever possible.

#### 1.8.3.1 Bookmarking

- a. Bookmark drawing submittal PDF sets to include one Parent Bookmark per Discipline and one Child Bookmark per sheet within each Discipline. Format Parent Bookmarks as "Discipline" (e.g. Architectural). Format Child Bookmarks as "Sheet ID Sheet Title" (e.g. A-101 First Floor Plan).
- b. Bookmark specification submittal PDF sets using the SpecsIntact Print Processing PDF Print/Publish feature, combining processed sections into one PDF document. Insert the Submittal Register into the file where specified by Section 01 33 00 SUBMITTAL PROCEDURES and bookmark.
- c. Bookmark design analysis and calculation submittal PDF sets to include one Parent Bookmark per design analysis section and one Child Bookmark per major paragraph per section. Format Parent Bookmarks as "Section" (e.g. Architectural). Format Child Bookmarks as "major paragraph designation Sheet Title" (e.g. 2.1 Primary Facility Functions).

# 1.8.3.2 Hyperlinking

Hyperlink all reference annotation symbology (e.g. section cut symbology, detail callout symbology, elevation callout symbology) to the sheet referenced by the annotation.

1.8.4 Encryption

Encrypt deliverable data as directed by Resident Office Engineer. Document the encryption in the PxP.

# PART 2 PRODUCTS

#### 2.1 GOVERNMENT FURNISHED MATERIALS

The Contractor has the option of preparing their own Advanced Modeling files in the formats prescribed as a basis for design, design drawings, and interim design submittals. If so, maintain the same level of detail, properties, and functionality in the models that is prescribed in this specification.

#### 2.2 ADVANCED MODELING COMPLETION AND QUALITY

If the Contractor chooses to use Advanced Modeling files, any quality control issues discovered do not absolve the Contractor from submitting contract compliant deliverables as described in this and other specifications.

#### 2.3 DESIGN DRAWINGS

From advanced model files, produce design drawings that describe the scope of the Contract for all required submittals including all interim and final deliverables.

#### 2.3.1 Electronic Drawing Files

Provide electronic drawing files in PDF format for each project drawing in the design set.

# 2.3.2 Drawing Index

Provide an index of drawings sheet as part of the drawing set, and an electronic table of all drawings submitted. Include the electronic file name, the sheet reference number, the sheet number, and the sheet title containing the data for each drawing.

# 2.3.3 Shop Drawings Used as Design Drawings

Design drawings may be prepared similar to shop drawings to minimize construction submittals after the Design Complete Submittals. Prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings.

2.3.3.1 Drawing Format For Shop Drawings Used as Design Drawings

Use the Contractor-originated drawings as the basis for the record drawings. Conform shop drawings included as design documents with the same drawing requirements such as drawing format, sheet size, layering, lettering, and title block used in design drawings.

2.3.3.2 Identification of Shop Drawings Used as Design Drawings

Indicate which shop drawings are being submitted as design drawings in the transmittal letter.

# 2.3.4 Seal on Documents

If required by Task Order, sign, date and seal all Contractor-originated design drawings by the registered architect or the registered engineer of the respective discipline. This is the seal of the Designer of Record for that drawing. Application of the electronic seal and signature accepts responsibility for the work shown thereon.

#### 2.4 SPECIFICATIONS

Provide design specifications in accordance with SAS Des Manl.

#### 2.4.1 Specification Deliverable

Submit a bundled specification package in PDF format for each design package. As a minimum, bookmark each specification section in the bundled package. Also, submit the source files, in SpecsIntact format (.sec), used to create the PDF.

# 2.5 DESIGN ANALYSIS

Prepare, organize, and present a design analysis that will document the general parameters, functional and technical requirements, design objectives, design assumptions, and provides design calculations applicable to a project's design. Organize the design analysis into three parts: Part 1 - General Description; Part 2 - Design Requirements and Provisions; and Part 3 - O&M Provisions.

The design analysis states the purpose, authorization, applicable criteria and the project description for the project, and provides a summary of the factors influencing the choice of the civil, environmental, architectural, structural, mechanical, electrical, communications, fire protection, physical security systems, HTRW, and sustainable design features used in the project along with an indication of how the initial costs and life cycle costs were factored into final selections. In the final design analysis clearly and succinctly include:

- a. An introductory description of the project concepts that addresses the salient points of the design
- b. An orderly and comprehensive documentation of criteria and rationale for system selection, supported by life cycle cost analysis.
- c. The identification of any necessary licenses and permits that are anticipated to be required as a part of the design and/or construction process.
- d. Identify all applicable codes and criteria and highlight specific requirements within these codes and criteria for critical issues in the facility design.
- e. Required calculations as specified and as needed to support the design.
- f. Clearly identify "Sustainable Design" features that address high performance and sustainable building (HPSB) concepts as required by UFC 1-200-02 and current Army SDD Policy Update. Sustainable design documentation must support Guiding Principles Validation and Third Party Certification (TPC) requirements in Section 01 33 29 SUSTAINABILITY REPORTING to include HPSB and TPC checklists.
- g. Clearly identify "Antiterrorism" requirement and document the antiterrorism and force protection features as required by UFC 4-010-01.
- 2.5.1 Design Requirements and Provisions

Include subparts for each major design discipline and basic project design requirements for each discipline that justify and validate design decisions to include, but not limited to, life cycle cost effectiveness.

2.5.1.1 Civil

Include soil analysis and survey data, site design, site improvements, planting and landscaping, paving, grading and drainage, water, waste-water and soil treatment, contaminant containment, utilities systems analysis and design, and provisions for airfields, ports and railroads, if required.

# 2.5.1.2 Environmental

Include an impact assessment checklist covering air, water and noise effects from the project and construction; worker health and safety; HTRW remediation cleanup and action levels; transportation and disposal regulation requirements; quality control for chemical sampling/analysis; wetlands determination (tidal and nontidal); special wildlife, plant, and endangered species considerations; ground water, waterway and floodplain protection assessment; pollution prevention control requirements; and design measures to be implemented (i.e., construction site sediment and erosion control requirements by Federal, state and local governments); and hazardous material management, natural and cultural resources, and environmental permits.

# 2.5.1.3 Architectural

Include space allowance, functional layout, unique features, interior design, furniture planning, signage, accessibility, security, air barriers, energy conservation and sustainable design to include site analysis focusing on orientation, space-mass composition, materials used and details with respect to image, safety, maintenance and cost effectiveness and historical context.

# 2.5.1.4 Structural

Include foundation, structural, seismic, hardened structure, nuclear radiation and blast protection systems analysis and design.

#### 2.5.1.5 Mechanical

Include heating, ventilation and air conditioning systems, refrigeration, plumbing, elevators and cranes, energy conservation, pollution control, noise and vibration control, heating and chilled water distribution, gas distribution, fuel storage and dispensing, and process systems design.

#### 2.5.1.6 Electrical

Include power generation, transmission and distribution systems, lighting (interior and exterior), voice and video communications, intrusion detection, utilities monitoring control systems (UMCS), cathodic protection, lightning and static electricity protection systems analysis and design, aviation lighting, and electromagnetic protection

#### 2.5.1.7 Fire Protection and Life Safety

Include building construction, exit requirements, fire extinguishing systems, fire protection water supplies, surge analysis, and alarm and detection systems analysis and design.

#### 2.5.1.8 Physical Security

Include fencing, vaults, protective lighting, security systems, locks, arms rooms, controlled substances, entrances, guard facilities, classified material, patrol roads, clear zones, restricted areas, surveillance and penetration resistance.

#### 2.5.2 Operations and Maintenance (O&M) Provisions

Identify design provisions made to enhance and to reduce the cost of operating and maintaining the facility when completed. Identify any special safety considerations or occupational health related considerations that may affect operation and maintenance activities as a result of the final design.

#### 2.5.3 Design Analysis Packaging

# 2.5.3.1 Assembly and Identification

Assemble design analysis in a single volume with a table of contents if

possible. Include a cover page in the basis of design for each discipline indicating the project title and locations, contract number, table of contents, and tabbed separations or bookmarks for quick reference. At a minimum tab or bookmark for each discipline.

## 2.5.4 Calculations

Place the signature and seal of the designer of record responsible for the work on the cover page of the calculations for the respective design discipline.

#### PART 3 EXECUTION

The SAS Des Manl provides detailed guidance for preparation of work under this Contract. Unless otherwise indicated, use MicroStation CADD technology for Contract Drawings and SPECSINTACT software for Contract Specifications. Anticipated services required under this Contract are as follows:

# 3.1 STUDIES AND REPORTS

Prepare and submit studies and reports (engineering, life cycle cost analyses, etc.) in accordance with additional specific instructions provided within task orders.

#### 3.2 PRELIMINARY DESIGN AND SUBMITTAL

Prepare and submit for approval the drawings, written descriptions, design analyses, cost estimate, and other related and supporting documents as are more fully specified in the SAS Des Manl, Volume II, Chapters A-1 Through A-12 and Chapters B-1 and B-2. Incorporate preliminary design review comments as a part of completing the Preliminary Design submittal.

#### 3.3 FINAL DESIGN AND SUBMITTALS

Prepare, in accordance with Government standards, the detailed working drawings and specifications necessary for the effective coordination and efficient execution of the construction work, together with such design analyses, cost estimate, quantity take-off, unit price schedules, and other related and supporting documentation as are more fully specified in the SAS Des Manl, Volume II, Chapters A-1 Through A-12 and Chapters B-1 and B-2. This includes incorporation of comments from the final design review. At no additional expense to the Government, correct items of noncompliance within the time allowed by established design and bidding schedules. This includes travel by the Contractor to Savannah District during reproduction of the bid documents to review discrepancies. Workstations in the Savannah District will not be available for Contractor use.

# 3.3.1 Submittal Register

Prepare the submittal register listing Contractor submittals required in the Contract Specifications. The Submittal Register Form (ENG Form 4288) shall be developed using the SPECSINTACT software. Using the ENG Form 4288 Submittal Register, develop a list of submittal items requiring Designer ("DO" Savannah District or "AE" (Architect-Engineer) level review.

# 3.3.2 Contract Documents

The corrected final design shall constitute the construction contract documents. Submit an electronic copy of the Drawings and Specifications, one original copy of the Drawings on vellum, one original single-sided copy of the Specifications on bond paper (unbound), and one original single-sided copy of the cost estimate on bond paper. If an MCACES estimate is prepared, an electronic copy of the estimate shall be submitted as part of the corrected final design.

#### 3.4 AS-BUILT DRAWINGS (INITIAL)

Survey existing facility conditions and update existing architectural and engineering drawings to reflect current conditions. Create the as-built drawings using Computer Aided Design and Drafting (CADD) technology. The Contractor shall provide, as a final product, the as-built drawing files in MicroStation software in use by the Savannah District at the time of Contract award. The drawing files may require translation to a format compatible with the Installation's file system. If required, this shall be specified with each task order.

## 3.5 ARCHITECTURAL RENDERINGS

Provide one original and two full-sized color photos of the final color rendering. The full size renderings (original and photos) shall be framed and matted. The rendering shall be double matted as follows: upper matte sheet shall be a neutral color with a lower sheet of contrasting and complementary color. The frame shall be a standard aluminum type frame. The matte, frame, and rendering shall be color coordinated.

# 3.5.1 Perspective Sketch

Submit for approval, a single line perspective sketch showing the three dimensional aspects of the facility with emphasis on the main building features. The perspective sketch shall be a minimum of 8 inches by 10 inches, and illustrate the view planned for the final color rendering. The Contractor shall include a sample indicating the type of rendering technique proposed for the final perspective. Select the horizon line and viewing point to best present the facility's character. Generally, a normal eye level view is preferred for single building projects, and an aerial view shall be used for multiple building complexes. A professional architectural illustrator shall prepare the rendering, showing the view approved from the single line perspective. Details must be appropriate for the Installation (e.g., correct portrayal of personnel and uniforms).

# 3.5.2 Size

The rendering size shall be appropriately apportioned to illustrate the facility shape, color, patterns of exterior materials, and site development features. The minimum size, as determined by adding the vertical and horizontal dimensions of the rendering (without matte) shall be 42 inches. Non-glare plastic glazing is required. Titles shall be scaled appropriately and included as part of the matte design. Titles shall identify only the project name, Installation, and A-E firm.

#### 3.5.3 Slides and Negatives

Provide three mounted 35mm color slides and a photo negative (minimum 35mm) of the final rendering.

#### 3.6 INTERIOR DESIGN

Development of a comprehensive interior design package shall be in accordance with SAS Des Manl.

# 3.7 TOPOGRAPHIC SURVEY

Complete requirements are detailed in the SAS Des Manl, Volume II, Chapter A-1.

#### 3.8 SUBSURFACE INVESTIGATION

Complete requirements are detailed in the SAS Des Manl, Volume II, Chapter B-1. If included in the task order, complete SAS Form 363 for each structure and return them to the COR. Early receipt of this document will expedite completion of the foundation design analysis report. Changes in siting or to the basic information furnished in SAS Form 363 shall be reported immediately as these changes will likely affect the foundation analysis.

#### 3.9 DESIGN FOR THE PHYSICALLY HANDICAPPED

In accordance with Public Law 90-480, the facility shall be designed for use by the physically handicapped. The Uniform Federal Accessibility Standards published in the Federal Register in August 7, 1984, (49FR 31528) covers applicable criteria. If provisions for the handicapped are not included, furnish specific reasons for exemption.

# 3.10 COLOR BOARDS

Provide two sets of color finish boards giving two distinct options, from which one scheme will be selected by the Government. Submit the color boards in a 3-ring binder format. Floor plans and elevations shall be included in this document. Submit three copies of the approved color boards with the corrected final design submittal. Finishes shall conform to the Installation's Design Guide.

#### 3.11 ASBESTOS OR LEAD BASED PAINT IDENTIFICATION AND REMOVAL

Complete requirements are detailed in the SAS Des Manl.

# 3.12 DD FORM 1354

Submit with the final design a draft DD Form 1354, Transfer and Acceptance of Military Real Property. Instructions and an example of the completed form can be found in the SAS Des Manl.

# 3.13 OTHER A-E SERVICES

Complete other types of services related to military or federal facilities that may be identified during the life of the Contract.

-- End of Section --
## SECTION 01 33 29

# SUSTAINABILITY REPORTING 02/17

#### PART 1 GENERAL

#### 1.1 REFERENCES

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.

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

ASHRAE 189.1	(2014) Standard for the Design of
	High-Performance Green Buildings Except
	Low-Rise Residential Buildings

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) (WHITE HOUSE)

HPSB Guiding Principles (2016) Guiding Principles for Sustainable Federal Buildings and Determining Compliance with the Guiding Principles for Sustainable Federal Buildings

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

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

U.S. DEPARTMENT OF AGRICULTURE (USDA)

FSRIA 9002Farm Security and Rural Investment Act<br/>Section 9002 (USDA Biopreferred Program)

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-200-02 (2016, with Change 4, 2019) High Performance and Sustainable Building Requirements

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star (1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)

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

40 CFR 247 Comprehensive Procurement Guideline for Products Containing Recovered Materials

## 1.2 SUMMARY

This specification includes general requirements and procedures for this project to be constructed and documented per the federally mandated High Performance and Sustainable Building or HPSB Guiding Principles (GP),

UFC 1-200-02, and other requirements identified in this specification.

#### 1.3 DOCUMENTATION REQUIREMENTS

a. Incorporate each of the following HPSB Guiding Principles Requirements into project construction and, if required by Task order, provide documentation that proves compliance with each listed requirement. Items below are organized according to the HPSB Guiding Principles. For life-cycle cost analysis requirements, one document with all analyses is acceptable, with Contracting Officer approval.

b. For each of the following paragraphs that require the use of products listed on Government-required websites, provide documentation of the process used to select products, or process used to determine why listed products do not meet project performance requirements.

#### 1.3.1 Energy Efficient Products

Provide only energy-using products that are Energy Star rated, or have the Federal Energy Management Program (FEMP) recommended efficiency. Where Energy Star or FEMP recommendations have not been established, provide most efficient products that are life-cycle cost effective. Provide only energy using products that meet FEMP requirements for low standby power consumption. Energy efficient products can be found at: https://energy.gov/eere/femp/federal-energy-management-program and https://www.energystar.gov/. If required by Task Order, provide proof that products are labeled energy efficient and comply with the cited requirements.

## 1.3.2 Indoor Water Use

Provide only water-consuming products that are EPA WaterSense labeled, or the most efficient water fixtures available that meet the requirements of ASHRAE 189.1 Section 6.3.2, when EPA WaterSense products are not available.

For products available with EPA WaterSense labeling, provide proof that fixtures are labeled EPA WaterSense or Energy Star; for all other fixtures, proof they comply with the cited efficiency requirements.

1.3.3 Reduce Volatile Organic Compounds (VOC) (Low Emitting Materials)

Meet the requirements of Table 3-1 at the end of this Section and provide certifications or labels that demonstrate compliance with cited requirements.

#### 1.3.4 Indoor Air Quality During Construction

Prior to construction, create indoor air quality (IAQ) plan. Develop and implement the IAQ construction management plan during construction and flush building air before occupancy.

For new construction and for renovation of unoccupied existing buildings, indoor air quality plan must meet the requirements of ASHRAE 189.1 Section 10.3.1.4. (Indoor Air Quality (IAQ) Construction Management), with maximum outdoor air consistent with achieving relative humidity no greater than 60 percent. For renovation of occupied existing buildings, comply with ANSI/SMACNA 008 IAQ Guidelines for Occupied Buildings Under Construction.

If required per task order, provide documentation showing that after

construction ends and prior to occupancy, HVAC filters were replaced and building air was flushed out in accordance with the cited standard.

## 1.3.5 Recycled Content

Comply with 40 CFR 247. Refer to

https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program for assistance identifying products cited in 40 CFR 247. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation, and must meet performance requirements. If require per Task Order, provide the following documentation:

- a. Manufacturers' documents stating the recycled content by material, or written justification for claiming one of the exceptions allowed on the cited website.
- b. Substitutions: Submit for Government approval, proposed alternative products or systems that provide equivalent performance and appearance and have greater contribution to project recycled content requirements. For all such proposed substitutions, submit with the Sustainability Action Plan accompanied by product data demonstrating equivalence.
- c. To comply with FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA Designated Items, refer to submittal requirement for recycled/recovered material content in Section 01 78 00.

#### 1.3.6 Bio-Based Products

Provide products and material composed of the highest percentage of biobased materials (including rapidly renewable resources and certified sustainably harvested products), consistent with FSRIA 9002 USDA BioPreferred Program, to the maximum extent possible without jeopardizing the intended end use or detracting from the overall quality delivered to the end user. Use only supplies and materials of a type and quality that conform to applicable specifications and standards.

Comply with FSRIA 9002 USDA BioPreferred Program. Refer to https://www.biopreferred.gov/BioPreferred/ for the product categories and BioPreferred Catalog. Selected products must comply with non-proprietary requirements of the Federal Acquisition Regulation, and must meet performance requirements. If required per Task Order, provide:

- a. USDA BioPreferred label for each product; for bio-based products used on project but not listed with BioPreferred program, provide bio-based content and percentage.
- b. To comply with FAR 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts, refer to submittal requirement for biobased products in Section 01 78 00.

#### 1.3.7 Waste Material Management (Recycling - Construction)

Divert construction debris from landfill disposal where markets or on-site recycling exists, and provide documentation in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

## SECTION 01 35 26

## GOVERNMENTAL SAFETY REQUIREMENTS 11/15

PART 1 GENERAL

1.1 REFERENCES

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.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME	B30.3	(2016) Tower Cranes
ASME	B30.5	(2018) Mobile and Locomotive Cranes
ASME	B30.7	(2011) Winches
ASME	B30.8	(2015) Floating Cranes and Floating Derricks
ASME	B30.9	(2018) Slings
ASME	B30.20	(2018) Below-the-Hook Lifting Devices
ASME	B30.22	(2016) Articulating Boom Cranes
ASME	B30.23	(2011) Personnel Lifting Systems Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings
ASME	B30.26	(2015; INT Jun 2010 - Jun 2014) Rigging Hardware
	AMERICAN SOCIETY OF SAF	ETY PROFESSIONALS (ASSP)
ASSP	AMERICAN SOCIETY OF SAF	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists
ASSP ASSP	AMERICAN SOCIETY OF SAF A10.22 A10.34	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites
ASSP ASSP ASSP	AMERICAN SOCIETY OF SAFT A10.22 A10.34 A10.44	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites (2014) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations
ASSP ASSP ASSP ASSP	AMERICAN SOCIETY OF SAF A10.22 A10.34 A10.44	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites (2014) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations (2016) The Control of Hazardous Energy Lockout, Tagout and Alternative Methods
ASSP ASSP ASSP ASSP	AMERICAN SOCIETY OF SAFT A10.22 A10.34 A10.44 Z244.1 Z359.0	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites (2014) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations (2016) The Control of Hazardous Energy Lockout, Tagout and Alternative Methods (2012) Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ASSP ASSP ASSP ASSP ASSP	AMERICAN SOCIETY OF SAFT         A10.22         A10.34         A10.44         Z244.1         Z359.0         Z359.1	ETY PROFESSIONALS (ASSP) (2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists (2001; R 2012) Protection of the Public on or Adjacent to Construction Sites (2014) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations (2016) The Control of Hazardous Energy Lockout, Tagout and Alternative Methods (2012) Definitions and Nomenclature Used for Fall Protection and Fall Arrest (2016) The Fall Protection Code

Program ASSP Z359.3 (2017) Safety Requirements for Lanyards and Positioning Lanyards ASSP Z359.4 (2013) Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components ASSP Z359.6 (2016) Specifications and Design Requirements for Active Fall Protection Systems ASSP Z359.7 (2011) Qualification and Verification Testing of Fall Protection Products ASSP Z359.11 (2014) Safety Requirements for Full Body Harnesses ASSP Z359.12 (2009) Connecting Components for Personal Fall Arrest Systems ASSP Z359.13 (2013) Personal Energy Absorbers and Energy Absorbing Lanyards ASSP Z359.14 (2014) Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems ASSP Z359.15 (2014) Safety Requirements for Single Anchor Lifelines and Fall Arresters for Personal Fall Arrest Systems ASSP Z359.16 (2016) Safety Requirements for Climbing Ladder Fall Arrest Systems ASSP Z359.18 (2017) Safety Requirements for Anchorage Connectors for Active Fall Protection Systems ASTM INTERNATIONAL (ASTM)

#### ASIM INIERNALIONAL (ASIM)

ASTM F855 (2015) 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	(2003)	Guide	for	Protective	Grounding	of
		Power	Lines				

# IEEE C2(2017; Errata 1-2 2017; INT 1 2017)National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (2018; TIA 18-1) Standard for Portable Fire Extinguishers

NFPA 51B	(2014) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work
NFPA 70	(2019; TIA 19-1; TIA 19-2; TIA 19-3; TIA 19-4; ERTA 1 2019) National Electrical Code
NFPA 70E	(2018; TIA 18-1; TIA 81-2) Standard for Electrical Safety in the Workplace
NFPA 241	(2019) Standard for Safeguarding Construction, Alteration, and Demolition Operations
TELECOMMUNICATIONS INDU	JSTRY ASSOCIATION (TIA)
TIA-222	(2005G; Add 1 2007; Add 2 2009; Add 3 2014; Add 4 2014; R 2014; R 2016) Structural Standards for Steel Antenna Towers and Antenna Supporting Structures
TIA-1019	(2012; R 2016) Standard for Installation, Alteration and Maintenance of Antenna Supporting Structures and Antennas
U.S. ARMY CORPS OF ENGI	NEERS (USACE)
EM 385-1-1	(2014) Safety and Health Requirements Manual
U.S. NATIONAL ARCHIVES	AND RECORDS ADMINISTRATION (NARA)
10 CFR 20	Standards for Protection Against Radiation
29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910 146	
29 CIR 1910.110	Permit-required Confined Spaces
29 CFR 1910.147	Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out)
29 CFR 1910.147 29 CFR 1910.333	Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices
29 CFR 1910.147 29 CFR 1910.333 29 CFR 1915	Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1910.147 29 CFR 1910.333 29 CFR 1915 29 CFR 1915.89	Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment Control of Hazardous Energy (Lockout/Tags-Plus)
29 CFR 1910.147 29 CFR 1910.333 29 CFR 1915 29 CFR 1915.89 29 CFR 1926	<pre>Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment Control of Hazardous Energy (Lockout/Tags-Plus) Safety and Health Regulations for Construction</pre>
<ul> <li>29 CFR 1910.147</li> <li>29 CFR 1910.333</li> <li>29 CFR 1915</li> <li>29 CFR 1915.89</li> <li>29 CFR 1926</li> <li>29 CFR 1926.16</li> </ul>	<pre>Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment Control of Hazardous Energy (Lockout/Tags-Plus) Safety and Health Regulations for Construction Rules of Construction</pre>
<ul> <li>29 CFR 1910.147</li> <li>29 CFR 1910.333</li> <li>29 CFR 1915</li> <li>29 CFR 1915.89</li> <li>29 CFR 1926</li> <li>29 CFR 1926.16</li> <li>29 CFR 1926.450</li> </ul>	<pre>Permit-required Confined Spaces The Control of Hazardous Energy (Lock Out/Tag Out) Selection and Use of Work Practices Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment Control of Hazardous Energy (Lockout/Tags-Plus) Safety and Health Regulations for Construction Rules of Construction Scaffolds</pre>

29 CFR 1926.552	Material Hoists, Personal Hoists, and Elevators
29 CFR 1926.553	Base-Mounted Drum Hoists
29 CFR 1926.1400	Cranes and Derricks in Construction
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
CPL 02-01-056	(2014) Inspection Procedures for Accessing Communication Towers by Hoist
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

## 1.2 DEFINITIONS

1.2.1 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 dangerous to personnel, and who has authorization to take prompt corrective measures with regards to such hazards.

#### 1.2.2 Competent Person, Confined Space

The CP, Confined Space, is a person meeting the competent person requirements as defined EM 385-1-1 Appendix Q, with thorough knowledge of OSHA's Confined Space Standard, 29 CFR 1910.146, and designated in writing to be responsible for the immediate supervision, implementation and monitoring of the confined space program, who through training, knowledge and experience in confined space entry is capable of identifying, evaluating and addressing existing and potential confined space hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

#### 1.2.3 Competent Person, Cranes and Rigging

The CP, Cranes and Rigging, as defined in EM 385-1-1 Appendix Q, is a person meeting the competent person, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the Crane and Rigging Program, who through training, knowledge and experience in crane and rigging is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

#### 1.2.4 Competent Person, Excavation/Trenching

A CP, Excavation/Trenching, is a person meeting the competent person requirements as defined in EM 385-1-1 Appendix Q and 29 CFR 1926, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the excavation/trenching program, who through training, knowledge and experience in excavation/trenching is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

#### 1.2.5 Competent Person, Fall Protection

The CP, Fall Protection, is a person meeting the competent person requirements as defined in EM 385-1-1 Appendix Q and in accordance with ASSP Z359.0, who has been designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the fall protection program, who through training, knowledge and experience in fall protection and rescue systems and equipment, is capable of identifying, evaluating and addressing existing and potential fall hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

#### 1.2.6 Competent Person, Scaffolding

The CP, Scaffolding is a person meeting the competent person requirements in EM 385-1-1 Appendix Q, and designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the scaffolding program. The CP for Scaffolding has enough training, knowledge and experience in scaffolding to correctly identify, evaluate and address existing and potential hazards and also has the authority to take prompt corrective measures with regard to these hazards. CP qualifications must be documented and include experience on the specific scaffolding systems/types being used, assessment of the base material that the scaffold will be erected upon, load calculations for materials and personnel, and erection and dismantling. The CP for scaffolding must have a documented, minimum of 8-hours of scaffold training to include training on the specific type of scaffold being used (e.g. mast-climbing, adjustable, tubular frame), in accordance with EM 385-1-1 Section 22.B.02.

## 1.2.7 Competent Person (CP) Trainer

A competent person trainer as defined in EM 385-1-1 Appendix Q, who is qualified in the training material presented, and who possesses a working knowledge of applicable technical regulations, standards, equipment and systems related to the subject matter on which they are training Competent Persons. A competent person trainer must be familiar with the typical hazards and the equipment used in the industry they are instructing. The training provided by the competent person trainer must be appropriate to that specific industry. The competent person trainer must evaluate the knowledge and skills of the competent persons as part of the training process.

#### 1.2.8 High Risk Activities

High Risk Activities are activities that involve work at heights, crane and rigging, excavations and trenching, scaffolding, electrical work, and confined space entry.

#### 1.2.9 High Visibility Accident

A High Visibility Accident is any mishap which may generate publicity or high visibility.

#### 1.2.10 Load Handling Equipment (LHE)

LHE is a term used to describe cranes, hoists and all other hoisting equipment (hoisting equipment means equipment, including crane, derricks, hoists and power operated equipment used with rigging to raise, lower or

horizontally move a load).

## 1.2.11 Medical Treatment

Medical Treatment is 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 when provided by a physician or registered personnel.

1.2.12 Near Miss

A Near Miss is a mishap resulting in no personal injury and zero property damage, but given a shift in time or position, damage or injury may have occurred (e.g., a worker falls off a scaffold and is not injured; a crane swings around to move the load and narrowly misses a parked vehicle).

1.2.13 Operating Envelope

The Operating Envelope is the area surrounding any crane or load handling equipment. Inside this "envelope" is the crane, the operator, riggers and crane walkers, other personnel involved in the operation, rigging gear between the hook, the load, the crane's supporting structure (i.e. ground or rail), the load's rigging path, the lift and rigging procedure.

1.2.14 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.

1.2.15 Qualified Person, Fall Protection (QP for FP)

A QP for FP is a person meeting the definition requirements of EM 385-1-1 Appendix Q, and ASSP Z359.2, having a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, and evaluating and specifying fall protection and rescue systems.

1.2.16 USACE Property and Equipment

Interpret "USACE" property and equipment specified in USACE EM 385-1-1 as Government property and equipment.

1.2.17 Load Handling Equipment (LHE) Accident or Load Handling Equipment Mishap

A LHE accident occurs when any one or more of the eight 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; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents, 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, or roll over). Document an LHE mishap using the Crane High Hazard working group mishap reporting form.

## 1.3 SUBMITTALS

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

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP); G, RO

SD-06 Test Reports

Monthly Exposure Reports

Notifications and Reports

Accident Reports; G, RO

LHE Inspection Reports

SD-07 Certificates

Crane Operators/Riggers

Standard Lift Plan; G, RO

Critical Lift Plan ; G, RO

Naval Architecture Analysis; G, RO

Activity Hazard Analysis (AHA)

Confined Space Entry Permit

Hot Work Permit

Certificate of Compliance

License Certificates

Radiography Operation Planning Work Sheet; G, RO

Portable Gauge Operations Planning Worksheet; G, RO

## 1.4 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report and attach to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the voucher.

## 1.5 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of

## 1.6 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

- 1.6.1 Personnel Qualifications
- 1.6.1.1 Site Safety and Health Officer (SSHO)

Provide an SSHO that meets the requirements of EM 385-1-1 Section 1. The SSHO must ensure that the requirements of 29 CFR 1926.16 are met for the project. Provide a Safety oversight team that includes a minimum of one (1) person at each project site to function as the Site Safety and Health Officer (SSHO). The SSHO or an equally-qualified Alternate SSHO must be at the work site at all times to implement and administer the Contractor's safety program and government-accepted Accident Prevention Plan. The SSHO and Alternate SSHO must have the required training, experience, and qualifications in accordance with EM 385-1-1 Section 01.A.17, and all associated sub-paragraphs.

referenced documents vary, the most stringent requirements govern.

If the SSHO is off-site for a period longer than 24 hours, an equally-qualified alternate SSHO must be provided and must fulfill the same roles and responsibilities as the primary SSHO. When the SSHO is temporarily (up to 24 hours) off-site, a Designated Representative (DR), as identified in the AHA may be used in lieu of an Alternate SSHO, and must be on the project site at all times when work is being performed. Note that the DR is a collateral duty safety position, with safety duties in addition to their full time occupation.

Each Task Order will indicate whether the SSHO may serve as the Quality Control Manager or the Superintendent.

1.6.1.2 Competent Person Qualifications

Provide Competent Persons in accordance with EM 385-1-1, Appendix Q and herein. Competent Persons for high risk activities include confined space, cranes and rigging, excavation/trenching, fall protection, and electrical work. The CP for these activities must be designated in writing, and meet the requirements for the specific activity (i.e. competent person, fall protection).

The Competent Person identified in the Contractor's Safety and Health Program and accepted Accident Prevention Plan, must be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the the Contracting Officer for information in consultation with the Safety Office.

1.6.1.2.1 Competent Person for Confined Space Entry

Provide a Confined Space (CP) Competent Person who meets the requirements of EM 385-1-1, Appendix Q, and herein. The CP for Confined Space Entry must supervise the entry into each confined space in accordance with EM 385-1-1, Section 34.

1.6.1.2.2 Competent Person for Scaffolding

Provide a Competent Person for Scaffolding who meets the requirements of EM 385-1-1, Section 22.B.02 and herein.

1.6.1.2.3 Competent Person for Fall Protection

Provide a Competent Person for Fall Protection who meets the requirements of EM 385-1-1, Section 21.C.04, 21.B.03, and herein.

1.6.1.3 Qualified Trainer Requirements

Individuals qualified to instruct the 40 hour contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer, 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 1926.450, Subpart L.

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 five (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.

#### 1.6.1.4 Crane Operators/Riggers

Provide Operators, Signal Persons, and Riggers meeting the requirements in EM 385-1-1, Section 15.B for Riggers and Section 16.B for Crane Operators and Signal Persons. Provide proof of current qualification.

- 1.6.2 Personnel Duties
- 1.6.2.1 Duties of the Site Safety and Health Officer (SSHO)

The SSHO must:

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 report.

- Conduct mishap investigations and complete required accident reports. Report mishaps and near misses.
- c. Use and maintain OSHA's Form 300 to log work-related injuries and illnesses occurring on the project site for Prime Contractors and subcontractors, and make available to the Contracting Officer upon request. Post and maintain the Form 300A on the site Safety Bulletin Board.
- d. Maintain applicable safety reference material on the job site.
- e. Attend the pre-construction conference, pre-work meetings including preparatory meetings, and periodic in-progress meetings.
- f. Review the APP and AHAs for compliance with EM 385-1-1, and approve, sign, implement and enforce them.
- g. Establish a Safety and Occupational Health (SOH) Deficiency Tracking System that lists and monitors outstanding deficiencies until resolution.
- h. Ensure subcontractor compliance with safety and health requirements.
- i. Maintain a list of hazardous chemicals on site and their material Safety Data Sheets (SDS).
- j. Maintain a weekly list of high hazard activities involving energy, equipment, excavation, entry into confined space, and elevation, and be prepared to discuss details during QC Meetings.
- k. Provide and keep a record of site safety orientation and indoctrination for Contractor employees, subcontractor employees, and site visitors.

Superintendent, QC Manager, and SSHO are subject to dismissal if the above duties are not being effectively carried out. If 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.

#### 1.6.3 Meetings

## 1.6.3.1 Preconstruction Conference

- 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 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 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.

- 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.
- d. The functions of a Preconstruction conference may take place at the Post-Award Kickoff meeting for Design Build Contracts.

## 1.6.3.2 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 on the project location. The SSHO, supervisors, foremen, or CDSOs 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 ACCIDENT PREVENTION PLAN (APP)

A qualified person must prepare the written site-specific APP. Prepare the APP in accordance with the format and requirements of EM 385-1-1, Appendix A, and as supplemented herein. Cover all paragraph and subparagraph elements in EM 385-1-1, Appendix A. 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 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 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 must be signed by an officer of the firm (Prime Contractor senior person), the individual preparing the APP, the on-site superintendent, the designated SSHO, the Contractor Quality Control Manager, and any designated Certified Safety Professional (CSP) or Certified Health Physicist (CIH). The SSHO 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.

Submit the APP to the Contracting Officer 15 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 ASSP A10.34), and the environment.

1.7.1 Names and Qualifications

Provide plans in accordance with the requirements outlined in Appendix A of 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. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons 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.
- 1.7.2 Plans

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

1.7.2.1 Confined Space Entry Plan

Develop a confined or enclosed space entry plan in accordance with EM 385-1-1, applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, OSHA Directive CPL 2.100, and any other federal, state and local regulatory requirements identified in this contract. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)

1.7.2.2 Standard Lift Plan (SLP)

Plan lifts to avoid situations where the operator cannot maintain safe control of the lift. Prepare a written SLP in accordance with EM 385-1-1, Section 16.A.03, using Form 16-2 for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be

developed, reviewed and accepted by all personnel involved in the lift in conjunction with the associated AHA. Signature on the AHA constitutes acceptance of the plan. Maintain the SLP on the LHE for the current lift(s) being made. Maintain historical SLPs for a minimum of 3 months.

1.7.2.3 Critical Lift Plan - Crane or Load Handling Equipment

Provide a Critical Lift Plan as required by EM 385-1-1, Section 16.H.01, using Form 16-3. In addition, Critical Lift Plans are required for the following:

- a. Lifts over 50 percent of the capacity of barge mounted mobile crane's hoist.
- b. When working around energized power lines where the work will get closer than the minimum clearance distance in EM 385-1-1 Table 16-1.
- c. For lifts with anticipated binding conditions.
- d. When erecting cranes.

1.7.2.3.1 Critical Lift Plan Planning and Schedule

Critical lifts require detailed planning and additional or unusual safety precautions. Develop and submit a critical lift plan to the Contracting Officer 30 calendar days prior to critical lift. Comply with load testing requirements in accordance with EM 385-1-1, Section 16.F.03.

1.7.2.3.2 Lifts of Personnel

In addition to the requirements of EM 385-1-1, Section 16.H.02, for lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.1400 and EM 385-1-1, Section 16.T.

1.7.2.4 Barge Mounted Mobile Crane Lift Plan

Provide a Naval Architecture Analysis and include an LHE Manufacturer's Floating Service Load Chart in accordance with EM 385-1-1, Section 16.L.03.

1.7.2.5 Multi-Purpose Machines, Material Handling Equipment, and Construction Equipment Lift Plan

Multi-purpose machines, material handling equipment, and construction equipment used to lift loads that are suspended by rigging gear, require proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. Written approval from a qualified registered professional engineer, after a safety analysis is performed, is allowed in lieu of the OEM's approval. Demonstrate that the operator is properly trained and that the equipment is properly configured to make such lifts and is equipped with a load chart.

1.7.2.6 Fall Protection and Prevention (FP&P) Plan

The plan must comply with the requirements of EM 385-1-1, Section 21.D and ASSP Z359.2, be site specific, and address all fall hazards in the work place and during different phases of construction. Address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A competent person or qualified person for fall protection must prepare and sign the plan documentation. Include

fall protection and prevention systems, equipment and methods employed for every phase of work, roles and responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Review and revise, as necessary, the Fall Protection and Prevention Plan documentation as conditions change, but at a minimum every six months, for lengthy projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. Keep and maintain the accepted Fall Protection and Prevention Plan documentation at the job site for the duration of the project. Include the Fall Protection and Prevention Plan documentation in the Accident Prevention Plan (APP).

## 1.7.2.7 Rescue and Evacuation Plan

Provide a Rescue and Evacuation Plan in accordance with EM 385-1-1 Section 21.N and ASSP Z359.2, and include in the FP&P Plan and as part of the APP. 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.

#### 1.7.2.8 Hazardous Energy Control Program (HECP)

Develop a HECP in accordance with EM 385-1-1 Section 12, 29 CFR 1910.147, 29 CFR 1910.333, 29 CFR 1915.89, ASSP Z244.1, and ASSP A10.44. Submit this HECP as part of the Accident Prevention Plan (APP). Conduct a preparatory meeting and inspection with all effected personnel to coordinate all HECP activities. Document this meeting and inspection in accordance with EM 385-1-1, Section 12.A.02. Ensure that each employee is familiar with and complies with these procedures.

#### 1.7.2.9 Excavation Plan

Identify the safety and health aspects of excavation, and provide and prepare the plan in accordance with EM 385-1-1, Section 25.A and UFGS Section 31 00 00 EARTHWORK.

### 1.8 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, Section 1 or as directed by the Contracting Officer. 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.

#### 1.8.1 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.

## 1.8.2 AHA Signature Log

Each employee performing work as part of an activity, task or DFOW 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.

## 1.9 DISPLAY OF SAFETY INFORMATION

## 1.9.1 Safety Bulletin Board

Within one calendar day after commencement of work, erect a safety bulletin board at the job site. Where size, duration, or logistics of project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, may be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by EM 385-1-1, Section 01.A.07. Additional items required to be posted include:

- a. Confined space entry permit.
- b. Hot work permit.
- 1.9.2 Safety and Occupational Health (SOH) Deficiency Tracking System

Establish a SOH deficiency tracking system that lists and monitors the status of SOH deficiencies in chronological order. Use the tracking system to evaluate the effectiveness of the APP. A monthly evaluation of the data must be discussed in the QC or SOH meeting with everyone on the project. The list must be posted on the project bulletin board and updated daily, and provide the following information:

- a. Date deficiency identified;
- b. Description of deficiency;
- c. Name of person responsible for correcting deficiency;
- d. Projected resolution date;
- e. Date actually resolved.

#### 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. Government has no responsibility to provide emergency medical treatment.

## 1.12 NOTIFICATIONS and REPORTS

#### 1.12.1 Mishap Notification

Notify the Contracting Officer as soon as practical, but no more than twenty-four hours, after any mishaps, including recordable accidents, incidents, and near misses, as defined in EM 385-1-1 Appendix Q, any report of injury, illness, or any property damage. For LHE or rigging mishaps, notify the Contracting Officer as soon as practical but not more than 4 hours after mishap. The Contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. Immediate reporting is required for electrical mishaps, to include Arc Flash; shock; uncontrolled release of hazardous energy (includes electrical and non-electrical); load handling equipment or rigging; fall from height (any level other than same surface); and underwater diving. These mishaps must be investigated in depth to identify all causes and to recommend hazard control measures.

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 mishap.

#### 1.12.2 Accident Reports

- a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined in EM 385-1-1, to establish the root causes of the accident. Complete the applicable USACE Accident Report Form 3394, and provide the report to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide copies of any required or special forms.
- b. Near Misses: Report "Near Misses" to the GDA, using local mishap reporting procedures, within 24 hrs. The Contracting Officer will provide the Contractor the required forms. Near miss reports are considered positive and proactive Contractor safety management actions.
- c. Conduct an accident investigation for any load handling equipment accident (including rigging accidents) to establish the root causes of the accident. Complete the LHE Accident Report (Crane and Rigging Accident Report) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the Contracting Officer. The Contracting Officer will provide a blank copy of the accident report form.

#### 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

Provide a FORM 16-1 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, Section 16.H.03 using Form 16-2 Standard Pre-Lift Crane Plan/Checklist for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

## 1.13 HOT WORK

#### 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. A permit is required from the Explosives Safety Office for work in and around where explosives are processed, stored, or handled. A permit will not be issued until the criteria are met. Provide at least two 20-pound 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. Designate a Fire Watch for "Hot Work" done at this Installation. The Fire Watch must be trained in accordance with NFPA 51B and remain on-site for a minimum of one 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 fires, no matter how small, to the responsible Fire Division immediately.

#### 1.13.2 Work Around Flammable Materials

Obtain permit approval from a NFPA Certified Marine Chemist 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, Section 06.H

### 1.14 RADIATION SAFETY REQUIREMENTS

Submit License Certificates, employee training records, and Leak Test Reports for radiation materials and equipment to the Contracting Officer and Radiation Safety Office (RSO)for all specialized and licensed material and equipment proposed for use on the construction project (excludes portable machine sources of ionizing radiation including moisture density and X-Ray Fluorescence (XRF)). Maintain on-site records whenever licensed radiological materials or ionizing equipment are on government property.

Protect workers from radiation exposure in accordance with  $10\ {\rm CFR}\ 20$ , ensuring any personnel exposures are maintained As Low As Reasonably Achievable.

#### 1.14.1 Radiography Operation Planning Work Sheet

Submit a Gamma and X-Ray Radiography Operation Planning Work Sheet to Contracting Officer 14 days prior to commencement of operations involving radioactive materials or radiation generating devices. For portable machine sources of ionizing radiation, including moisture density and XRF, use and submit the Portable Gauge Operations Planning Worksheet instead. The Contracting Officer will review the submitted worksheet and provide questions and comments.

Contractors must use primary dosimeters process by a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory.

#### 1.14.2 Site Access and Security

Coordinate site access and security requirements with the Contracting Officer for all radiological materials and equipment containing ionizing radiation that are proposed for use on a government facility. For gamma radiography materials and equipment, a Government escort is required for any travels on the Installation. The Government authorized representative will meet the Contractor at a designated location outside the Installation, ensure safety of the materials being transported, and will escort the Contractor for gamma sources onto the Installation, to the job site, and off the Installation. For portable machine sources of ionizing radiation, including moisture density and XRF, the Government authorized representative will meet the Contractor at the job site.

Provide a copy of all calibration records, and utilization records for radiological operations performed on the site.

1.14.3 Loss or Release and Unplanned Personnel Exposure

Loss or release of radioactive materials, and unplanned personnel exposures must be reported immediately to the Contracting Officer, RSO, and Base Security Department Emergency Number.

### 1.14.4 Site Demarcation and Barricade

Properly demark and barricade an area surrounding radiological operations to preclude personnel entrance, in accordance with EM 385-1-1, Nuclear Regulatory Commission, and Applicable State regulations and license requirements, and in accordance with requirements established in the accepted Radiography Operation Planning Work Sheet.

Do not close or obstruct streets, walks, and other facilities occupied and used by the Government without written permission from the Contracting Officer.

## 1.14.5 Security of Material and Equipment

Properly secure the radiological material and ionizing radiation equipment at all times, including keeping the devices in a properly marked and locked container, and secondarily locking the container to a secure point in the Contractor's vehicle or other approved storage location during transportation and while not in use. While in use, maintain a continuous visual observation on the radiological material and ionizing radiation equipment. In instances where radiography is scheduled near or adjacent to buildings or areas having limited access or one-way doors, make no assumptions as to building occupancy. Where necessary, the Contracting Officer will direct the Contractor to conduct an actual building entry, search, and alert. Where removal of personnel from such a building cannot be accomplished and it is otherwise safe to proceed with the radiography, position a fully instructed employee inside the building or area to prevent exiting while external radiographic operations are in process.

#### 1.14.6 Transportation of Material

Comply with 49 CFR 173 for Transportation of Regulated Amounts of Radioactive Material. Notify Local Fire authorities and the site Radiation Safety officer (RSO) of any Radioactive Material use.

#### 1.14.7 Schedule for Exposure or Unshielding

Actual exposure of the radiographic film or unshielding the source must not be initiated until after 5 p.m. on weekdays.

#### 1.14.8 Transmitter Requirements

Adhere to the base policy concerning the use of transmitters, such as radios and cell phones. Obey Emissions control (EMCON) restrictions.

#### 1.15 CONFINED SPACE ENTRY REQUIREMENTS

Confined space entry must comply with Section 34 of EM 385-1-1, OSHA 29 CFR 1926, OSHA 29 CFR 1910, OSHA 29 CFR 1910.146, and OSHA Directive CPL 2.100. Any potential for a hazard in the confined space requires a permit system to be used.

#### 1.15.1 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. Comply with EM 385-1-1, Section 34 for entry procedures. Hazards pertaining to the space must be reviewed with each employee during review of the AHA.

## 1.15.2 Forced Air Ventilation

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.

## 1.15.3 Sewer Wet Wells

Sewer wet wells require continuous atmosphere monitoring with audible

alarm for toxic gas detection.

1.15.4 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.

1.16 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.
- c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

Not used.

- 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 State 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. Hard Hat
- b. Long Pants
- c. Appropriate Safety Shoes
- 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. An employee check-in/check-out communication procedure must be developed to ensure employee safety.

## 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 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) prior to excepted items of radioactive material and devices being brought on base.

#### 3.1.3 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 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 Government 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 pursuant to FAR 52.243-4 "Changes" and FAR 52.236-2 "Differing Site Conditions".

## 3.2 UTILITY OUTAGE REQUIREMENTS

Apply for utility outages at least 15 days in advance. 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, Section 11.A.02 (Isolation). Some examples of energy isolation devices and procedures are highlighted in EM 385-1-1, Section 12.D. In accordance with EM 385-1-1, Section 12.A.01, 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 HECP and HEC procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with EM 385-1-1, Section 11.A.02 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

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, Section 12.A. This meeting must include the Prime Contractor, the Prime and subcontractors performing the work, the Contracting Officer, and the Installation 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, Section 12.C. 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 HECP in accordance with EM 385-1-1 Section 12, 29 CFR 1910.333, 29 CFR 1915.89, ASSP A10.44, NFPA 70E, and paragraph "Hazardous Energy Control Program (HECP)".

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, Section 12.A.02. 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, Sections 05.I and 11.B. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with EM 385-1-1, Section 12.E.06.

#### 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, Section 12.E.08, 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 ASSP Z359.2 and EM 385-1-1, Sections 21.A and 21.D.

## 3.5.1 Training

Institute a fall protection training program. As part of the Fall Protection Program, provide training for each employee who might be exposed to fall hazards and using personal fall protection equipment. Provide training by a competent person for fall protection in accordance with EM 385-1-1, Section 21.C. Document training and practical application of the competent person in accordance with EM 385-1-1, Section 21.C.04 and ASSP Z359.2 in the AHA.

#### 3.5.2 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, Section 21.

Provide personal fall protection equipment, systems, subsystems, and components that comply with EM 385-1-1 Section 21.I, 29 CFR 1926.500 Subpart M,ASSP Z359.0, ASSP Z359.1, ASSP Z359.2, ASSP Z359.3, ASSP Z359.4, ASSP Z359.6, ASSP Z359.7, ASSP Z359.11, ASSP Z359.12, ASSP Z359.13, ASSP Z359.14, ASSP Z359.15, ASSP Z359.16 and ASSP Z359.18.

## 3.5.2.1 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, Sections 21.0 through 21.0.06. 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.

#### 3.5.2.2 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 carabiners 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 3,600 lbs 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 6 feet, 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. All full body harnesses must be equipped 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, Section 21.I.06.

3.5.3 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:
  - (1) For work within 6 feet from unprotected edge of a roof having a slope less than or equal to 4:12 (vertical to horizontal), protect personnel from falling by the use of conventional fall protection systems (personal fall arrest/restraint systems, guardrails, or safety nets) in accordance with EM 385-1-1, Section 21 and 29 CFR 1926.500. A safety monitoring system is not adequate fall protection and is not authorized.
  - (2) For work greater than 6 feet from the unprotected roof edge, addition to the use of conventional fall protection systems the use of a warning line system is also permitted, in accordance with 29 CFR 1926.500 and EM 385-1-1, Section 21.L.
- b. Steep-Sloped Roofs: Work on a roof having a slope greater than 4:12 (vertical to horizontal) requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also applies to residential or housing type construction.
- 3.5.4 Horizontal Lifelines (HLL)

Provide HLL in accordance with EM 385-1-1, Section 21.I.08.d.2. Commercially manufactured horizontal lifelines (HLL) must be designed, installed, certified and used, under the supervision of a qualified person, for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500). The competent person for fall protection may (if deemed appropriate by the qualified person) supervise the assembly, disassembly, use and inspection of the HLL system under the direction of the qualified person. Locally manufactured HLLs are not acceptable unless they are custom designed for limited or site specific applications by a Registered Professional Engineer who is qualified in designing HLL systems.

3.5.5 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with EM 385-1-1, Section 21.F.01 and 29 CFR 1926 Subpart M.

3.5.6 Rescue and Evacuation Plan and Procedures

When personal fall arrest systems are used, 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 or assisted-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). The plan must comply with the requirements of EM 385-1-1, ASSP Z359.2, and ASSP Z359.4.

- 3.6 WORK PLATFORMS
- 3.6.1 Scaffolding

Provide employees with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Comply with the following requirements:

- a. Scaffold platforms greater than 20 feet in height must be accessed by use of a scaffold stair system.
- b. Ladders commonly provided by scaffold system manufacturers are prohibited for accessing scaffold platforms greater than 20 feet maximum in height.
- c. An adequate gate is required.
- d. Employees performing scaffold erection and dismantling must be qualified.
- e. Scaffold must be capable of supporting at least four times the maximum intended load, and provide appropriate fall protection as delineated in the accepted fall protection and prevention plan.
- f. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.
- g. Special care must be given to ensure scaffold systems are not overloaded.
- h. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited. The first tie-in must be at the height equal to 4 times the width of the smallest dimension of the scaffold base.
- i. Scaffolding other than suspended types must bear on base plates upon wood mudsills (2 in x 10 in x 8 in minimum) or other adequate firm foundation.
- j. Scaffold or work platform erectors must have fall protection during the erection and dismantling of scaffolding or work platforms that are more than 6 feet.
- belineate fall protection requirements when working above 6 feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.
- 3.6.2 Elevated Aerial Work Platforms (AWPs)

Workers must be anchored to the basket or bucket in accordance with manufacturer's specifications and instructions (anchoring to the boom may only be used when allowed by the manufacturer and permitted by the CP). Lanyards used must be sufficiently short to prohibit worker from climbing out of basket. The climbing of rails is prohibited. Lanyards with built-in shock absorbers are acceptable. Self-retracting devices are not acceptable. Tying off to an adjacent pole or structure is not permitted unless a safe device for 100 percent tie-off is used for the transfer.

Use of AWPs must be operated, inspected, and maintained as specified in the operating manual for the equipment and delineated in the AHA. Operators of AWPs must be designated as qualified operators by the Prime Contractor. Maintain proof of qualifications on site for review and include in the AHA.

## 3.7 EQUIPMENT

- 3.7.1 Material Handling Equipment (MHE)
  - a. Material handling equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions. Material handling equipment fitted with personnel work platform attachments are prohibited from traveling or positioning while personnel are working on the platform.
  - b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Material Handling Equipment Operators must be trained in accordance with OSHA 29 CFR 1910, Subpart N.
  - c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.
- 3.7.2 Load Handling Equipment (LHE)

The following requirements apply. In exception, these requirements do not apply to commercial truck mounted and articulating boom cranes used solely to deliver material and supplies (not prefabricated components, structural steel, or components of a systems-engineered metal building) where the lift consists of moving materials and supplies from a truck or trailer to the ground; to cranes installed on mechanics trucks that are used solely in the repair of shore-based equipment; to crane that enter the activity but are not used for lifting; nor to other machines not used to lift loads suspended by rigging equipment. However, LHE accidents occurring during such operations must be reported.

- a. Equip cranes and derricks as specified in EM 385-1-1, Section 16.
- b. Notify the Contracting Officer 15 working days in advance of any LHE entering the activity, in accordance with EM 385-1-1, Section 16.A.02, so that necessary quality assurance spot checks can be coordinated. Contractor's operator must remain with the crane during the spot check. Rigging gear must comply with OSHA safety standards and ASME B30.9.
- c. Comply with the LHE 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.
- d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower

cranes, ASME B30.8 for floating cranes and floating derricks, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices and ASME B30.26 for rigging hardware.

- e. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of EM 385-1-1 Section 11, and ASME B30.5 or ASME B30.22 as applicable.
- f. Do not use 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. Additionally, submit a specific AHA for this work to the Contracting Officer. Ensure the activity and AHA are thoroughly reviewed by all involved personnel.
- g. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.
- h. All employees must keep clear of loads about to be lifted and of suspended loads, except for employees required to handle the load.
- i. Use cribbing when performing lifts on outriggers.
- j. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- k. A physical barricade must be positioned to prevent personnel access where accessible areas of the LHE's rotating superstructure poses a risk of striking, pinching or crushing personnel.
- Maintain inspection records in accordance by EM 385-1-1, Section 16.D, including shift, monthly, and annual inspections, the signature of the person performing the inspection, and the serial number or other identifier of the LHE that was inspected. Records must be available for review by the Contracting Officer.
- m. Maintain written reports of operational and load testing in accordance with EM 385-1-1, Section 16.F, listing the load test procedures used along with any repairs or alterations performed on the LHE. Reports must be available for review by the Contracting Officer.
- n. Certify that all LHE operators have been trained in proper use of all safety devices (e.g. anti-two block devices).
- o. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. At wind speeds greater than 20 mph, the operator, rigger and lift supervisor must cease all crane operations, evaluate conditions and determine if the lift may proceed. Base the determination to proceed or not on wind calculations per the manufacturer and a reduction in LHE rated capacity if applicable. Include this maximum wind speed determination as part of the activity hazard analysis plan for that operation.
- 3.7.3 Machinery and Mechanized Equipment
  - a. Proof of qualifications for operator must be kept on the project site for review.

- b. Manufacture specifications or owner's manual for the equipment must be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA or USACE EM 385-1-1. Incorporate such additional safety precautions or requirements into the AHAs.
- 3.7.4 Base Mounted Drum Hoists
  - a. Operation of base mounted drum hoists must comply with EM 385-1-1 and ASSP A10.22.
  - b. Rigging gear must comply with applicable ASME/OSHA standards
  - c. When used on telecommunication towers, base mounted drum hoists must comply with TIA-1019, TIA-222, ASME B30.7, 29 CFR 1926.552, and 29 CFR 1926.553.
  - d. When used to hoist personnel, the AHA must include a written standard operating procedure. Operators must have a physical examination in accordance with EM 385-1-1 Section 16.B.05 and trained, at a minimum, in accordance with EM 385-1-1 Section 16.U and 16.T. The base mounted drum hoist must also comply with OSHA Instruction CPL 02-01-056 and ASME B30.23.
  - e. Material and personnel must not be hoisted simultaneously.
  - f. Personnel cage must be marked with the capacity (in number of persons) and load limit in pounds.
  - g. Construction equipment must not be used for hoisting material or personnel or with trolley/tag lines. Construction equipment may be used for towing and assisting with anchoring guy lines.
- 3.7.5 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.

## 3.8 EXCAVATIONS

Soil classification must be performed by a competent person in accordance with 29 CFR 1926 and EM 385-1-1.

## 3.8.1 Utility Locations

Provide a third party, independent, private utility locating company to positively identify underground utilities in the work area in addition to any station locating service and coordinated with the station utility department.

## 3.8.2 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within 3 feet of the underground system.

3.8.3 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces

Utilities located within and under concrete slabs or pier structures, bridges, parking areas, and the like, are extremely difficult to identify. Whenever contract work involves chipping, saw cutting, or core drilling through concrete, bituminous asphalt or other impervious surfaces, the existing utility location must be coordinated with station utility departments in addition to location and depth verification by a third party, independent, private locating company. The third party, independent, private locating company must locate utility depth by use of Ground Penetrating Radar (GPR), X-ray, bore scope, or ultrasound prior to the start of demolition and construction. 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

Perform electrical work in accordance with EM 385-1-1, Appendix A, Sections 11 and 12.

## 3.9.1 Conduct of Electrical Work

As delineated 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. 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 shoes, 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 1910.147.

## 3.9.2 Qualifications

Electrical work must be performed by QP personnel with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of national, state, 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 and local requirements applicable to where work is being performed.

#### 3.9.3 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.

#### 3.9.4 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.

Check grounding circuits to ensure that the circuit between the ground and a grounded power conductor has a resistance low enough to permit sufficient current flow to allow the fuse or circuit breaker to interrupt the current.

#### 3.9.5 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.

-- End of Section --

#### SECTION 01 42 00

## SOURCES FOR REFERENCE PUBLICATIONS 02/19

## PART 1 GENERAL

#### 1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g. ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

## 1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

> AACE INTERNATIONAL (AACE) 1265 Suncrest Towne Centre Drive Morgantown, WV 26505-1876 USA Ph: 304-296-8444 Fax: 304-291-5728 Internet: <u>https://web.aacei.org/</u>

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE) 1791 Tullie Circle, NE Atlanta, GA 30329 Ph: 404-636-8400 or 800-527-4723 Fax: 404-321-5478 E-mail: ashrae@ashrae.org Internet: <u>https://www.ashrae.org/</u>

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) Two Park Avenue New York, NY 10016-5990 Ph: 800-843-2763 Fax: 973-882-1717 E-mail: customercare@asme.org Internet: https://www.asme.org/

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP) 520 N. Northwest Highway Park Ridge, IL 60068 Ph: 847-699-2929 E-mail: customerservice@assp.org Internet: https://www.assp.org/ AMERICAN WATER WORKS ASSOCIATION (AWWA) 6666 W. Quincy Avenue Denver, CO 80235 USA Ph: 303-794-7711 or 800-926-7337 Fax: 303-347-0804 Internet: https://www.awwa.org/

ASTM INTERNATIONAL (ASTM) 100 Barr Harbor Drive, P.O. Box C700 West Conshohocken, PA 19428-2959 Ph: 610-832-9500 Fax: 610-832-9555 E-mail: service@astm.org Internet: https://www.astm.org/

COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) (WHITE HOUSE) 722 Jackson Place Washington DC 20506 Internet: https://www.whitehouse.gov/administration/eop/ceq

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR) USC Foundation Office Research Annex 219 Los Angeles, CA 90089-7700 Ph: 866-545-6340 Fax: 213-740-8399 E-mail: fccchr@usc.edu Internet: https://fccchr.usc.edu/

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
445 and 501 Hoes Lane
Piscataway, NJ 08854-4141
Ph: 732-981-0060 or 800-701-4333
Fax: 732-981-9667
E-mail: onlinesupport@ieee.org
Internet: https://www.ieee.org/

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)
ISO Central Secretariat
BIBC II
Chemin de Blandonnet 8
CP 401 - 1214 Vernier, Geneva
Switzerland
Ph: 41-22-749-01-11
E-mail: central@iso.ch
Internet: <u>https://www.iso.org</u>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1 Batterymarch Park Quincy, MA 02169-7471 Ph: 800-344-3555 Fax: 800-593-6372 Internet: https://www.nfpa.org
SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA) 4201 Lafayette Center Drive Chantilly, VA 20151-1219 703-803-2980 Ph: Fax: 703-803-3732 Internet: <u>https://www.smacna.org/</u> TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 1320 North Courthouse Rosd, Suite 200 Arlington, VA 22201 Ph: 703-907-7700 Fax: 703-907-7727 E-mail: marketing@tiaonline.org Internet: https://www.tiaonline.org/ U.S. ARMY (DA) Army Publishing Directorate 9301 Chapek Rd., Bldg 1458 Fort Belvoir, VA 22060-5447 Ph: 703-614-3727 E-mail: usarmy.pentagon.hqda-apd.mbx.customer-service@mail.mil Internet: https://armypubs.army.mil/ U.S. ARMY CORPS OF ENGINEERS (USACE) CRD-C DOCUMENTS available on Internet: http://www.wbdg.org/ffc/army-coe/standards Order Other Documents from: Official Publications of the Headquarters, USACE E-mail: hqpublications@usace.army.mil Internet: http://www.publications.usace.army.mil/ or https://www.hnc.usace.army.mil/Missions/Engineering-Directorate/TECHINFO/ U.S. DEPARTMENT OF AGRICULTURE (USDA) Order AMS Publications from: AGRICULTURAL MARKETING SERVICE (AMS) Seed Regulatory and Testing Branch 801 Summit Crossing Place, Suite C Gastonia, NC 28054-2193 Ph: 704-810-8884 E-mail: PA@ams.usda.gov Internet: https://www.ams.usda.gov/ Order Other Publications from: USDA Rural Development Rural Utilities Service STOP 1510, Rm 5135 1400 Independence Avenue SW Washington, DC 20250-1510 Phone: (202) 720-9540 Internet: https://www.rd.usda.gov/about-rd/agencies/rural-utilities-service U.S. DEPARTMENT OF DEFENSE (DOD) Order DOD Documents from:

Order DOD Documents from: Room 3A750-The Pentagon 1400 Defense Pentagon Washington, DC 20301-1400 Ph: 703-571-3343

Fax: 215-697-1462 E-mail: customerservice@ntis.gov Internet: https://www.ntis.gov/ Obtain Military Specifications, Standards and Related Publications from: Acquisition Streamlining and Standardization Information System (ASSIST) Department of Defense Single Stock Point (DODSSP) Document Automation and Production Service (DAPS) Building 4/D 700 Robbins Avenue Philadelphia, PA 19111-5094 215-697-6396 - for account/password issues Ph: Internet: https://assist.dla.mil/online/start/; account registration required Obtain Unified Facilities Criteria (UFC) from: Whole Building Design Guide (WBDG) National Institute of Building Sciences (NIBS) 1090 Vermont Avenue NW, Suite 700 Washington, DC 20005 Ph: 202-289-7800 Fax: 202-289-1092 Internet: https://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc U.S. DEPARTMENT OF ENERGY (DOE) 1000 Independence Avenue Southwest Washington, D.C. 20585 Ph: 202-586-5000 Fax: 202-586-4403 E-mail: The.Secretary@hq.doe.gov Internet: https://www.energy.gov/ U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) 1200 Pennsylvania Avenue, N.W. Washington, DC 20004 202-564-4700 Ph: Internet: https://www.epa.gov --- Some EPA documents are available only from: National Technical Information Service (NTIS) 5301 Shawnee Road Alexandria, VA 22312 703-605-6060 or 1-800-363-2068 Ph: Fax: 703-605-6880 TDD: 703-487-4639 E-mail: info@ntis.gov Internet: https://www.ntis.gov/ U.S. FEDERAL AVIATION ADMINISTRATION (FAA) Order for sale documents from: Superintendent of Documents U.S. Government Publishing Office (GPO) 732 N. Capitol Street, NW Washington, DC 20401 Ph: 202-512-1800 or 866-512-1800 Bookstore: 202-512-0132 Internet: https://www.gpo.gov/ Order free documents from: U.S. Department of Transportation

Federal Aviation Administration 800 Independence Avenue, SW Washington, DC 20591 Ph: 866-835-5322 Internet: https://www.faa.gov/

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)
1200 New Jersey Ave., SE
Washington, DC 20590
Ph: 202-366-4000
E-mail: ExecSecretariat.FHWA@dot.gov
Internet: https://www.fhwa.dot.gov/
Order from:
Superintendent of Documents
U.S. Government Publishing Office (GPO)
732 N. Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800 or 866-512-1800
Bookstore: 202-512-0132
Internet: https://www.gpo.gov/

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA) 8601 Adelphi Road College Park, MD 20740-6001 Ph: 866-272-6272 Internet: https://www.archives.gov/ Order documents from: Superintendent of Documents U.S. Government Publishing Office (GPO) 732 N. Capitol Street, NW Washington, DC 20401 Ph: 202-512-1800 or 866-512-1800 Bookstore: 202-512-0132 Internet: https://www.gpo.gov/

- PART 2 PRODUCTS
  - Not used
- PART 3 EXECUTION

Not used

-- End of Section --

## SECTION 01 45 00

# QUALITY CONTROL 11/16

#### PART 1 GENERAL

#### 1.1 REFERENCES

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.

ASTM INTERNATIONAL (ASTM)

ASTM D3740	(2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	(2020) Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

U.S. ARMY CORPS OF ENGINEERS (USACE)

ER 1110-1-12 (2006; Change 1) Engineering and Design --Quality Management

#### 1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the applicable Bid Schedule item.

#### 1.3 SUBMITTALS

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

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G, RO

Additional Requirements for Design Quality Control (DQC) Plan; G, DO

SD-05 Design Data

Discipline-Specific Checklists

Design Quality Control

SD-06 Test Reports

Verification Statement

## PART 2 PRODUCTS

Not used.

# PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system covers all design and construction operations, both onsite and offsite, and be keyed to the proposed design and construction sequence. The project superintendent will be held responsible for the quality of work and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. In this context the highest level manager responsible for the overall construction activities at the site, including quality and production is the project superintendent. The project superintendent maintains a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer.

3.2 CONTRACTOR QUALITY CONTROL (CQC) PLAN

Submit no later than 15 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements FAR 52.246-12 Inspection of Construction. The Government will consider an interim plan for the first 30 days of operation. Design and construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work.

# 3.2.1 Content of the CQC Plan

Include, as a minimum, the following to cover all design and construction-operations, both onsite and offsite, including work by subcontractors designers of record, consultants, architect/engineers (AE), fabricators, suppliers and purchasing agents:

- a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified. Include a CQC System Manager that reports to the project superintendent.
- b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties,

authorities, and responsibilities will be issued by the CQC System Manager. Furnish copies of these letters to the Contracting Officer.

- d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, designers of record, consultants, architect engineers (AE), offsite fabricators, suppliers, and purchasing agents. These procedures must be in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.
- e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer are required to be used.)
- f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.
- g. Procedures for tracking design and construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.
- h. Reporting procedures, including proposed reporting formats.
- i. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and is identified by different trades or disciplines, or it is work by the same trade in a different environment. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.
- j. Coordinate scheduled work with Special Inspections required by UFGS Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections. Where the applicable Code issue by the International Code Council (ICC) calls for inspections by the Building Official, the Contractor must include the inspections in the Quality Control Plan and must perform the inspections required by the applicable ICC. The Contractor must perform these inspections using independent qualified inspectors. Include the Special Inspection Plan requirements in the QC Plan.

#### 3.2.2 Additional Requirements for Design Quality Control (DQC) Plan

The following additional requirements apply to the Design Quality Control (DQC) plan:

a. Submit and maintain a Design Quality Control (DQC) Plan as an effective quality control program which assures that all services required by this contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, all documents must be technically reviewed by competent, independent reviewers identified in the DQC Plan. The same element that produced the product may not perform the independent technical review (ITR). Correct errors and deficiencies in the design documents

prior to submitting them to the Government.

- b. Include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project design tasks within the specific Contract period. This should be at a detailed level of scheduling sufficient to identify all major design tasks, including those that control the flow of work. Include review and correction periods associated with each item. This should be a forward planning as well as a project monitoring tool. The schedule reflects calendar days and not dates for each activity. If the schedule is changed, submit a revised schedule reflecting the change within 7 calendar days. Include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. Submit at each design phase as part of the project documentation these completed discipline-specific checklists. ER 1110-1-12 provides some useful information in developing checklists.
- c. Implement the DQC Plan by a Design Quality Control Manager who has the responsibility of being cognizant of and assuring that all documents on the project have been coordinated. This individual must be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. Notify the Contracting Officer, in writing, of the name of the individual, and the name of an alternate person assigned to the position.

The Contracting Officer will notify the Contractor in writing of the acceptance of the DQC Plan. After acceptance, any changes proposed by the Contractor are subject to the acceptance of the Contracting Officer.

#### 3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of design and construction. Acceptance is conditional and will be predicated on satisfactory performance during the design and construction. The Government reserves the right to require the Contractor to make changes in the Contractor Quality Control(CQC) Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

# 3.2.4 Notification of Changes

After acceptance of the CQC Plan, notify the Contracting Officer in writing of any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

#### 3.3 COORDINATION MEETING

After the Postaward Conference, before start of design or construction, and prior to acceptance by the Government of the CQC Plan, meet with the Contracting Officer and discuss the Contractor's quality control system. Submit the CQC Plan a minimum of 15 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the CQC operations, design activities, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Government, signed by both the Contractor and the Contracting Officer and will become a part of the contract file. There can be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings or address deficiencies in the CQC system or procedures which can require corrective action by the Contractor.

#### 3.4 QUALITY CONTROL ORGANIZATION

#### 3.4.1 Personnel Requirements

The requirements for the CQC organization are a Safety and Health Manager, CQC System Manager, a Design Quality Manager, and sufficient number of additional qualified personnel to ensure safety and Contract compliance. The Safety and Health Manager reports directly to a senior project (or corporate) official independent from the CQC System Manager. The Safety and Health Manager will also serve as a member of the CQC Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required work is being performed properly will also be included as part of the CQC organization. The Contractor's CQC staff maintains a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance. The CQC staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional CQC organization. Promptly complete and furnish all letters, material submittals, shop drawing submittals, schedules and all other project documentation to the CQC organization. The CQC organization is responsible to maintain these documents and records at the site at all times, except as otherwise acceptable to the Contracting Officer.

#### 3.4.2 CQC System Manager

Identify as CQC System Manager an individual within the onsite work organization that is responsible for overall management of CQC and has the authority to act in all CQC matters for the Contractor. The CQC System Manager is required to be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 5 years construction experience on construction similar to this Contract. This CQC System Manager must be on the site during construction and employed by the prime Contractor. The CQC System Manager may have duties as project superintendent in addition to quality control. Identify in the plan an alternate to serve in the event of the CQC System Manager's absence. The requirements for the alternate are the same as the CQC System Manager.

#### 3.4.3 CQC Personnel

In addition to CQC personnel specified elsewhere in the contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager as identified in each Task Order. These individuals or specialized technical companies must be directly employed by the prime Contractor and must not be employed by a supplier or subcontractor on this project; be responsible to the CQC System Manager; be physically present at the construction site during work on the specialized peronnel's areas of responsibility; have the necessary education or experience in accordance with the experience matrix, below. These individuals may perform other duties but must be allowed sufficient time to perform their assigned quality control duties as described in the Quality Control Plan.

Experience Matrix				
Area	Qualifications			
Civil	Graduate Civil Engineer or Construction Manager with 2 years experience in the type of work being performed on this project or technician with 5 yrs related experience			
Mechanical	Graduate Mechanical Engineer with 2 yrs experience or person with 5 years of experience supervising mechanical features of work in the field with a construction company			
Electrical	Graduate Electrical Engineer with 2 years related experience or person 5 years of experience supervising electrical features of work in the field with a construction company			
Structural	Graduate Civil Engineer (with Structural Track or Focus) or Construction Manager with 2 years experience or person 5 years of experience supervising structural features of work in the field with a construction company			
Architectural	Graduate Architect with 2 years experience or person with 5 years related experience			
Environmental	Graduate Environmental Engineer with 3 years experience			
Submittals	Submittal Clerk with 1 year experience			
Occupied Family Housing	Person, customer relations type, coordinator experience			
Concrete, Pavements and Soils	Materials Technician with 2 years experience for the appropriate area			
Testing, Adjusting and Balancing (TAB) Personnel	Specialist must be a member of AABC or an experienced technician of the firm certified by the NEBB			
Design Quality Control Manager	Registered Architect or Professional Engineer			

# 3.4.4 Additional Requirement

In addition to the above experience and education requirements, the

Contractor Quality Control(CQC) System Manager and Alternate CQC System Manager are required to have completed the Construction Quality Management (CQM) for Contractors course. If the CQC System Manager does not have a current certification, obtain the CQM for Contractors course certification within 90 days of award. This course is periodically offered by the Naval Facilities Engineering Command and the Army Corps of Engineers. Contact the Contracting Officer for information on the next scheduled class.

The Construction Quality Management Training certificate expires after 5 years. If the CQC System Manager's certificate has expired, retake the course to remain current.

# 3.4.5 Organizational Changes

Maintain the CQC staff at full strength at all times. When it is necessary to make changes to the CQC staff, revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

#### 3.5 SUBMITTALS AND DELIVERABLES

Submittals, if needed, have to comply with the requirements in Section 01 33 00SUBMITTAL PROCEDURES. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the contract requirements. When Section 01 91 00.15 10 TOTAL BUILDING COMMISSIONING is included in a Task Order, the submittals required by that section must be coordinated with Section 01 33 00 SUBMITTAL PROCEDURES to ensure adequate time is allowed for each type of submittal required.

# 3.6 CONTROL

CQC is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. At least three phases of control are required to be conducted by the CQC System Manager for each definable feature of the construction work as follows:

# 3.6.1 Preparatory Phase

This phase is performed prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. This phase includes:

- a. A review of each paragraph of applicable specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the work.
- b. Review of the Contract drawings.
- c. Check to assure that all materials and equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the Contract.

- f. Examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. Review of the appropriate activity hazard analysis to assure safety requirements are met.
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. Check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. Notify the Government at least 48 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. Document the results of the preparatory phase actions by separate minutes prepared by the CQC System Manager and attach to the daily CQC report. Instruct applicable workers as to the level of workmanship required to meet contract specifications.

# 3.6.2 Initial Phase

This phase is accomplished at the beginning of a definable feature of work. Accomplish the following:

- a. Check work to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing are in compliance with the contract.
- c. Establish level of workmanship and verify that it meets the workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.
- f. Notify the Government at least 48 hours in advance of beginning the initial phase for definable feature of work. Prepare separate minutes of this phase by the CQC System Manager and attach to the daily CQC report. Indicate the exact location of initial phase for definable feature of work for future reference and comparison with follow-up phases.
- g. The initial phase for each definable feature of work must be repeated for each new crew to work onsite and when specified quality standards are not being met.

# 3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. Record the checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

#### 3.6.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same definable features of work if: the quality of on-going work is unacceptable; if there are changes in the applicable CQC staff, onsite production supervision or work crew; if work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

#### 3.7 TESTS

# 3.7.1 Testing Procedure

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. Perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.
- e. Record results of all tests taken, both passing and failing on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If approved by the Contracting Officer, actual test reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related work performed and disapproval of the test facility for this Contract.

#### 3.7.2 Testing Laboratories

All testing laboratories must be validated by the USACE Material Testing Center (MTC) for the tests to be performed. Information on the USACE MTC with web-links to both a list of validated testing laboratories and for the laboratory inspection request for can be found at: https://mtc.erdc.dren.mil/.

# 3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel is required to meet criteria detailed in ASTM D3740 and ASTM E329.

#### 3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

#### 3.7.3 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

# 3.8 COMPLETION INSPECTION

#### 3.8.1 Punch-Out Inspection

Conduct an inspection of the work by the CQC System Manager near the end of the work, or any increment of the work established by a time stated in FAR 52.211-10 Commencement, Prosecution, and Completion of Work, or by the specifications. Prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications, as required by paragraph DOCUMENTATION. Within the list of deficiencies, include the estimated date by which the deficiencies will be corrected. Make a second inspection the CQC System Manager or staff to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

# 3.8.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph need to be accomplished within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion dates.

#### 3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting

Officer's Representative is required to be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands can also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with FAR 52.246-12 "Inspection of Construction".

# 3.9 DOCUMENTATION

#### 3.9.1 Quality Control Activities

Maintain current records providing factual evidence that required quality control activities and tests have been performed. Include in these records the work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

- a. The name and area of responsibility of the Contractor/Subcontractor.
- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and control activities performed with results and references to specifications/drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and specifications.
- j. Provide documentation of design quality control activities. For independent design reviews, provide, as a minimum, identification of the Independent Technical Review (ITR) team, the ITR review comments, responses and the record of resolution of the comments.

# 3.9.2 Verification Statement

Indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the work and workmanship comply with the Contract. Furnish the original and one copy of these records in report form to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, prepare and submit one report for every 7 days of no work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the Contractor Quality Control(CQC) System Manager. Include copies of test reports and copies of reports prepared by all subordinate quality control personnel within the CQC System Manager Report.

# 3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. Take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer can issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

# SECTION 01 45 00.15

#### RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM) 11/16

#### PART 1 GENERAL

#### 1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

#### 1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without any direct compensation other than the payment received for contract items.

#### 1.3 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract. The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

Administration Finances Quality Control Submittal Monitoring Scheduling Closeout Import/Export of Data

#### 1.3.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible. Some correspondence, including pay requests and payrolls, are also to be provided in paper format with original signatures. Paper documents will govern, in the event of discrepancy with the electronic version.

#### 1.3.2 Other Factors

Other portions of this document have a direct relationship to the reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under

Fixed-Priced Construction Contracts; Section 01 32 01 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL.

#### 1.4 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website (<u>https://rms.usace.army.mil</u>). The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

#### 1.5 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will generally be related to submittal reviews, correspondence status, and Quality Assurance(QA)comments, as well as other miscellaneous administrative information.

#### 1.6 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFI's, schedule updates and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following items:

#### 1.6.1 Administration

#### 1.6.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

# 1.6.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within 7 calendar days of receiving access to the contract in RMS or within 7 calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor is listed separately for each trade to be performed.

## 1.6.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters are numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with

"C" or "RFP".

#### 1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

#### 1.6.1.5 Reports

Track the status of the project utilizing the reports available in RMS. The value of these reports is reflective of the quality of the data input. These reports include the Progress Payment Request worksheet, Quality Control (QC) comments, Submittal Register Status, and Three-Phase Control worksheets.

#### 1.6.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response.

## 1.6.2 Finances

#### 1.6.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule. The sum of pay activities equals the total contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN equals the amount of each CLIN.

# 1.6.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data either electronically or by hard copy. Unless waived by the Contracting Officer, a signed paper copy of the approved payment certification and request is also required and will govern in the event of discrepancy with the electronic version.

## 1.6.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Insure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments of same within 7 calendar days of Government acceptance of the CQC Plan.

#### 1.6.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated

and entered into the RMS QC Daily Report. Any supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports must be finalized and signed in RMS within 24 hours after the date covered by the report. Provide the Government a printed signed copy of the QC Daily Report, unless waived by the Contracting Officer.

1.6.3.2 Deficiency Tracking.

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.6.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS. Worksheets for the three-phase control meetings are generated within RMS.

1.6.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.6.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. The Contractor must monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.6.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work may be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.6.3.7 Activity Hazard Analysis

Import activity hazard analysis electronic document files into the RMS QC Module utilizing the document package manager.

1.6.4 Submittal Management

Enter all current submittal register data and information into RMS within 7 calendar days of receiving access to the contract in RMS. The information shown on the submittal register following Section 01 33 00 SUBMITTAL PROCEDURES will already be entered into the RMS database when access is granted. Group electronic submittal documents into transmittal packages to send to the Government, except very large electronic files, samples, spare parts, mock ups, color boards, or where hard copies are specifically required. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the contract. Submit hard copies of all submittals unless waived by the Contracting Officer.

# 1.6.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01 PROJECT SCHEDULE.

# 1.6.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

#### 1.7 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

# 1.8 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within 7 calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

# SECTION 01 50 00

# TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS 05/18

PART 1 GENERAL

1.1 REFERENCES

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.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511 (2017) Reduced-Pressure Principle Backflow Prevention Assembly

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)

FCCCHR List (continuously updated) List of Approved Backflow Prevention Assemblies

FCCCHR Manual (10th Edition) Manual of Cross-Connection Control

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2019)	; TIA	19	9-1;	TIA	19-2;	TIA	19-3;	ΤJ	[A]
	19-4;	ERTA	1	2019	9) N	ational	. Ele	ectric	al	Code

NFPA 241 (2019) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2014) Safety and Health Requirements Manual

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1 (2015; Rev L) Obstruction Marking and Lighting

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD (2015) Manual on Uniform Traffic Control Devices

# 1.2 SUBMITTALS

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

Construction Site Plan; G, RO

Traffic Control Plan; G, RO

Haul Road Plan; G, RO

Contractor Computer Cybersecurity Compliance Statements; G, RO

Contractor Temporary Network Cybersecurity Compliance Statements; G, RO

SD-06 Test Reports

Backflow Preventer Tests

SD-07 Certificates

Backflow Tester Certification

Backflow Preventers Certificate of Full Approval

#### 1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit a site plan showing the locations and dimensions of temporary facilities (including layouts and details, equipment and material storage area (onsite and offsite), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

#### 1.4 BACKFLOW PREVENTERS CERTIFICATE

Certificate of Full Approval from FCCCHR List, University of Southern California, attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval will not be acceptable.

#### 1.4.1 Backflow Tester Certificate

Prior to testing, submit to the Contracting Officer certification issued by the State or local regulatory agency attesting that the backflow tester has successfully completed a certification course sponsored by the regulatory agency. Tester must not be affiliated with any company participating in any other phase of this Contract.

# 1.4.2 Backflow Prevention Training Certificate

Submit a certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations. The certificate must be current.

# 1.5 DOD CONDITION OF READINESS (COR)

DOD will set the Condition of Readiness (COR) based on the weather forecast for sustained winds 50 knots (60mph or 95 km/hr) or greater. Contact the Contracting Officer for the current COR setting.

Monitor weather conditions a minimum of twice a day and take appropriate actions according to the aproved Emergency Plan in the accepted Accident Prevention Plan, EM 385-1-1 Section 01 Emergency Planning and the instructions below.

Unless otherwise directed by the Contracting Officer, comply with:

- a. Condition FOUR (Sustained winds of 50 knots or greater expected within 72 hours): Normal daily jobsite cleanup and good housekeeping practices. Collect and store in piles or containers scrap lumber, waste material, and rubbish for removal and disposal at the close of each work day. Maintain the construction site including storage areas, free of accumulation of debris. Stack form lumber in neat piles less than 4 feet high. Remove all debris, trash, or objects that could become missile hazards.
- b. Condition THREE (Sustained winds of 50 knots or greater expected within 48 hours): Maintain "Condition FOUR" requirements and commence securing operations necessary for "Condition ONE" which cannot be completed within 18 hours. Cease all routine activities which might interfere with securing operations. Commence securing and stow all gear and portable equipment. Make preparations for securing buildings. Review requirements pertaining to "Condition TWO" and continue action as necessary to attain "Condition THREE" readiness.
- c. Condition TWO (Sustained winds of 50 knots or greater expected within 24 hours): Curtail or cease routine activities until securing operation is complete. Reinforce or remove form work and scaffolding. Secure machinery, tools, equipment, materials, or remove from the jobsite. Expend every effort to clear all missile hazards and loose equipment from general base areas.
- d. Condition ONE. (Sustained winds of 50 knots or greater expected within 12 hours): Secure the jobsite, and leave Government premises.

#### 1.6 CYBERSECURITY DURING CONSTRUCTION

{For Reference Only: This subpart (and its subparts) relates to AC-18, SA-3, CCI-00258.} Meet the following requirements throughout the construction process.

#### 1.6.1 Contractor Computer Equipment

Contractor owned computers may be used for construction. When used, contractor computers must meet the following requirements:

## 1.6.1.1 Operating System

The operating system must be an operating system currently supported by the manufacturer of the operating system. The operating system must be current on security patches and operating system manufacturer required updates.

# 1.6.1.2 Anti-Malware Software

The computer must run anti-malware software from a reputable software manufacturer. Anti-malware software must be a version currently supported by the software manufacturer, must be current on all patches and updates, and must use the latest definitions file. All computers used on this project must be scanned using the installed software at least once per day.

#### 1.6.1.3 Passwords and Passphrases

The passwords and passphrases for all computers must be changed from their default values. Passwords must be a minimum of eight characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

#### 1.6.1.4 Contractor Computer Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Computer Cybersecurity Compliance Statements for each company using contractor owned computers. Contractor Computer Cybersecurity Compliance Statements must use the template published at <a href="http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic">http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic</a> Each Statement must be signed by a cybersecurity representative for the relevant company.

# 1.6.2 Temporary IP Networks

Temporary contractor-installed IP networks may be used during construction. When used, temporary contractor-installed IP networks must meet the following requirements:

1.6.2.1 Network Boundaries and Connections

The network must not extend outside the project site and must not connect to any IP network other than IP networks provided under this project or Government furnished IP networks provided for this purpose. Any and all network access from outside the project site is prohibited.

1.6.3 Government Access to Network

Government personnel must be allowed to have complete and immediate access to the network at any time in order to verify compliance with this specification.

1.6.4 Temporary Wireless IP Networks

In addition to the other requirements on temporary IP networks, temporary wireless IP (WiFi) networks must not interfere with existing wireless network and must use WPA2 security. Network names (SSID) for wireless networks must be changed from their default values.

#### 1.6.5 Passwords and Passphrases

The passwords and passphrases for all network devices and network access must be changed from their default values. Passwords must be a minimum 8 characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

# 1.6.6 Contractor Temporary Network Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Temporary Network Cybersecurity Compliance Statements for each company implementing a temporary IP network. Contractor Temporary Network Cybersecurity Compliance Statements must use the template published at <u>http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic</u> Each Statement must be signed by a cybersecurity representative for the relevant company. If no temporary IP networks will be used, provide a single copy of the Statement indicating this.

#### PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

# 2.1.1 Bulletin Board

Within one calendar day of mobilization on site and prior to the commencement of work activities, provide a clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the Contract, Wage Rate Information poster, Safety and Health Information as required by EM 385-1-1 Section 01 and other information approved by the Contracting Officer. Coordinate these requirements with 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

# 2.1.2 Project Identification Signs

The requirements for the signs, their content, and location will be indicated in each task order. Erect signs within 15 days after receipt of the notice to proceed. Correct the data required by the safety sign daily, with light colored metallic or non-metallic numerals.

#### 2.1.3 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards according to the EM 385-1-1 Section 04. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of contruction hazards. Signs must require unauthorized persons to keep out of the construction site. Correct the data required by safety signs daily.

# 2.2 TEMPORARY TRAFFIC CONTROL

# 2.2.1 Haul Roads

Construct access and haul roads necessary for proper prosecution of the work in accordance with EM 385-1-1 Section 04. Construct with suitable grades and widths; avoid sharp curves, blind corners, and dangerous cross traffic. Submit haul road plan for approval. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and haul roads are subject to approval by the Contracting Officer. Lighting must be adequate to ensure full and clear visibility for full width of haul road and work areas during night work operations.

# 2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. Whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

# 2.3 FENCING

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. Specific fencing requirements are as described herein. All fencing will meet the requirements of EM 385-1-1.

#### 2.3.1 Polyethylene Mesh Safety Fencing

Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

#### 2.3.2 Chain Link Panel Fencing

Temporary panel fencing must be galvanized steel chain link panels 6 feet high. Multiple fencing panels may be linked together at the bases toform long spens as needed. Each panel base must be weighted down using sand bags or other suitable materials in order for the fencing to withstand anticipated winds while remaining upright. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

# 2.3.3 Post-Driven Chain Link Fencing

Temporary post-driven fencing must be galvanized chain link fencing 6 feet high supported by an tightly secured to galvanized steel posts driven below grade. Fence posts must be located on minimum 10 foot centers. Posts may be set in various sufaces such as sand, soil, ashpalt or concrete as necessary. Chain link fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection. Fencing and posts must be completely removed at the completion of construction and any surfaces disturbed or damaged must be restored to its original condition. Underground utilities must be located and identified prior to setting fence posts. Fence must be equipped with a lockable gate. Gate must remain locked when construction personnel are not present.

# 2.4 TEMPORARY WIRING

Provide temporary wiring in accordance with EM 385-1-1 Section 11, NFPA 241, and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

# 2.5 BACKFLOW PREVENTERS

Provide reduced pressure principle type conforming to the applicable requirements AWWA C511. Provide backflow preventers complete with 150 pound flanges or unions, bronze or brass mounted gate valve, strainer, and 304 stainless steel or bronze internal parts. The particular make, model/design, and size of backflow preventers to be installed must be included in the latest edition of the List of Approved Backflow Prevention Assemblies issued by the FCCCHR List and be accompanied by a Certificate of Full Approval from FCCCHR List. After installation conduct Backflow Preventer Tests and provide test reports verifying that the installation meets the FCCCHR Manual Standards.

# PART 3 EXECUTION

#### 3.1 EMPLOYEE PARKING

Construction contract employees will park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Employee parking must not interfere with existing and established parking requirements of the government installation.

#### 3.2 TEMPORARY BULLETIN BOARD

Locate the bulletin board at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer.

# 3.3 AVAILABILITY AND USE OF UTILITY SERVICES

# 3.3.1 Temporary Utilities

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

# 3.3.2 Payment for Utility Services

- a. The Government will make reasonably required utilities available from existing outlets and supplies. Unless otherwise provided in the Contract, the amount of each utility service consumed will be charged to or paid by the Contractor at prevailing rates charged to the Government or, where the utility is produced by the Government, at reasonable rates determined by the Contracting Officer. Carefully conserve any utilities furnished without charge.
- b. Reasonable quantities of utilities will be made available to the Contractor at rates established for each Task Order.
- c. The point at which the Government will deliver such utilities or services and the quantity available will be as indicated in each Task Order. Pay all costs incurred in connecting, converting, and transferring the utilities to the work. Make connections, provide meters, provide transformers,; and make disconnections. Do not tap into Installation fire hydrants.

#### 3.3.3 Meters and Temporary Connections

Provide and maintain necessary temporary connections, distribution lines,

and meter bases (Government will provide meters) required to measure the amount of each utility used for the purpose of determining charges. Notify the Contracting Officer, in writing, 5 working days before final electrical connection is desired so that a utilities contract can be established. The Government will provide a meter and make the final hot connection after inspection and approval of the Contractor's temporary wiring installation. Do not make the final electrical connection.

# 3.3.4 Advance Deposit

An advance deposit for utilities consisting of an estimated month's usage or a minimum of \$50 will be required. The last monthly bills for the fiscal year will normally be offset by the deposit and adjustments will be billed or returned as appropriate. Services to be rendered for the next fiscal year, beginning 1 October, will require a new deposit. The GOVernment will notify the Contractor of the due date for this deposit prior to the end of the current fiscal year.

# 3.3.5 Final Meter Reading

Before completion of the work and final acceptance of the work by the Government, notify the Contracting Officer, in writing, 5 working days before termination is desired. The Government will take a final meter reading, disconnect service, and remove the meters. Then remove all the temporary distribution lines, meter bases, and associated paraphernalia. Pay all outstanding utility bills before final acceptance of the work by the Government.

# 3.3.6 Sanitation

Provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer and periodically empty wastes into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into any municipal, district, or commercial sanitary sewer system. Penalties and fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences without nuisance. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

# 3.3.7 Telephone

Make arrangements and pay all costs for telephone facilities desired.

#### 3.3.8 Obstruction Lighting of Cranes

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level. Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

# 3.3.9 Fire Protection

Provide temporary fire protection equipment for the protection of personnel and property during construction. Remove debris and flammable

materials daily to minimize potential hazards.

- 3.4 TRAFFIC PROVISIONS
- 3.4.1 Maintenance of Traffic
  - a. Conduct operations in a manner that will not close thoroughfares nor interfere with traffic on railways or highways, except with written permission of the Contracting Officer at least 15 calendar days prior to the proposed modification date. Provide a Traffic Control Plan detailing the proposed controls to traffic movement for approval. The plan must be in accordance with State and local regulations and the MUTCD, Part VI. Make the notifications and obtain the permits required for modification to traffic movements outside the Installation's jurisdiction. Contractor may move oversized and slow-moving vehicles to the worksite provided requirements of the highway authority have been met.
  - b. Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic.
  - c. Provide, erect, and maintain, at contractors expense, lights, barriers, signals, passageways, detours, and other items, that may be required by the Life Safety Signage, overhead protection authority having jurisdiction.

# 3.4.2 Protection of Traffic

Maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Protect the traveling public from damage to person and property. Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of any damage to roads caused by construction operations.

3.4.3 Rush Hour Restrictions

Do not interfere with the peak traffic flows preceding and during normal operations without notification to and approval by the Contracting Officer.

3.4.4 Dust Control

Dust control methods and procedures must be approved by the Contracting Officer. Coordinate dust control methods with 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

- 3.5 CONTRACTOR'S TEMPORARY FACILITIES
- 3.5.1 Safety Systems

Protect the integrity of installed safety systems and personnel safety

devices. Obtain prior approval from Contracting Officer if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

# 3.5.2 Administrative Field Offices

Provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

#### 3.5.3 Storage Area

Construct a temporary 6 foot high chain link fence around trailers and materials. Include plastic strip inserts, colored brown, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of concrete bases, where soil conditions permit. Do not place or store trailers, materials, or equipment outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the installation boundaries. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on any given day. Do not stockpile materials outside the fence in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

# 3.5.4 Supplemental Storage Area

Upon request, and pending availability, the Contracting Officer will designate another or supplemental area for the use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but will be within the Installation boundaries. Maintain the area in an clean and orderly fashion and secure, if needed, to protect supplies and equipment. The Government will not provide utilitie to thsi area.

#### 3.5.5 Appearance of Trailers

Trailers which are rusted, have peeling paint, or are otherwise in need of repair will not be allowed on Installation property. Trailers must present a clean and neat exterior appearance and be in a state of good repair. Failure to maintain the temporary facilities will be sufficient reason to require their removal.

#### 3.5.6 Maintenance of Storage Area

Keep fencing in a state of good repair and proper alignment. If the Contractor elects to traverse grassed or unpaved areas, which are not established roadways, cover the grassed or unpaved areas with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.

#### 3.5.7 New Building

If a new building is constructed for the temporary project field office, it will be a minimum 12 feet in width, 16 feet in length and have a minimum of 7 feet headroom. Equip the building with approved electrical wiring, at least one double convenience outlet and the required switches and fuses to provide 110-120 volt power. Provide a work table with stool, desk with chair, two additional chairs, and one legal size file cabinet that can be locked. The building must be waterproof, supplied with a heater, have a minimum of two doors, electric lights, a telephone, a battery operated smoke detector alarm, a sufficient number of adjustable windows for adequate light and ventilation, and a supply of approved drinking water. Approved sanitary facilities must be furnished. Screen the windows and doors and provide the doors with dead bolt type locking devices or a padlock and heavy duty hasp bolted to the door. Door hinge pins will be non-removable. Arrange the windows to open and to be securely fastened from the inside. Protect glass panels in windows by bars or heavy mesh screens to prevent easy access. In warm weather, furnish air conditioning capable of maintaining the office at 50 percent relative humidity and a room temperature 20 degrees F below the outside temperature when the outside temperature is 95 degrees F. Any new building erected for a temporary field office must be maintained during the life of the contract. Unless otherwise directed by the Contracting Officer, remove the building from the site upon completion and acceptance of the work.

# 3.5.8 Security Provisions

Provide adequate outside security lighting at the temporary facilities. The Contractor will be responsible for the security of its own equipment.

# 3.5.9 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

#### 3.5.9.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the work when storms of lesser intensity pose a threat to the work or any nearby Government property.

# 3.6 GOVERNMENT FIELD OFFICE

The Government will indicate the requirements for a Resident Engineer's office in each Task Order.

# 3.7 PLANT COMMUNICATIONS

When the individual elements of the plant are located so that operation by

normal voice between these elements is not satisfactory, provde a satisfactory means of communication, such as telephone or other suitable devices, and make the communication sy stem available for use by Government personnel.

## 3.8 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. Maintain the safety fencing during the life of the contract and, upon completion and acceptance of the work, remove the fencing from the work site.

# 3.9 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store any salvageable materials resulting from demolition activities within the fenced area described above or at the supplemental storage area. Neatly stack stored materials not in trailers, whether new or salvaged.

#### 3.10 RESTORATION OF STORAGE AREA

Upon completion of each Task Order, remove the bulletin board, signs, barricades, haul roads, and any other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary.

-- End of Section --

# SECTION 01 57 19

# TEMPORARY ENVIRONMENTAL CONTROLS 11/15

PART 1 GENERAL

#### 1.1 REFERENCES

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.

U.S. ARMY (DA)

DA AR 200-1 (2007) Environmental Protection and Enhancement

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA SW-846	(Third Edition; Update IV) Test Methods
	for Evaluating Solid Waste:
	Physical/Chemical Methods

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

29	CFR 1910.120	Hazardous Waste Operations and Emergency Response
29	CFR 1910.1053	Respirable Crystalline Silica
29	CFR 1926.1153	Respirable Crystalline Silica
40	CFR 50	National Primary and Secondary Ambient Air Quality Standards
40	CFR 60	Standards of Performance for New Stationary Sources
40	CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40	CFR 64	Compliance Assurance Monitoring
40	CFR 112	Oil Pollution Prevention
40	CFR 152	Pesticide Registration and Classification Procedures
40	CFR 152 - 186	Pesticide Programs
40	CFR 241	Guidelines for Disposal of Solid Waste
40	CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40	CFR 258	Subtitle D Landfill Requirements

40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty Containers
40 CFR 262	Standards Applicable to Generators of Hazardous Waste
40 CFR 262.31	Standards Applicable to Generators of Hazardous Waste-Labeling
40 CFR 262.34	Standards Applicable to Generators of Hazardous Waste-Accumulation Time
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards for Universal Waste Management
40 CFR 273.2	Standards for Universal Waste Management - Batteries
40 CFR 273.3	Standards for Universal Waste Management - Pesticides
40 CFR 273.4	Standards for Universal Waste Management - Mercury Containing Equipment
40 CFR 273.5	Standards for Universal Waste Management - Lamps
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification

40 CFR 372	Toxic Chemical Release Reporting: Community Right-To-Know
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 172.101	Hazardous Material Regulation-Purpose and Use of Hazardous Material Table
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

# 1.2 DEFINITIONS

1.2.1 Class I and II Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act. A list of Class I ODS can be found on the EPA website at the following weblink. https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances.

Class II ODS is defined in Section 602(s) of The Clean Air Act. A list of Class II ODS can be found on the EPA website at the following weblink. https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances.

# 1.2.2 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the Contractor to execute work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated pesticide equipment rinse water.

1.2.3 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.2.4 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.2.5 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction.

The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

# 1.2.6 Hazardous Debris

As defined in paragraph SOLID WASTE, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261.

# 1.2.7 Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

Hazardous material is any material that: Is regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.120; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this section for "control" purposes. Such material includes ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

#### 1.2.8 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibit a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D.

# 1.2.9 Installation Pest Management Coordinator

Installation Pest Management Coordinator (IPMC) is the individual officially designated by the Installation Commander to oversee the Installation Pest Management Program and the Installation Pest Management Plan.

# 1.2.10 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" must occur. Comply with federal, state, and local laws and regulations.

#### 1.2.11 Municipal Separate Storm Sewer System (MS4) Permit

MS4 permits are those held by installations to obtain NPDES permit
coverage for their stormwater discharges.

## 1.2.12 National Pollutant Discharge Elimination System (NPDES)

The NPDES permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

#### 1.2.13 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

# 1.2.14 Pesticide

Pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant or desiccant.

# 1.2.15 Pesticide Treatment Plan

A plan for the prevention, monitoring, and control to eliminate pest infestation.

# 1.2.16 Pests

Pests are arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

# 1.2.17 Project Pesticide Coordinator

The Project Pesticide Coordinator (PPC) is an individual who resides at a Civil Works Project office and who is responsible overseeing of pesticide application on project grounds.

## 1.2.18 Regulated Waste

Regulated waste are solid wastes that have specific additional federal,

state, or local controls for handling, storage, or disposal.

## 1.2.19 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

# 1.2.20 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at construction sites may include:

## 1.2.20.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

## 1.2.20.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

#### 1.2.20.3 Material not regulated as solid waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

#### 1.2.20.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 263.

## 1.2.20.5 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, wiring, insulated/non-insulated copper wire cable, wire rope, and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with 40 CFR 261.7 may be included as recyclable if sold to a scrap metal company.

#### 1.2.20.6 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

## 1.2.20.7 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

#### 1.2.20.8 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

# 1.2.21 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, creeks or "waters of the United States". Surface discharges are discrete, identifiable sources and require a permit from the governing agency. Comply with federal, state, and local laws and regulations.

#### 1.2.22 Wastewater

Wastewater is the used water and solids from a community that flow to a treatment plant.

# 1.2.22.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

#### 1.2.23 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

#### 1.2.24 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that

under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2.25 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

## 1.3 SUBMITTALS

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

SD-01 Preconstruction Submittals

Preconstruction Survey

Solid Waste Management Permit; G, RO

Regulatory Notifications; G, RO

Environmental Protection Plan; G, RO

Dirt and Dust Control Plan; G, RO

Environmental Manager Qualifications; G, RO

SD-06 Test Reports

Laboratory Analysis

Solid Waste Disposal Report; G, RO

SD-07 Certificates

Employee Training Records; G, RO

Certificate of Competency

SD-11 Closeout Submittals

Waste Determination Documentation; G, RO

Disposal Documentation for Hazardous and Regulated Waste; G, RO

Assembled Employee Training Records; G, RO

Solid Waste Management Permit; G, RO

Project Solid Waste Disposal Documentation Report; G, RO

Hazardous Waste/Debris Management; G, RO

Regulatory Notifications; G, RO

Sales Documentation; G, RO

# 1.4 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the Contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

# 1.4.1 Conformance with the Environmental Management System

Perform work under this contract consistent with the policy and objectives identified in the installation's Environmental Management System (EMS). Perform work in a manner that conforms to objectives and targets of the environmental programs and operational controls identified by the EMS. Support Government personnel when environmental compliance and EMS audits are conducted by escorting auditors at the Project site, answering questions, and providing proof of records being maintained. Provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. In the event an EMS nonconformance or environmental noncompliance associated with the contracted services, tasks, or actions occurs, take corrective and preventative actions. In addition, employees must be aware of their roles and responsibilities under the installation EMS and of how these EMS roles and responsibilities affect work performed under the contract.

Coordinate with the installation's EMS coordinator to identify training needs associated with environmental aspects and the EMS, and arrange training or take other action to meet these needs. Provide training documentation to the Contracting Officer. The Installation Environmental Office will retain associated environmental compliance records. Make EMS Awareness training completion certificates available to Government auditors during EMS audits and include the certificates in the Employee Training Records. See paragraph EMPLOYEE TRAINING RECORDS.

## 1.5 QUALITY ASSURANCE

1.5.1 Preconstruction Survey and Protection of Features

This paragraph supplements the Contract Clause PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Prior to

start of any onsite construction activities, perform a Preconstruction Survey of the project site with the Contracting Officer, and take photographs showing existing environmental conditions in and adjacent to the site. Submit a report for the record. Include in the report a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the drawings as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of work and adjacent to the Contractor's assigned storage area and access route(s), as applicable. The Contractor and the Contracting Officer will sign this survey report upon mutual agreement regarding its accuracy and completeness. Protect those environmental features included in the survey report and any indicated on the drawings, regardless of interference that their preservation may cause to the work under the Contract.

# 1.5.2 Regulatory Notifications

Provide regulatory notification requirements in accordance with federal, state and local regulations. In cases where the Government will also provide public notification (such as stormwater permitting), coordinate with the Contracting Officer. Submit copies of regulatory notifications to the Contracting Officer at least 14 days prior to commencement of work activities. Typically, regulatory notifications must be provided for the following (this listing is not all-inclusive): demolition, renovation, NPDES defined site work, construction, removal or use of a permitted air emissions source, and remediation of controlled substances (asbestos, hazardous waste, lead paint).

#### 1.5.3 Environmental Brief

Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the installation; and types and quantities of wastes/wastewater that may be generated during the Contract. Discuss the results of the Preconstruction Survey at this time.

Prior to initiating any work on site, meet with the Contracting Officer and installation Environmental Office to discuss the proposed Environmental Protection Plan (EPP). Develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required permits, permit requirements (such as mitigation measures), and other measures to be taken.

# 1.5.4 Environmental Manager

Appoint in writing an Environmental Manager for the project site. The Environmental Manager is directly responsible for coordinating contractor compliance with federal, state, local, and installation requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental permits are obtained, maintained, and closed out; ensure compliance with Stormwater Program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out. Submit Environmental Manager Qualifications to the Contracting Officer.

# 1.5.5 Employee Training Records

Prepare and maintain employee training records throughout the term of the contract meeting applicable 40 CFR requirements. Provide Employee Training Records in the Environmental Records Binder. Submit these Assembled Employee Training Records to the Contracting Officer at the conclusion of the project, unless otherwise directed.

Train personnel to meet EPA and state requirements. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Contact additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, waters of the United States, and endangered species and their habitat that are known to be in the area. Suubmit copies of the Erosion and Sediment Control Inspector's qualifications or certifications, as required by each Task Order and in accordance with ection 01 33 00 SUBMITTAL PROCEDURES.

# 1.5.5.1 Pest Control Training

Trained personnel in pest control. Conduct a pest control meeting for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change. Include in the training and meeting agenda: methods of detecting and pest infestation; familiarization with statutory and contractual pest control standards; installation and care of devices, and instruments, if required, for monitoring purposes to ensure adequate and continuous pest control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of waters of the United States, and endangered species and their habitat that are known to be in the area. Provide a Certificate of Competency for the personnel who will be conducting the pesticide application and management of pest control.

#### 1.5.6 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with federal, state or local environmental laws or regulations, permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of work due to the fault or negligence of the Contractor allows for no adjustments to the contract for time extensions or equitable adjustments. In addition to a suspension of work, the Contracting Officer may use additional authorities under the contract or law..

# 1.6 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets from the installation's EMS into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. Submit the EPP within 15 days after notice to proceed and not less than 10 days before the preconstruction meeting. Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes, but is not limited to, the following elements:

1.6.1 General Overview and Purpose

#### 1.6.1.1 Descriptions

A brief description of each specific plan, required by environmental permit or elsewhere in this Contract, such as stormwater pollution prevention plan, solid waste management plan, wastewater management plan, and pesticide treatment plan.

# 1.6.1.2 Duties

The duties and level of authority assigned to the person(s) on the job site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

#### 1.6.1.3 Procedures

A copy of any standard or project-specific operating procedures that will be used to effectively manage and protect the environment on the project site.

## 1.6.1.4 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

# 1.6.1.5 Contact Information

Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

## 1.6.2 General Site Information

## 1.6.2.1 Drawings

Drawings showing locations of proposed temporary excavations or embankments for haul roads, stream crossings, jurisdictional wetlands, material storage areas, structures, sanitary facilities, storm drains and conveyances, and stockpiles of excess soil.

## 1.6.2.2 Work Area

Work area plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized work areas and methods to control runoff and to contain materials on site, and a traffic control plan.

## 1.6.2.3 Documentation

A letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.

#### 1.6.3 Management of Natural Resources

- a. Land resources
- b. Tree protection
- c. Replacement of damaged landscape features
- d. Temporary construction
- e. Stream crossings
- f. Fish and wildlife resources
- g. Wetland areas
- 1.6.4 Protection of Historical and Archaeological Resources
  - a. Objectives
  - b. Methods
- 1.6.5 Stormwater Management and Control
  - a. Ground cover
  - b. Erodible soils

- c. Temporary measures
  - (1) Structural Practices
  - (2) Temporary and permanent stabilization
- d. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

1.6.6 Protection of the Environment from Waste Derived from Contractor Operations

Control and disposal of solid and sanitary waste. Control and disposal of hazardous waste.

This item consist of the management procedures for hazardous waste to be generated. The elements of those procedures will coincide with the Installation Hazardous Waste Management Plan. The Contracting Officer will provide a copy of the Installation Hazardous Waste Management Plan. As a minimum, include the following:

- a. List of the types of hazardous wastes expected to be generated
- b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated
- c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications
- d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers)
- e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted)
- f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268 )
- g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar
- h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures
- i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.
- 1.6.7 Prevention of Releases to the Environment

Procedures to prevent releases to the environment

Notifications in the event of a release to the environment

# 1.6.8 Regulatory Notification and Permits

List what notifications and permit applications must be made. Some permits require up to 180 days to obtain. Demonstrate that those permits have been obtained or applied for by including copies of applicable environmental permits. The EPP will not be approved until the permits have been obtained.

## 1.6.9 Clean Air Act Compliance

#### 1.6.9.1 Haul Route

Submit truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust on Installation roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

# 1.6.9.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current installation permits and the impacts of the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Installation Environmental Office (Air Program Manager).

#### 1.6.9.3 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number, manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between emergency and non-emergency operation.

# 1.6.9.4 Refrigerants

Identify management practices to ensure that heating, ventilation, and air conditioning (HVAC) work involving refrigerants complies with 40 CFR 82 requirements. Technicians must be certified, maintain copies of certification on site, use certified equipment and log work that requires the addition or removal of refrigerant. Any refrigerant reclaimed is the property of the Government, coordinate with the Installation Environmental Office to determine the appropriate turn in location.

#### 1.6.9.5 Air Pollution-engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

# 1.6.9.6 Compliant Materials

Provide the Government a list of and SDSs for all hazardous materials

proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet installation permit requirements for emissions.

## 1.7 LICENSES AND PERMITS

Obtain licenses and permits required for each Task Order and in accordance with FAR 52.236-7 "Permits and Responsibilities". Notify the Government of all general use permitted equipment the Contractor plans to use on site. This paragraph supplements the Contractor's responsibility under FAR 52.236-7 "Permits and Responsibilities".

#### 1.8 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit at the completion of the project. Make separate parts within the binder that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this section.

#### 1.9 PESTICIDE DELIVERY, STORAGE, AND HANDLING

#### 1.9.1 Delivery and Storage

Deliver pesticides to the site in the original, unopened containers bearing legible labels indicating the EPA registration number and the manufacturer's registered uses. Store pesticides according to manufacturer's instructions and under lock and key when unattended.

## 1.9.2 Handling Requirements

Formulate, treat with, and dispose of pesticides and associated containers in accordance with label directions and use the clothing and personal protective equipment specified on the labeling for use during each phases of the application. Furnish SDSs for pesticide products.

# 1.10 SOLID WASTE MANAGEMENT PERMIT

Provide the Contracting Officer with written notification of the quantity of anticipated solid waste or debris that is anticipated or estimated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance from the receiving location or as applicable; submit one copy of the receiving location state and local Solid Waste Management Permit or license showing such agency's approval of the disposal plan before transporting wastes off Government property.

Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste.

## 1.11 FACILITY HAZARDOUS WASTE GENERATOR STATUS

Generator status will be determined in each Task Order. Meet the regulatory requirements of the generator designation for the work and comply with provisions of federal, state, and local regulatory

requirements regarding training and storage, handling, and disposal of construction derived wastes.

## PART 2 PRODUCTS

Not used.

## PART 3 EXECUTION

#### 3.1 PROTECTION OF NATURAL RESOURCES

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. Prior to the commencement of activities, consult with the Installation Environmental Office, regarding rare species or sensitive habitats that need to be protected. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility.

Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work that is consistent with the requirements of the Installation Environmental Office or as otherwise specified. Confine construction activities to within the limits of the work indicated or specified.

#### 3.1.1 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the project and critical to the survival of fish and wildlife, except as specified and permitted.

## 3.1.2 Vegetation

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer and Installation Environmental Office to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

#### 3.1.3 Streams

Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with any required permits including, but not limited to, Clean Water Act Section 404, and Section 401 Water Quality.

The Contracting Officer's approval and appropriate permits are required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

# 3.2 STORMWATER

Do not discharge stormwater from construction sites to the sanitary sewer. If the water is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization in advance from the Installation Environmental Office for releases of contaminated water.

# 3.2.1 Erosion and Sediment Control Measures

Provide erosion and sediment control measures in accordance with state and local laws and regulations. Preserve vegetation to the maximum extent practicable.

Erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports.

#### 3.2.1.1 Erosion Control

Each Task Order will indicate the erosion control and slope stabilization means to be used.

# 3.2.1.2 Sediment Control Practices

Implement sediment control practices to divert flows from exposed soils, temporarily store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Implement sediment control practices prior to soil disturbance and prior to creating areas with concentrated flow, during the construction process to minimize erosion and sediment laden runoff. Specific sediment control devices will be indicated in the Task Orders.

# 3.2.2 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Where construction operations are to be conducted during darkness, any markers must be visible in the dark. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

## 3.2.3 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

# 3.2.4 Municipal Separate Storm Sewer System (MS4) Management

Comply with the Installation's MS4 permit requirements.

#### 3.3 SURFACE AND GROUNDWATER

#### 3.3.1 Cofferdams, Diversions, and Dewatering

Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure must be constantly controlled to maintain compliance with existing state water quality standards and designated uses of the surface water body. Comply with state water quality standards and anti-degradation provisions and the Clean Water Act Section 404. Do not discharge excavation ground water to the sanitary sewer, storm drains, or to surface waters without prior specific authorization in writing from the Installation Environmental Office. Discharge of hazardous substances will not be permitted under any circumstances. Use sediment control BMPs to prevent construction site runoff from directly entering any storm drain or surface waters.

If the construction dewatering is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Obtain authorization for any contaminated groundwater release in advance from the Installation Environmental Officer and the federal or state authority, as applicable. Discharge of hazardous substances will not be permitted under any circumstances.

# 3.3.2 Waters of the United States

Do not enter, disturb, destroy, or allow discharge of contaminants into waters of the United States except as authorized within the Task Orders. Authorization to enter specific waters of the United States identified does not relieve the Contractor from its obligation to protect other waters of the United States within, adjacent to, or in the vicinity of the construction site and associated boundaries.

## 3.4 PROTECTION OF CULTURAL RESOURCES

#### 3.4.1 Archaeological Resources

Protect the archaeological resources indicated in the Task Orders and preserve them throughout the life of the Contract. If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, activities that may damage or alter such resources will be suspended. Resources covered by this paragraph include, but are not limited to: any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features; and indications of agricultural or other human activities. Upon such discovery or find, immediately notify the Contracting Officer so that the appropriate authorities may be notified and a determination made as to their significance and disposition. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. The Government retains ownership and control over archaeological resources.

# 3.4.2 Historical Resources

Existing historical resources within the work area will be indicated in

each Task Order. Protect and preserve these resources during the life of the Contract.

## 3.5 AIR RESOURCES

Equipment operation, activities, or processes will be in accordance with  $40~\mathrm{CFR}~64$  and state air emission and performance laws and standards.

## 3.5.1 Preconstruction Air Permits

Notify the Air Program Manager, through the Contracting Officer, at least 6 months prior to bringing equipment, assembled or unassembled, onto the Installation, so that air permits can be secured. Necessary permitting time must be considered in regard to construction activities. Clean Air Act (CAA) permits must be obtained prior to bringing equipment, assembled or unassembled, onto the Installation.

The responsibility for obtaining permits will be determined in each task Order.

## 3.5.2 Oil or Dual-fuel Boilers and Furnaces

Provide product data and details for new, replacement, or relocated fuel fired boilers, heaters, or furnaces to the Installation Environmental Office (Air Program Manager) through the Contracting Officer. Data to be reported include: equipment purpose (water heater, building heat, process), manufacturer, model number, serial number, fuel type (oil type, gas type) size (MMBTU heat input). Provide in accordance with paragraph PRECONSTRUCTION AIR PERMITS.

# 3.5.3 Burning

Permission to burn will be determined by each Task Order. However, burning is generally prohibited on Government premises.

3.5.4 Class I and II ODS Prohibition

Class I and II ODS are Government property and must be returned to the Government for appropriate management. Coordinate with the Installation Environmental Office to determine the appropriate location for turn in of reclaimed refrigeranst.

3.5.5 Accidental Venting of Refrigerant

Accidental venting of a refrigerant is a release and must be reported immediately to the Contracting Officer.

3.5.6 EPA Certification Requirements

Heating and air conditioning technicians must be certified through an EPA-approved program. Maintain copies of certifications at the employees' places of business; technicians must carry certification wallet cards, as provided by environmental law.

3.5.7 Dust Control

Keep dust down at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will

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not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Since these products contain Crystalline Silica, comply with the applicable OSHA standard, 29 CFR 1910.1053 or 29 CFR 1926.1153 for controlling exposure to Crystalline Silica Dust.

# 3.5.7.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other work areas within or outside the project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the work proceeds and whenever a particulate nuisance or hazard occurs. Comply with state and local visibility regulations.

## 3.5.7.2 Abrasive Blasting

Blasting operations cannot be performed without prior approval of the Installation Air Program Manager. The use of silica sand is prohibited in sandblasting.

Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other debris. Perform work involving removal of hazardous material in accordance with 29 CFR 1910.

# 3.5.8 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and may not constitute a health hazard.

# 3.6 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management Section of the EPP. Obtain a copy of the installation's Pollution Prevention/Hazardous Waste Minimization Plan for reference material when preparing this part of the EPP. If no written plan exists, obtain information by contacting the Contracting Officer. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

#### 3.6.1 Salvage, Reuse and Recycle

Identify anticipated materials and waste for salvage, reuse, and

recycling. Describe actions to promote material reuse, resale or recycling. To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local permit (cover) or license for recycling.

# 3.6.2 Nonhazardous Solid Waste Diversion Report

Maintain an inventory of nonhazardous solid waste diversion and disposal of construction and demolition debris. Submit a report to the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that nonhazardous solid waste has been generated. Include the following in the report:

Construction and Demolition (C&D) Debris Disposed	cubic yards or tons, as appropriate
C&D Debris Recycled	cubic yards or tons, as appropriate
C&D Debris Composted	cubic yards or tons, as appropriate
Total C&D Debris Generated	cubic yards or tons, as appropriate
Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount)	cubic yards or tons, as appropriate

#### 3.7 WASTE MANAGEMENT AND DISPOSAL

# 3.7.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the pre-construction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g. scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 261 or corresponding applicable state or local regulations. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Consult with the Installation environmental staff for guidance on specific requirements. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not inclusive): oil- and latex -based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

## 3.7.1.1 Sampling and Analysis of Waste

## 3.7.1.1.1 Waste Sampling

Sample waste in accordance with EPA SW-846. Clearly mark each sampled

drum or container with the Contractor's identification number, and cross reference to the chemical analysis performed.

## 3.7.1.1.2 Laboratory Analysis

Follow the analytical procedure and methods in accordance with the 40 CFR 261. Provide analytical results and reports performed to the Contracting Officer.

## 3.7.1.1.3 Analysis Type

Identify hazardous waste by analyzing for the characteristics indicated in each Task Order.

3.7.2 Solid Waste Management

#### 3.7.2.1 Project Solid Waste Disposal Documentation Report

Provide copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, a statement indicating the disposal location for the solid waste that is signed by an employee authorized to legally obligate or bind the firm may be submitted. The sales documentation must include the receiver's tax identification number and business, EPA or state registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained for the Contractor's own use, submit the information previously described in this paragraph on the solid waste disposal report. Prices paid or received do not have to be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

#### 3.7.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste. Disposition method will be determined in each Task Order. Solid waste disposal offsite must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

## 3.7.3 Control and Management of Hazardous Waste

Do not dispose of hazardous waste on Government property. Do not discharge any waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal on Government property without written approval of the Contracting Officer.

#### 3.7.3.1 Hazardous Waste/Debris Management

Identify construction activities that will generate hazardous waste or debris. Provide a documented waste determination for resultant waste streams. Identify, label, handle, store, and dispose of hazardous waste or debris in accordance with federal, state, and local regulations, including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Manage hazardous waste in accordance with the approved Hazardous Waste Management Section of the EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, hazardous waste manifests must be signed by personnel from the Installation Environmental Office. Do not bring hazardous waste onto Government property. Provide the Contracting Officer with a copy of waste determination documentation for any solid waste streams that have any potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372.

3.7.3.2 Waste Storage/Satellite Accumulation/90 Day Storage Areas

Accumulate hazardous waste at satellite accumulation points and in compliance with 40 CFR 262.34 and applicable state or local regulations. Individual waste streams will be limited to 55 gallons of accumulation (or 1 quart for acutely hazardous wastes). If the Contractor expects to generate hazardous waste at a rate and quantity that makes satellite accumulation impractical, the Contractor may request a temporary 90 day accumulation point be established. Submit a request in writing to the Contracting Officer and provide the following information (Attach Site Plan to the Request):

Contract Number	
Contractor	
Haz/Waste or Regulated Waste POC	
Phone Number	
Type of Waste	
Source of Waste	
Emergency POC	
Phone Number	
Location of the Site	

Attach a Waste Determination form for the expected waste streams. Allow 10 working days for processing this request. Additional compliance requirements (e.g. training and contingency planning) that may be required are the responsibility of the Contractor. Barricade the designated area where waste is being stored and post a sign identifying as follows:

"DANGER - UNAUTHORIZED PERSONNEL KEEP OUT"

# 3.7.3.3 Hazardous Waste Disposal

The Government will determine whether hazardous waste must be disposed on or off the Installation in each Task Order. Comply with Paragraph "Responsibilities for Contractor's Disposal" or Paragraph "Contractor Disposal Turn-In Requirements", as appropriate.

#### 3.7.3.3.1 Responsibilities for Contractor's Disposal

Provide hazardous waste manifest to the Installations Environmental Office for review, approval, and signature prior to shipping waste off Government property.

#### 3.7.3.3.1.1 Services

Provide service necessary for the final treatment or disposal of the hazardous material or waste in accordance with 40 CFR 260, local, and state, laws and regulations, and the terms and conditions of the Contract within 60 days after the materials have been generated. These services include necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal or transportation, include manifesting or complete waste profile sheets, equipment, and compile documentation).

#### 3.7.3.3.1.2 Samples

Obtain a representative sample of the material generated for each job done to provide waste stream determination.

3.7.3.3.1.3 Analysis

Analyze each sample taken and provide analytical results to the Contracting Officer. See paragraph WASTE DETERMINATION DOCUMENTATION.

#### 3.7.3.3.1.4 Labeling

Determine the Department of Transportation's (DOT's) proper shipping names for waste (each container requiring disposal) and demonstrate to the Contracting Officer how this determination is developed and supported by the sampling and analysis requirements contained herein. Label all containers of hazardous waste with the words "Hazardous Waste" or other words to describe the contents of the container in accordance with 40 CFR 262.31 and applicable state or local regulations.

## 3.7.3.3.2 Contractor Disposal Turn-In Requirements

Hazardous waste generated must be disposed of in accordance with the following conditions to meet installation requirements:

a. Drums must be compatible with waste contents and drums must meet DOT requirements for 49 CFR 173 for transportation of materials.

b. Band drums to wooden pallets.

c. No more than three 55 gallon drums or two 85 gallon over packs are to be banded to a pallet.

- d. Band using 1-1/4 inch minimum band on upper third of drum.
- e. Provide label in accordance with 49 CFR 172.101.
- f. Leave 3 to 5 inches of empty space above volume of material.

3.7.3.4 Universal Waste Management

Manage the following categories of universal waste in accordance with

federal, state, and local requirements and installation instructions:

- a. Batteries as described in 40 CFR 273.2
- b. Lamps as described in 40 CFR 273.5
- c. Mercury-containing equipment as described in 40 CFR 273.4
- d. Pesticides as described in 40 CFR 273.3

Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed.

3.7.3.5 Electronics End-of-Life Management

Recycle or dispose of electronics waste, including, but not limited to, used electronic devices such computers, monitors, hard-copy devices, televisions, mobile devices, in accordance with 40 CFR 260-262, state, and local requirements, and installation instructions.

3.7.3.6 Disposal Documentation for Hazardous and Regulated Waste

Contact the Contracting Officer for the facility RCRA identification number that is to be used on each manifest.

- 3.7.4 Releases/Spills of Oil and Hazardous Substances
- 3.7.4.1 Response and Notifications

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the Installation Fire Department, the Installation Command Duty Officer, the Installation Environmental Office, the Contracting Officer and the state or local authority.

Submit verbal and written notifications as required by the federal ( 40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

# 3.7.4.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, and labor if the Government will initiate its own spill cleanup procedures, for Contractor- responsible spills, when: Spill cleanup procedures have not begun within one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

# 3.7.5 Mercury Materials

Immediately report to the Environmental Office and the Contracting Officer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Contracting Officer.

Do not recycle a mercury spill cleanup; manage it as a hazardous waste for disposal.

# 3.7.6 Wastewater

#### 3.7.6.1 Treatment

Do not allow wastewater from construction activities, such as onsite material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, and forms to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction-related waste water as indicated in each Task Order.

## 3.7.6.2 Surface Discharge

Discharge ground water as indicated in each Task Order.

#### 3.7.6.3 Land Application

Discharge water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing as indicated in each Task Order.

#### 3.8 HAZARDOUS MATERIAL MANAGEMENT

Include hazardous material control procedures in the Safety Plan, in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the installation. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

## 3.9 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the project site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S.

Department of Agriculture jurisdictional office for additional cleaning requirements.

## 3.10 MILITARY MUNITIONS

In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, immediately stop work in that area and immediately inform the Contracting Officer.

# 3.11 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA 40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided. Store POL products on-site or off-site, as indicated in each Task Order.

## 3.11.1 Used Oil Management

Manage used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while onsite exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of solvents is considered a hazardous waste and disposed of at the Contractor's expense. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

# 3.11.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overfill protection for oil storage tanks. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be onsite to clean up any spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. If tanks and containers with an aggregate aboveground capacity greater than 1320 gallons will be used onsite (only containers with a capacity of 55 gallons or greater are counted), provide and implement a SPCC plan meeting the requirements of 40 CFR 112. Do not bring underground storage tanks to the installation for Contractor use during a project. Submit the SPCC plan to the Contracting Officer for approval.

Monitor and remove any rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present. 3.12 INADVERTENT DISCOVERY OF PETROLEUM-CONTAMINATED SOIL OR HAZARDOUS WASTES

If petroleum-contaminated soil, or suspected hazardous waste is found during construction that was not identified in the Contract documents, immediately notify the Contracting Officer. Do not disturb this material until authorized by the Contracting Officer.

# 3.13 PEST MANAGEMENT

In order to minimize impacts to existing fauna and flora, coordinate with the Installation Pest Management Coordinator (IPMC), through the Contracting Officer, at the earliest possible time prior to pesticide application. Discuss integrated pest management strategies with the IPMC and receive concurrence from the IPMC through the Contracting Officer prior to the application of pesticides associated with these specifications. Provide Installation Pest Management personnel the opportunity to be present at meetings concerning treatment measures for pest or disease control and during application of the pesticide. Termiticide requirements will be addressed in each Task Order. The use and management of pesticides are regulated under 40 CFR 152 - 186.

#### 3.13.1 Application

Apply pesticides using a state-certified pesticide applicator in accordance with EPA label restrictions and recommendation. The certified applicator must wear clothing and personal protective equipment as specified on the pesticide label. The Contracting Officer will designate locations for water used in formulating. Do not allow the equipment to overflow. Inspect equipment for leaks, clogging, wear, or damage and repair prior to application of pesticide.

# 3.13.2 Pesticide Treatment Plan

Include and update a pesticide treatment plan, as information becomes available. Include in the plan the sequence of treatment, dates, times, locations, pesticide trade name, EPA registration numbers, authorized uses, chemical composition, formulation, original and applied concentration, application rates of active ingredient (that is, pounds of active ingredient applied), equipment used for application and calibration of equipment. Comply with 40 CFR 152-189, state, regional, and local pest management record-keeping and reporting requirements and Installation-specific requirements in conformance with DA AR 200-1 Chapter 5, Pest Management, Section 5-4 "Program Requirements".

#### 3.14 CHLORDANE

Evaluate excess soils and concrete foundation debris generated during the demolition of housing units or other wooden structures for the presence of chlordane or other pesticides prior to reuse or final disposal.

# 3.15 SOUND INTRUSION

Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives are not permitted without written permission from the Contracting Officer, and then only during the designated times. Confine pile-driving operations to the time periods indicated in the Task Orders.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with State rules.

# 3.16 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --

# SECTION 01 74 19

# CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL 02/19

#### PART 1 GENERAL

#### 1.1 DEFINITIONS

1.1.1 Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

## 1.1.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

1.1.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of Intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

1.1.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

1.1.5 Diversion

The practice of diverting waste from disposal in a landfill, by means of eliminating or minimizing waste, or reuse of materials.

1.1.6 Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying constituent materials diverted from disposal, usually including summary tabulations of materials, weight in short-ton.

1.1.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

1.1.8 Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

# 1.1.9 Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

# 1.1.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

## 1.2 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert a minimum of 60 percent by weight of the project construction waste and demolition debris/waste from the landfill. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

#### 1.3 CONSTRUCTION WASTE MANAGEMENT

Implement a construction waste management program for the project. Take a pro-active, responsible role in the management of construction construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the construction waste management program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

## 1.3.1 Implementation of Construction Waste Management Program

Develop and document how the construction waste management program will be implemented in a construction waste management plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates.

## 1.3.2 Oversight

The Quality Control Manager, as specified in Section 01 45 00 QUALITY CONTROL, is responsible for overseeing and documenting results from executing the construction waste management plan for the project.

## 1.3.3 Special Programs

Implement any special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

#### 1.3.4 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the projects. Designation of single source separating or commingling will be clearly marked on the containers.

# 1.3.5 Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the construction waste management plan. Manage all waste streams associated with the project. Typical waste streams are listed below. Include additional waste steams not listed:

- a. Land Clearing Debris
- b. Asphalt
- c. Masonry and CMU
- d. Concrete
- e. Metals (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze, etc.)
- f. Wood (nails and staples allowed)
- g. Glass
- h. Paper
- i. Plastics (PET, HDPE, PVC, LDPE, PP, PS, Other)
- j. Gypsum
- k. Non-hazardous paint and paint cans
- 1. Carpet
- m. Ceiling Tiles
- n. Insulation
- o. Beverage Containers

#### 1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan; G, RO

SD-06 Test Reports

Quarterly Reports

Annual Report

SD-11 Closeout Submittals

Final Construction Waste Diversion Report; S

# 1.5 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed construction waste management plan and to develop a mutual understanding relative to the management of the construction waste management program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

- a. Preconstruction meeting.
- b. Regular site meetings.
- c. Work safety meeting (if applicable).

# 1.6 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 15 days after notice to proceed. Revise and resubmit Construction Waste Management Plan until it receives final approval from the Contracting Officer, in order for construction to begin. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

An approved construction waste management plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the project waste diversion requirement. Also, include the following in the plan:

- a. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the project..
- b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
- c. Description of the regular meetings to be held to address waste management.
- d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of materials.
- e. Name of landfill and/or incinerator to be used.
- f. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.

- g. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Identify the recycling facilities by name, address, and phone number.
- h. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.
- i. Description of the means by which any materials identified in item (g) above will be protected from contamination.
- j. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site).
- k. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.

Distribute copies of the waste management plan to each subcontractor, Quality Control Manager, and the Contracting Officer.

1.7 RECORDS (DOCUMENTATION)

# 1.7.1 General

Maintain records to document the types and quantities of waste generated and diverted though re-use, recycling and/or sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for any materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted project waste materials or disposed materials.

# 1.7.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

#### 1.8 REPORTS

#### 1.8.1 General

Maintain current construction waste diversion information on site for periodic inspection by the Contracting Officer. Include in the quarterly reports, annual reports and final reports: the project name, contract information, information for waste generated, diverted and disposed of for the current reporting period and show cumulative totals for the project. Reports must identify quantifies of waste by type and disposal method. Also include in each report, supporting documentation to include manifests, weigh tickets, receipts, and invoices specifically identifying the project and waste material type and weighted sum.

## 1.8.2 Quarterly Reporting

Provide cumulative reports at the end of each quarter (December, March, June, and September, corresponding with the federal fiscal year for reporting purposes). Submit quarterly reports not later than 15 calendar days after the preceding quarter has ended. Submit Quarterly Reports to the appropriate office or identified point of contact.

# 1.8.3 Annual Reporting

Provide a cumulative construction waste diversion report annually. Submit annual report not later than 30 calendar days after the preceding fourth quarter has ended. Provide copy of annual construction waste diversion report to the Installation POC.

#### 1.9 FINAL CONSTRUCTION WASTE DIVERSION REPORT

A Final Construction Waste Diversion Report is required at the end of the project. Provide Final Construction Waste Diversion Report 60 days prior to the Beneficial Occupancy Date (BOD). The final Construction Waste Diversion Report must be included in the Sustainability eNotebook in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

## 1.10 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the construction waste management plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS. Separate materials by one of the following methods.

## 1.10.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the construction waste management plan.

## 1.10.2 Co-Mingled Method

Place waste products and recyclable materials into a single container and then transport to an authorized recycling facility, which meets all applicable requirements to accept and dispose of recyclable materials in accordance with all applicable local, state and federal regulations. The Co-mingled materials must be sorted and processed in accordance with the approved construction waste management plan.

## 1.10.3 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.11 DISPOSAL

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other sections of the specifications, dispose of in accordance with the following:

## 1.11.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved construction waste management plan. Coordinate with the Contracting Officer to identify onsite reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on the Installation.

# 1.11.2 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) -containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on site as this creates a hazardous waste stream with additional handling requirements.

## 1.11.3 Waste

Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

## SECTION 01 78 00

# CLOSEOUT SUBMITTALS 05/19

#### PART 1 GENERAL

#### 1.1 REFERENCES

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 1110-1-2909	(2012)	Geospatial Data and Systems
ERDC/ITL TR-12-1	(2015)	A/E/C Graphics Standard, Release 2.0
ERDC/ITL TR-12-6	(2015)	A/E/C CAD Standard - Release 6.0

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 1-300-08	(2009, with Change 2, 2011) Criteria for
	Transfer and Acceptance of DoD Real
	Property

# 1.2 DEFINITIONS

#### 1.2.1 As-Built Drawings

As-built drawings are the marked-up drawings, maintained by the Contractor on-site, that depict actual conditions and deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to submitted Requests for Information (RFI's); direction from the Contracting Officer; design that is the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined PDF files. These files serve as the basis for the creation of the record drawings.

#### 1.2.2 Record Drawings

The record drawings are the final compilation of actual conditions reflected in the as-built drawings.

Produce the record drawings from the Record Model(s) and do not include annotations indicating revisions.

# 1.2.3 Record Model

A model reflecting approved changes during construction including red-lines, requests for information (RFI's), and conract modifications. Include updated construction phase facility/site data for components.

## 1.2.4 Advanced Modeling

A subset of geospatial technologies as defined in EM 1110-1-2909 to include Building Information Modeling (BIM), Civil Information Modeling

(CIM), Geographic Information Systems (GIS), and Computer-Aided Design (CAD). Advanced modeling is comprised of models and drawings that form a digital representation of the project, or part thereof, that are comprised of model elements with facility data.

## 1.2.5 USACE CAD/BIM Technology Center

The USACE CAD/BIM Technology Center hosts all standard content for USACE. This content can be accessed through the CAD/BIM Technology Center website, https://cadbimcenter.erdc.dren.mil/.

#### 1.3 SOURCE DRAWING FILES

Request the full set of electronic drawings, in the source format, for Record Drawing preparation, after award and at least 30 days prior to required use.

## 1.3.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic CAD drawing files are not construction documents. Differences may exist between the CAD files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic CAD files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction drawings and data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

## 1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES: SD-03 Product Data

Warranty Management Plan

Warranty Tags

Spare Parts Data

# SD-08 Manufacturer's Instructions

Posted Instructions

SD-11 Closeout Submittals

As-Built Drawings; G, RO

Record Drawings; G, RO

Final Approved Shop Drawings

Construction Contract Specifications

Certification of EPA Designated Items; G, RO

Certification Of USDA Designated Items; G, RO

As-Built Record Of Equipment And Materials

Checklist For Dd Form 1354; G, RO

Interim Dd Form 1354; G, RO

# 1.5 SPARE PARTS DATA

Submit two copies of the Spare Parts Data list.

- a. Indicate manufacturer's name, part number, and stock level required for test and balance, pre-commissioning, maintenance and repair activities. List those items that may be standard to the normal maintenance of the system.
- b. At acceptance of commissioning, ensure the required stock level is supplied as indicated in subparagraph a for maintenance and repair activities through the facilities warranty period. Provision of spare parts does not relieve the Contractor of responsibilities listed under the contract guarantee provisions.

## 1.6 QUALITY CONTROL

Additions and corrections to the contract drawings must be equal in quality and detail to that of the originals. Line colors, line weights, lettering, layering conventions, and symbols must conform to ERDC/ITL TR-12-6.

## 1.7 WARRANTY MANAGEMENT

#### 1.7.1 Warranty Management Plan

Develop a warranty management plan which contains information relevant to
FAR 52.246-21 Warranty of Construction. At least 30 days before the planned pre-warranty conference, submit one set of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan narrative must contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The term "status" as indicated below must include due date and whether item has been submitted or was accomplished. Submit warranty information, made available during the construction phase, to the Contracting Officer for approval prior to each monthly pay estimate. Assemble approved information in a binder and turn over to the Government upon acceptance of the work. The construction warranty period must begin on the date of project acceptance and continue for the full product warranty period. Conduct a joint 4 month and 9 month warranty inspection, measured from time of acceptance; with the Contractor, Contracting Officer and the Customer Representative. The warranty management plan must include, but is not limited to, the following:

- a. Roles and responsibilities of personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.
- b. For each warranty, the name, address, telephone number, and e-mail of each of the guarantor's representatives nearest to the project location.
- c. A list and status of delivery of Certificates of Warranty for extended warranty items, including roofs, HVAC balancing, pumps, motors, transformers, and for commissioned systems, such as fire protection and alarm systems, sprinkler systems, and lightning protection systems.
- d. As-Built Record of Equipment and Materials list for each warranted equipment, item, feature of construction or system indicating:
  - (1) Name of item.
  - (2) Model and serial numbers.
  - (3) Location where installed.
  - (4) Name and phone numbers of manufacturers or suppliers.
  - (5) Names, addresses and telephone numbers of sources of spare parts.
  - (6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have warranties longer than one year must be indicated with separate warranty expiration dates.
  - (7) Cross-reference to warranty certificates as applicable.
  - (8) Starting point and duration of warranty period.
  - (9) Summary of maintenance procedures required to continue the warranty in force.
  - (10) Cross-reference to specific pertinent Operation and Maintenance manuals.
  - (11) Organization, names and phone numbers of persons to call for warranty service.
  - (12) Typical response time and repair time expected for various warranted equipment.
- e. The plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

- f. Procedure and status of tagging of equipment covered by warranties longer than one year.
- g. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty or safety reasons.

#### 1.7.2 Performance Bond

The Performance Bond must remain effective throughout the construction period.

- a. In the event the Contractor fails to commence and diligently pursue any construction warranty work required, the Contracting Officer will have the work performed by others, and after completion of the work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.
- b. In the event sufficient funds are not available to cover the construction warranty work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.
- c. Following oral or written notification of required construction warranty repair work, respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

#### 1.7.3 Pre-Warranty Conference

Prior to contract completion, and at a time designated by the Contracting Officer, meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. At this meeting, establish and review communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty In connection with these requirements and at the time of the Contractor's quality control completion inspection, furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue construction warranty work action on behalf of the Contractor. This point of contact must be located within the local service area of the warranted construction, be continuously available, and be responsive to Government inquiry on warranty work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

## 1.7.4 Contractor's Response to Construction Warranty Service Requirements

Following oral or written notification by the Contracting Officer, respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within the timeframe specified, the Government will perform the work and back charge the construction warranty payment item established.

- a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.
- b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.
- c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.
- d. The "Construction Warranty Service Priority List" is as follows:

```
Code 1-Life Safety Systems

Fire suppression systems.
Fire alarm system(s) in place in the building.

Code 1-Air Conditioning Systems

Recreational support.
Air conditioning leak in part of building, if causing damage.
Air conditioning system not cooling properly.

Code 1-Doors

Overhead doors not operational, causing a security, fire, or safety problem.
Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors
```

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1) Area power failure affecting heat.
- (2) Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing (1) Hot water heater failure. (2) Leaking water supply pipes. Code 2-Plumbing (1) Flush valves not operating properly. (2) Fixture drain, supply line to commode, or any water pipe leaking. (3) Commode leaking at base. Code 3 -Plumbing Leaky faucets. Code 3-Interior (1) Floors damaged. (2) Paint chipping or peeling. (3) Casework. Code 1-Roof Leaks Temporary repairs will be made where major damage to property is occurring. Code 2-Roof Leaks Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis. Code 2-Water (Exterior) No water to facility. Code 2-Water (Hot) No hot water in portion of building listed. Code 3-All other work not listed above.

## 1.7.5 Warranty Tags

At the time of installation, tag each warranted item with a durable, oil and water resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also, submit two record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the project is accepted for beneficial occupancy. Show the following information on the tag.

Type of product/material	
Model number	
Serial number	
Contract number	
Warranty period from/to	

Inspector's signature				
Construction Contractor				
Address				
Telephone number				
Warranty contact				
Address				
Telephone number				
Warranty response time priority code				
WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.				

#### PART 2 PRODUCTS

#### 2.1 RECORD DRAWINGS

Prepare the CAD drawing files in MicroStation V8 format compatible with a Windows 7 operating system.

2.1.1 Additional Drawings

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-12-6 and ERDC/ITL TR-12-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings.

2.1.1.1 Sheet Numbers and File Names

If a sheet needs to be added between two sequential sheets, append a Supplemental Drawing Designator in accordance with ERDC/ITL TR-12-6 Adding a drawing sheet, and ERDC/ITL TR-12-1 Adding or deleting drawing sheets and index sheet procedures.

#### 2.2 CERTIFICATION OF EPA DESIGNATED ITEMS

Submit the Certification of EPA Designated Items as required by FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA Designated Items and FAR 52-223-17 Affirmative Procurement of EPA designated items in Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current EPA standards for recycled/recovered materials content. The following exemptions may apply to the non-procurement of recycled/recovered content materials:

- 1) The product does not meet appropriate performance standards;
- 2) The product is not available within a reasonable time frame;
- 3) The product is not available competitively (from two or more sources);
- 4) The product is only available at an unreasonable price (compared with
  - a comparable non-recycled content product)."

Record each product used in the project that has a requirement or option of containing recycled content in accordance with SECTION 01 33 29 SUSTAINABILITY REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (1, 2, 3, or 4, as indicated), and comments. Recycled content values may be determined by weight or volume percent, but must be consistent throughout.

#### 2.3 CERTIFICATION OF USDA DESIGNATED ITEMS

Submit the Certification of USDA Designated Items as required by FAR 52-223-1 Bio-based Product Certifications and FAR 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts. Include on the certification form the following information: project name, project number, Contractor name, license number, Contractor address, and certification. The certification will read as follows and be signed and dated by the Contractor. "I hereby certify the information provided herein is accurate and that the requisition/procurement of all materials listed on this form comply with current USDA standards for biobased materials content. The following exemptions may apply to the non-procurement of biobased content materials:

- 1) The product does not meet appropriate performance standards;
- 2) The product is not available within a reasonable time frame;
- 3) The product is not available competitively (from two or more sources);
- 4) The product is only available at an unreasonable price (compared with a comparable bio-based content product)."

Record each product used in the project that has a requirement or option of containing biobased content in accordance with SECTION 01 33 29 SUSTAINABILITY REPORTING, noting total price, total value of post-industrial recycled content, total value of post-consumer recycled content, exemptions (1, 2, 3, or 4, as indicated), and comments. Biobased content values may be determined by weight or volume percent, but must be consistent throughout.

## 2.4 PDF AS-BUILT FILES

Provide electronic PDF "plots" of all contract drawings sheets associated with the as-built drawing submittal. Compile and organize the PDF set to match the contract drawings. Bookmark and label the pages of the PDF file in accordance with Section 01 33 16 DESIGN DATA (DESIGN AFTER AWARD).

## 2.5 REDLINES AND MARKUPS

Provide PDFs of the current working redlines and/or markups complying with the as-builts drawing and markup requirements contained in this specification.

## 2.6 AS-BUILT OR ADVANCED MODELING RE-SUBMISSION REQUIREMENTS

If elements of an as-built submittal or advanced modeling package are

rejected, provide the following for each re-submission, in addition to any information required in Section 01 33 00 SUBMITTAL PROCEDURES:

- a. Re-submit all components required under paragraph As-Builts or Advanced Modeling Package, including a new Advanced Modeling Submittal Checklist and updated content in response to Government comments.
- b. Provide a copy of all Government review comments.
- c. Provide a disposition/response to each Government review comment for a back-check of the re-submission deliverable.

### PART 3 EXECUTION

#### 3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings. Maintain the as-builts throughout construction as red-lined PDF files. Submit As-Built Drawings 30 days prior to Beneficial Occupancy Date (BOD).

#### 3.1.1 Markup Guidelines

Make comments and markup the drawings complete without reference to letters, memos, or materials that are not part of the As-Built drawing. Show what was changed, how it was changed, where item(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

- a. Use base colors of red, green, and blue. Color code for changes as follows:
  - (1) Special (Blue) Items requiring special information, coordination, or special detailing or detailing notes.
  - (2) Deletions (Red) Over-strike deleted graphic items (lines), lettering in notes and leaders.
  - (3) Additions (Green) Added items, lettering in notes and leaders.
- b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.
- c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already shown in legend.
- d. Use frequent written explanations on markup drawings to describe changes. Do not totally rely on graphic means to convey the revision.
- e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.
- f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.

- g. For deletions, cross out all features, data and captions that relate to that revision.
- h. For changes on small-scale drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.
- i. Indicate one of the following when attaching a print or sketch to a markup print:
  - 1) Add an entire drawing to contract drawings
  - 2) Change the contract drawing to show
  - 3) Provided for reference only to further detail the initial design.
- j. Incorporate all shop and fabrication drawings into the markup drawings.
- 3.1.2 As-Built Drawings Content

Revise As-Built Drawings in accordance with ERDC/ITL TR-12-1 and ERDC/ITL TR-12-6. Keep these working as-built markup drawings current on a weekly basis and at least one set available on the jobsite at all times. Changes from the contract drawings which are made during construction or additional information which might be uncovered in the course of construction must be accurately and neatly recorded as they occur by means of details and notes. Submit the working as-built markup drawings for approval prior to submission of each monthly pay estimate. For failure to maintain the working and final record drawings as specified herein, the Contracting Officer will withhold 20 percent of the monthly progress payment until approval of updated drawings. Show on the as-built drawings, but not limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.
- b. The location and dimensions of any changes within the building structure.
- c. Layout and schematic drawings of electrical circuits and piping.
- d. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- e. Changes in details of design or additional information obtained from working drawings specified to be prepared or furnished by the Contractor; including but not limited to shop drawings, fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment, and foundations.
- f. The topography, invert elevations and grades of drainage installed or affected as part of the project construction.

- g. Changes or Revisions which result from the final inspection.
- h. Where contract drawings or specifications present options, show only the option selected for construction on the working as-built markup drawings.
- i. If borrow material for this project is from sources on Government property, or if Government property is used as a spoil area, furnish a contour map of the final borrow pit/spoil area elevations.
- j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- k. Changes in location of equipment and architectural features.
- 1. Modifications.
- m. Actual location of anchors, construction and control joints, etc., in concrete.
- n. Unusual or uncharted obstructions that are encountered in the contract work area during construction.
- o. Location, extent, thickness, and size of stone protection particularly where it will be normally submerged by water.

#### 3.2 RECORD DRAWING FILES

If additional drawings are required, prepare them using the specified electronic file format applying ERDC/ITL TR-12-6 and ERDC/ITL TR-12-1. The title block and drawing border to be used for any new final record drawings must be identical to that used on the contract drawings. Accomplish additions and corrections to the contract drawings using CAD files. Provide all program files and hardware necessary to prepare final PDF record drawings. The Contracting Officer will review final PDF record drawings for accuracy and return them to the Contractor for required corrections, changes, additions, and deletions.

3.2.1 Rename the CAD Drawing files

Rename the CAD Drawing files using the contract number as the Project Code field,(e.g., W91238-15-C-10A-102.DGN) as instructed in the Pre-Construction conference. Use only those renamed files for the Marked-up changes. Make all changes on the layer/level as the original item.

- a. For MicroStation files (DGN), enter all as-built delta changes and notations on:
  - Level #63
  - Level/Layer Name contains: ANNO-REVS
  - Level/Layer Description: Revisions
- c. When final revisions have been completed, show the wording "RECORD DRAWING AS-BUILTS" followed by the name of the Contractor in letters at least 3/16 inch high on the cover sheet drawing. Date RECORD DRAWING AS-BUILTS" drawing revisions in the revision block.

d. Within 20 days after Government approval of all of the working record drawings for a phase of work, prepare the final CAD record drawings for that phase of work and submit PDF drawing files and two sets of prints for review and approval. The Government will promptly return one set of prints annotated with any necessary corrections. Within 10 days revise the CAD files accordingly at no additional cost and submit one set of final prints for the completed phase of work to the Government. Within 20 days of substantial completion of all phases of work, submit the final record drawing package for the entire project. Submit one set of electronic CAD files, and one set of the approved working record PDF files on an optical disc with two sets of prints. The CAD files must be complete in all details and identical in form and function to the CAD drawing files supplied by the Government. Prepare MicroStation files for transmittal using the Packager (Archive). Make any transactions or adjustments necessary to accomplish this. The Government reserves the right to reject any drawing files it deems incompatible with the customer's CAD system. Paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit final record PDF drawing files, CAD files and marked prints as specified will be cause for withholding any payment due under this contract. Approval and acceptance of final record drawings must be accomplished before final payment is made.

#### 3.3 RECORD DRAWINGS

Prepare final record drawings after the completion of each definable feature of work as listed in the Contractor Quality Control Plan (such as Foundations, Utilities, or Structural Steel as appropriate for the project). Transfer the changes from the approved working as-built markup drawings to the original electronic CAD drawing files. Modify the as-built CAD drawing files to correctly show the features of the project as-built by bringing the working CAD drawing set into agreement with approved working as-built markup drawings, and adding such additional drawings as may be necessary. Refer to ERDC/ITL TR-12-1. Jointly review the working as-built markup drawings with printouts from working as-built CAD drawing PDF files for accuracy and completeness. Monthly review of working as-built CAD drawing PDF file printouts must cover all sheets revised since the previous review. These PDF drawing files are part of the permanent records of this project. Any drawings damaged or lost must be satisfactorily replaced at no expense to the Government.

Drawing revisions (include within change order price the cost to change working and final record drawings to reflect revisions) and compliance with the following procedures.

- a. Follow directions in the revision for posting descriptive changes.
- b. The revision delta size must be 5/16 inch unless the area where the delta is to be placed is crowded. Use a smaller size delta for crowded areas.
- c. Place a revision delta at the location of each deletion.
- d. For new details or sections which are added to a drawing, place a revision delta by the detail or section title.
- e. For minor changes, place a revision delta by the area changed on the drawing (each location).

- f. For major changes to a drawing, place a revision delta by the title of the affected plan, section, or detail at each location.
- g. For changes to schedules or drawings, place a revision delta either by the schedule heading or by the change in the schedule.

#### 3.3.1 Final Record Drawing Package

Submit the final record PDF and CAD drawings package for the entire project within 20 days of substantial completion of all phases of work. Submit one set of ANSI D size PDF and CAD files on optical disc, read-only memory (ROM), two sets of ANSI D size prints and one set of the approved working record drawings. The package must be complete in all details and identical in form and function to the contract drawing files supplied by the Government.

3.4 FINAL APPROVED SHOP DRAWINGS

Submit final approved project shop drawings 30 days after transfer of the completed facility.

3.5 CONSTRUCTION CONTRACT SPECIFICATIONS

Submit final PDF file record construction contract specifications, including revisions thereto, 30 days after transfer of the completed facility.

3.6 CLEANUP

Leave premises "broom clean". Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Replace filters of operating equipment. Clean debris from roofs, gutters, downspouts and drainage systems. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the site.

## 3.7 REAL PROPERTY RECORD

Refer to UFC 1-300-08 for instruction on completing the DD FORM 1354. Contact the Contracting Officer for any project specific information necessary to complete the DD FORM 1354.

3.7.1 Interim DD FORM 1354

Near the completion of Project, but a minimum of 60 days prior to final acceptance of the work, complete, update draft DD FORM 1354, and submit an accounting of all installed property with Interim DD FORM 1354. Include any additional assets, improvements, and alterations from the Draft DD FORM 1354.

3.7.2 Completed DD FORM 1354

For convenience, a blank fillable PDF DD FORM 1354 may be obtained at the following link: www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd1354.pdf Submit the completed Checklist for DD FORM 1354 of Installed Building Equipment items. Attach this list to the updated DD FORM 1354.

-- End of Section --

## SECTION 01 78 23

## OPERATION AND MAINTENANCE DATA 08/15

#### PART 1 GENERAL

#### 1.1 SUBMITTALS

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

SD-10 Operation and Maintenance Data

O&M Database; G, RO Training Plan; G, RO Training Outline; G, RO Training Content; G, RO SD-11 Closeout Submittals Training Video Recording; G, RO

Validation of Training Completion; G, RO

## 1.2 OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data for the provided equipment, product, or system, defining the importance of system interactions, troubleshooting, and long-term preventive operation and maintenance. Compile, prepare, and aggregate O&M data to include clarifying and updating the original sequences of operation to as-built conditions. Organize and present information in sufficient detail to clearly explain O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this section and Section 01 33 00 SUBMITTAL PROCEDURES.

1.2.1 Package Quality

Documents must be fully legible. Operation and Maintenance data must be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions.

#### 1.2.2 Package Content

Provide data package content in accordance with paragraph SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES. Comply with the data package requirements specified in the individual technical sections, including the content of the packages and addressing each product, component, and system designated for data package submission, except as follows. Use Data Package 3 for commissioned items without a specified data package requirement in the individual technical sections. Provide a Data Package 3 instead of Data Package 1 or 2, as specified in the individual technical section, for items that are commissioned.

1.2.3 Changes to Submittals

Provide manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data. Submit changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data within 30 calendar days of the notification of this change requirement.

#### 1.2.4 Commissioning Authority Review and Approval

Submit the commissioned systems and equipment submittals to the Commissioning Authority (CxA) to review for completeness and applicability. Obtain validation from the CxA that the systems and equipment provided meet the requirements of the Contract documents and design intent, particularly as they relate to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local environmental impacts. The CxA communicates deficiencies to the Contracting Officer. Submit the O&M manuals to the Contracting Officer upon a successful review of the corrections, and with the CxA recommendation for approval and acceptance of these O&M manuals. This work is in addition to the normal review procedures for O&M data.

#### 1.3 O&M DATABASE

Develop an editable, electronic spreadsheet based on the equipment in the Operation and Maintenance Manuals that contains the information required to start a preventive maintenance program. As a minimum, provide list of system equipment, location installed, warranty expiration date, manufacturer, model, and serial number.

## 1.4 OPERATION AND MAINTENANCE MANUAL FILE FORMAT

Assemble data packages into electronic Operation and Maintenance Manuals. Assemble each manual into a composite electronically indexed file using the most current version of Adobe Acrobat or similar software capable of producing PDF file format. Provide compact disks (CD) or data digital versatile disk (DVD) as appropriate, so that each one contains operation, maintenance and record files, project record documents, and training videos. Include a complete electronically linked operation and maintenance directory.

## 1.4.1 Organization

Bookmark Product and Drawing Information documents using the current version of CSI Masterformat numbering system, and arrange submittals using the specification sections as a structure. Use CSI Masterformat and UFGS numbers along with descriptive bookmarked titles that explain the content of the information that is being bookmarked.

1.4.2 CD or DVD Label and Disk Holder or Case

Provide the following information on the disk label and disk holder or case:

a. Building Number

- b. Project Title
- c. Activity and Location
- d. Construction Contract Number
- e. Prepared For: (Contracting Agency)
- f. Prepared By: (Name, title, phone number and email address)
- q. Include the disk content on the disk label
- h. Date
- i. Virus scanning program used
- 1.5 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

The following are a detailed description of the data package items listed in paragraph SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES.

1.5.1 Operating Instructions

Provide specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.5.1.1 Safety Precautions and Hazards

List personnel hazards and equipment or product safety precautions for operating conditions. List all residual hazards identified in the Activity Hazard Analysis provided under Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS. Provide recommended safeguards for each identified hazard.

1.5.1.2 Operator Prestart

Provide procedures required to install, set up, and prepare each system for use.

1.5.1.3 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.5.1.4 Normal Operations

Provide Control Diagrams with data to explain operation and control of systems and specific equipment. Provide narrative description of Normal Operating Procedures.

1.5.1.5 Emergency Operations

Provide Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Provide Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of utility systems including required valve positions, valve locations and zones or portions of systems controlled.

#### 1.5.1.6 Operator Service Requirements

Provide instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gauge readings.

1.5.1.7 Environmental Conditions

Provide a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item equipment should not be allowed to run.

1.5.1.8 Operating Log

Provide forms, sample logs, and instructions for maintaining necessary operating records.

1.5.1.9 Additional Requirements for HVAC Control Systems

Provide Data Package 5 and the following for control systems:

- a. Narrative description on how to perform and apply functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.
- b. Full as-built sequence of operations.
- c. Copies of checkout tests and calibrations performed by the Contractor (not Cx tests).
- d. Full points list. Provide a listing of rooms with the following information for each room:
  - (1) Floor
  - (2) Room number
  - (3) Room name
  - (4) Air handler unit ID
  - (5) Reference drawing number
  - (6) Air terminal unit tag ID
  - (7) Heating or cooling valve tag ID
  - (8) Minimum cfm
  - (9) Maximum cfm
- e. Full print out of all schedules and set points after testing and acceptance of the system.
- f. Full as-built print out of software program.
- g. Marking of system sensors and thermostats on the as-built floor plan

and mechanical drawings with their control system designations.

## 1.5.2 Preventive Maintenance

Provide the following information for preventive and scheduled maintenance to minimize repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

## 1.5.2.1 Lubrication Data

Include the following preventive maintenance lubrication data, in addition to instructions for lubrication required under paragraph OPERATOR SERVICE REQUIREMENTS:

- a. A table showing recommended lubricants for specific temperature ranges and applications.
- b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.
- c. A Lubrication Schedule showing service interval frequency.
- 1.5.2.2 Preventive Maintenance Plan, Schedule, and Procedures

Provide manufacturer's schedule for routine preventive maintenance, inspections, condition monitoring (predictive tests) and adjustments required to ensure proper and economical operation and to minimize repairs. Provide instructions stating when the systems should be retested. Provide manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

- a. Define the anticipated time required to perform each of each test (work-hours), test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventive maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize repairs.
- b. Repair requirements must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

## 1.5.3 Repair

Provide manufacturer's recommended procedures and instructions for correcting problems and making repairs.

## 1.5.3.1 Troubleshooting Guides and Diagnostic Techniques

Provide step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

## 1.5.3.2 Wiring Diagrams and Control Diagrams

Provide point-to-point drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

## 1.5.3.3 Repair Procedures

Provide instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.5.3.4 Removal and Replacement Instructions

Provide step-by-step procedures and a list of required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Use a combination of text and illustrations.

## 1.5.3.5 Spare Parts and Supply Lists

Provide lists of spare parts and supplies required for repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

#### 1.5.3.6 Repair Work-Hours

Provide manufacturer's projection of repair work-hours including requirements by type of craft. Identify, and tabulate separately, repair that requires the equipment manufacturer to complete or to participate.

#### 1.5.4 Real Property Equipment

Provide a list of installed equipment furnished under this contract. Include all information usually listed on manufacturer's name plate. In the "EQUIPMENT-IN-PLACE LIST" include, as applicable, the following for each piece of equipment installed: description of item, location (by room number), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty. Submit the final list 30 days after transfer of the completed facility.

Key the designations to the related area depicted on the contract drawings. List the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA						
Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used		

#### 1.5.5 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.5.5.1 Product Submittal Data

Provide a copy of SD-03 Product Data submittals documented with the required approval.

1.5.5.2 Manufacturer's Instructions

Provide a copy of SD-08 Manufacturer's Instructions submittals documented with the required approval.

1.5.5.3 O&M Submittal Data

Provide a copy of SD-10 Operation and Maintenance Data submittals documented with the required approval.

1.5.5.4 Parts Identification

Provide identification and coverage for the parts of each component, assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group the parts shown in the listings by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog.

## 1.5.5.5 Warranty Information

List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers or contract documents in order to keep warranties in force. Include warranty information for primary components of the system. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

## 1.5.5.6 Extended Warranty Information

List all warranties for products, equipment, components, and sub-components whose duration exceeds one year. For each warranty listed, indicate the applicable specification section, duration, start date, end date, and the point of contact for warranty fulfillment. Also, list or reference the specific operation and maintenance procedures that must be performed to keep the warranty valid. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

#### 1.5.5.7 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

#### 1.5.5.8 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.

1.5.5.9 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.

1.5.5.10 Field Test Reports

Provide a copy of Field Test Reports (SD-06) submittals documented with the required approval.

1.5.5.11 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each Subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's representative and service organization that can provide replacements most convenient to the project site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.6 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Provide the O&M data packages specified in individual technical sections. The information required in each type of data package follows:

- 1.6.1 Data Package 1
  - a. Safety precautions and hazards
  - b. Cleaning recommendations
  - c. Maintenance and repair procedures
  - d. Warranty information
  - e. Extended warranty information

- f. Contractor information
- g. Spare parts and supply list

## 1.6.2 Data Package 2

- a. Safety precautions and hazards
- b. Normal operations
- c. Environmental conditions
- d. Lubrication data
- e. Preventive maintenance plan, schedule, and procedures
- f. Cleaning recommendations
- g. Maintenance and repair procedures
- h. Removal and replacement instructions
- i. Spare parts and supply list
- j. Parts identification
- k. Warranty information
- 1. Extended warranty information
- m. Contractor information
- 1.6.3 Data Package 3
  - a. Safety precautions and hazards
  - b. Operator prestart
  - c. Startup, shutdown, and post-shutdown procedures
  - d. Normal operations
  - e. Emergency operations
  - f. Environmental conditions
  - g. Operating log
  - h. Lubrication data
  - i. Preventive maintenance plan, schedule, and procedures
  - j. Cleaning recommendations
  - k. Troubleshooting guides and diagnostic techniques
  - 1. Wiring diagrams and control diagrams

- m. Maintenance and repair procedures
- n. Removal and replacement instructions
- o. Spare parts and supply list
- p. Product submittal data
- q. O&M submittal data
- r. Parts identification
- s. Warranty information
- t. Extended warranty information
- u. Testing equipment and special tool information
- v. Testing and performance data
- w. Contractor information
- x. Field test reports
- 1.6.4 Data Package 4
  - a. Safety precautions and hazards
  - b. Operator prestart
  - c. Startup, shutdown, and post-shutdown procedures
  - d. Normal operations
  - e. Emergency operations
  - f. Operator service requirements
  - g. Environmental conditions
  - h. Operating log
  - i. Lubrication data
  - j. Preventive maintenance plan, schedule, and procedures
  - k. Cleaning recommendations
  - 1. Troubleshooting guides and diagnostic techniques
  - m. Wiring diagrams and control diagrams
  - n. Repair procedures
  - o. Removal and replacement instructions
  - p. Spare parts and supply list
  - q. Repair work-hours

- r. Product submittal data
- s. O&M submittal data
- t. Parts identification
- u. Warranty information
- v. Extended warranty information
- w. Personnel training requirements
- x. Testing equipment and special tool information
- y. Testing and performance data
- z. Contractor information
- aa. Field test reports
- 1.6.5 Data Package 5
  - a. Safety precautions and hazards
  - b. Operator prestart
  - c. Start-up, shutdown, and post-shutdown procedures
  - d. Normal operations
  - e. Environmental conditions
  - f. Preventive maintenance plan, schedule, and procedures
  - g. Troubleshooting guides and diagnostic techniques
  - h. Wiring and control diagrams
  - i. Maintenance and repair procedures
  - j. Removal and replacement instructions
  - k. Spare parts and supply list
  - 1. Product submittal data
  - m. Manufacturer's instructions
  - n. O&M submittal data
  - o. Parts identification
  - p. Testing equipment and special tool information
  - q. Warranty information
  - r. Extended warranty information

- s. Testing and performance data
- t. Contractor information
- u. Field test reports
- PART 2 PRODUCTS

Not used.

- PART 3 EXECUTION
- 3.1 TRAINING

Prior to acceptance of the facility by the Contracting Officer for Beneficial Occupancy, provide comprehensive training for the systems and equipment specified in the technical specifications. The training must be targeted for the building maintenance personnel, and applicable building occupants. Instructors must be well-versed in the particular systems that they are presenting. Address aspects of the Operation and Maintenance Manual submitted in accordance with Section 01 78 00 CLOSEOUT SUBMITTALS. Training must include classroom or field lectures based on the system operating requirements. The location of classroom training requires approval by the Contracting Officer.

#### 3.1.1 Training Plan

Submit a written training plan to the Contracting Officer for approval at least 60 calendar days prior to the scheduled training. Training plan must be approved by the Quality Control Manager (QC) prior to forwarding to the Contracting Officer. Also, coordinate the training schedule with the Contracting Officer and QC. Include within the plan the following elements:

- a. Equipment included in training
- b. Intended audience
- c. Location of training
- d. Dates of training
- e. Objectives
- f. Outline of the information to be presented and subjects covered including description
- g. Start and finish times and duration of training on each subject
- h. Methods (e.g. classroom lecture, video, site walk-through, actual operational demonstrations, written handouts)
- i. Instructor names and instructor qualifications for each subject
- j. List of texts and other materials to be furnished by the Contractor that are required to support training
- k. Description of proposed software to be used for video recording of training sessions.

#### 3.1.2 Training Content

The core of this training must be based on manufacturer's recommendations and the operation and maintenance information. The QC is responsible for overseeing and approving the content and adequacy of the training. Spend 95 percent of the instruction time during the presentation on the OPERATION AND MAINTENANCE DATA. Include the following for each system training presentation:

- a. Start-up, normal operation, shutdown, unoccupied operation, seasonal changeover, manual operation, controls set-up and programming, troubleshooting, and alarms.
- b. Relevant health and safety issues.
- c. Discussion of how the feature or system is environmentally responsive. Advise adjustments and optimizing methods for energy conservation.
- d. Design intent.
- e. Use of O&M Manual Files.
- f. Review of control drawings and schematics.
- g. Interactions with other systems.
- h. Special maintenance and replacement sources.
- i. Tenant interaction issues.

## 3.1.3 Training Outline

Provide the Operation and Maintenance Manual Files (Bookmarked PDF) and a written course outline listing the major and minor topics to be discussed by the instructor on each day of the course to each trainee in the course. Provide the course outline 14 calendar days prior to the training.

#### 3.1.4 Training Video Recording

Record classroom training session(s) on video. Provide to the Contracting Officer two copies of the training session(s) in DVD video recording format. Capture within the recording, in video and audio, the instructors' training presentations including question and answer periods with the attendees. The recording camera(s) must be attended by a person during the recording sessions to assure proper size of exhibits and projections during the recording are visible and readable when viewed as training.

## 3.1.5 Unresolved Questions from Attendees

If, at the end of the training course, there are questions from attendees that remain unresolved, the instructor must send the answers, in writing, to the Contracting Officer for transmittal to the attendees, and the training video must be modified to include the appropriate clarifications.

## 3.1.6 Validation of Training Completion

Ensure that each attendee at each training session signs a class roster daily to confirm Government participation in the training. At the completion of training, submit a signed validation letter that includes a sample record of training for reporting what systems were included in the training, who provided the training, when and where the training was performed, and copies of the signed class rosters. Provide two copies of the validation to the Contracting Officer, and one copy to the Operation and Maintenance Manual Preparer for inclusion into the Manual's documentation.

## 3.1.7 Quality Control Coordination

Coordinate this training with the QC in accordance with Section 01 45 00 QUALITY CONTROL.

-- End of Section --

# APPENDIX A

## STANDARD FORMS

LIST OF FORMS

Army Project Sign Project Sign Legend Defined Project Sign Erection Detail Safety Performance Sign Corps of Engineers Logo Accident Prevention Plan Checklist Construction Quality Control Report Weekly Temporary Electrical Inspection Minimum Standard for Temporary Electrical Service (Ref. FAR 52.236-14) SAS FL 363 - Foundation Data SAS Form 9 - Activity Hazard Analysis SAD FL198 - Report of Safety Meeting DA Form 5418-R - Cost Estimate Analysis DD Form 1354 - Transfer and Acceptance of Military Real Property DD Form 1354 Checklist DD Form 1532 - Pest Management Report DD Form 1532 - Pest Management Maintenance Record DHS Form I-9 - Employment Eligibility Verification ENG Form 16-1 - Certificate of Compliance for LHE and Rigging ENG Form 16-2 - Standard Pre-Lift Plan (LHE)/Checklist ENG Form 16-3 - Critical Lift Plan ENG Form 2454 - Construction Progress Chart ENG Form 3394 - Accident Investigation Report ENG Form 4025 - Transmittal of Shop Drawings, Equipment Data, Material Samples, or Manufacturer's Certificates of Compliance Real Property Inventory and BIS Worksheet Landfill Permit Application Hazardous Material Purchase Request for Contractor

Standard Form LLL-A - Disclosure of Lobbying Activities

LIST OF FORMS Contractor Hazardous Material Inventory Log (EPRCA)

Contractor-Furnished Spoil, Disposal Areas



Legend Group 1: The words:

"Construction	or	"Design and Construction
Supervised by:"		Supervised by:"

shall be placed on two lines using black, 1.25" Helvetica regular typeface. Maximum line length is 19".

10.5" Reverse Signature: The Corps symbol shall be a 10.5" white reverse signature using a 6" castle on a red background. The castle and surrounding border lines shall be white. The castle windows, door, and logo background are to be red. The words "U.S. Army Corps of Engineers" shall be black.

Legend Group 2: The words:

"Savannah District South Atlantic Division"

shall be placed on two lines below the 10.5" reverse signature, using black, 1.25" Helvetica regular typeface.

Legend Group 3: The "Name of Project" shall be placed on one to three lines using white 3" Helvetica bold typeface. Maximum line length is 42".

Legend Group 4: The "Army Installation" shall be a one or two line identification of the facility or name of the sponsoring department. Lettering is to be white, 1.5" Helvetica regular typeface. Maximum line length is 42".

NOTE: Cross-align the first line of legend group 4 with the first line of the Corps signature (U.S. Army Corps) as shown.

Legend Group 5a: The words:

"Architects:" or "Engineers:" or "Architect-Engineers:"

shall be a one to five line identification of the prime architect or engineering corporate or firm name, city, and State. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

Legend Group 5b: The "Contractor:" shall be a one to five line identification of the prime Contractor corporate or firm name, city, and State. Include type of Contractor, i.e. General Contractor, etc. Lettering shall be white, 1.25" Helvetica regular typeface. Maximum line length is 21".

NOTE: All typography shall be flush left and rag right, upper and lower case with initial capitals only as shown.



Each contractor's safety record is to be posted on Corps managed or supervised construction projects and mounted with the Construction Project Identification sign specified on page 16-2.

The graphic format, color, size and typefaces used on the sign are to be reproduced exactly as specified below. The

Legend Group 1: Standard two-line title "Safety is a Job Requirement" with 8" (outside diameter) Safety Green first aid logo. Color: To match Pantone system 347 Typeface: 3" Helvetica Bold Color: Black

Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"

Legend Group 3: One- to two-line identification: name of prime contractor and city, state address. Color: Black Typeface: 1.5" Helvetica Regular Maximum line length: 42"

Legend Group 4: Standard safety record captions as shown. Color: Black Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screwmounted to background. Color: Black Typeface: 3" Helvetica Regular Plate size: 2.5" x 4.5"

All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D. title with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend groups 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown.

Safety record numbers are mounted on individual metal plates and are screw-

mounted to the background to allow for daily revisions to posted safety performance record.

Special applications or situations not covered in these guidelines should be referred to the district Sign Program Manager.



Sign	Legend	Panel	Post	Specification	Mounting	Color
Type	Size (A)	Size	Size	Code	Height	Bkg/Lgd
CID-02	various	4'x4'	4"x4"	HDO-3	48"	WH/BK-SG





CORPS OF ENGINEERS LOGO HALF SIZE

Form A-0 U.S. Army Corps Accident Preventio	Date of Inspection	
Location (Plant or Facility)	Contract Number	
Contractor Name	Project Name	
Inspector Name (Print)	Inspector Signature	

This checklist serves as a guide only, it does not replace or eliminate the need to comply with the requirements set forth in Engineering Manual 385-1-1, Safety and Health Requirements Manual, dated 30 Nov 2014. The references included in this checklist correspond to the applicable sections of EM 385-1-1.

Item Description	Yes	No	N/A	Remarks (Any NO or N/A item)
a. Signature sheet		•	-	
1. Includes the name, title, signature, telephone number, and qualifications of the Plan Preparer ( <i>Qualified person, i.e. corporate safety staff person, QC</i> )				
2. Includes the name, title, signature, telephone number, and qualifications of the Plan Approver ( <i>e.g. owner, company president, regional vice president</i> ) (HTRW activities require approval of a Certified Industrial Hygienist, a Certified Safety Professional may approve the plan for operations involving UST removal where contaminants are known to be petroleum, oils, or lubricants).				
3. Includes the name(s), title(s), signature(s), telephone number(s), and qualifications for Plan Concurrence (provide concurrence of other applicable corporate and project personnel (contractor)) ( <i>e.g. Chief of Operations, Corporate Chief of Safety,</i> <i>Corporate Industrial Hygienist, project manager or</i> <i>superintendent, project safety professional, project QC.</i> )				
b. Background information				
1. Includes the Contractor Name.				
2. Includes the Contract Number.				
3. Includes the Project Name.				
4a. Includes the Brief Project Description.				
4b. Includes a Discription of the Work to be Performed.				
4c. Includes the Location of the Project (map).				
4d. Includes the Equipment to be Used.				
4e. Includes the Anticipated High Risk Activities.				
5. Includes the Major Phases of Work Anticipated. (Within these major phases of work identified, activities [includes Definable features of Work (DFOWs) and tasks] to be performed that will require an AHA shall be specifically highlighted. This information can then be used by QC, QA and Safety personnel to track AHA submittals. The AHAs for these activities, tasks of DFOWs are NOT submitted at this time (AHAs created/submitted at this time would not be activity-specific as they are intended to be). > See Sections 01.A.14 and 01.A.15.)				

Form A-02 U.S. Army Corps of Engi Accident Prevention Plan Chee	Date of Inspection					
Item Description	Yes	No	N/A	Remarks (Any NO or N/A item)		
c. Statement of Safety and Health Policy.			<u> </u>			
1. Provide a copy of current corporate/company Safety and Health Policy Statement, detailing commitment to providing a safe and healthful workplace for all employees. ( <i>In addition to the corporate</i> <i>policy statement, a copy of the corporate safety program may</i> <i>provide a portion of the information required by the accident</i> <i>prevention plan.</i> )						
2. Includes Contractor's written safety program goals.						
3. Includes Contractor's written safety program objectives.						
4. Includes the Contractor Accident Experience ( <i>Copy of OSHA 300 Forms, or equivalent documentation</i> ).						
d. Responsibilities and Lines of Authority.						
1. Includes statement of the employer's ultimate responsibility for the implementation of his SOH program for his own employees, all sub-contractors and all others on the worksite (includes the strict enforcement of the program).						
<ol> <li>Includes the identification and accountability of personnel responsible for safety and health at both the corporate and project level – including their resumes. Qualifications shall be in accordance with Section 01.A.17. (Only official OSHA 30-Hour cards will be accepted or, if equivalent training is provided, appropriate instructor qualifications.)</li> <li>Includes equivalent training to the OSHA 30-Hour classes is being prosphere as a gualification.</li> </ol>						
minimum, the areas discussed in Appendix A, Section 3.d.3.(a-d).						
4. Includes the names of Competent (CP) and/or Qualified Person(s) (QP) and proof of competency/qualification to meet specific OSHA CP/QP requirements. <i>(Must include copies of proof of CP/QP).</i>						
5. Includes requirements and details of the employer's Risk Management Process. (USACE uses the Activity Hazard Analysis (AHA) as part of a total risk management process. Contractors and other individual employer's may use the AHAs or their own version [Job Safety Analyses (JSAs), Job Hazard Analyses (JHAs), or similar Risk Management assessment tools]. These documents are considered equivalent to, and acceptable substitutes for, the USACE's AHA provided the data collected is the same as that required by the AHA.)						
<ol> <li>Includes requirements for initial activity-specific AHAs to be submitted and accepted at preparatory meetings, prior to work being performed;</li> </ol>						
7. Includes requirements that no work by the Contractor shall be performed unless a designated Competent Person/SSHO is present on the job site.						
8. Includes policies and procedures regarding non-compliance with safety requirements (to include disciplinary actions for violation of safety requirements).						
9. Lines of authority.			<b></b>			
and supervisors accountable for safety.						
Form A-02 U.S. Army Corps of Engi Accident Prevention Plan Chec	Date of Inspection					
---	--------------------	----	-----	---------	----------------------	--
Item Description	Yes	No	N/A	Remarks	(Any NO or N/A item)	
e. Subcontractors and Suppliers.						
1. Includes the list of subcontractors and suppliers. (If not known at the time of initial APP submittal, the contractor shall include the following statement in their initial APP: "The subcontractors for the following DFOWs/activities are not known at this time, but additional information will be submitted to the APP for acceptance prior to the start of any activities listed")						
1. Includes requirements for new hire SOH orientation training at the time of initial hire of each new employee.						
<ol> <li>Includes requirements for mandatory training and certifications that are applicable to this project (<i>e.g., explosive actuated tools,</i> <i>confined space entry, crane operator, diver, vehicle operator,</i> <i>HAZWOPER training and certification, PPE</i>) and any requirements for periodic retraining / recertification.</li> <li>Includes procedures for periodic safety and health training for</li> </ol>						
supervisors and employees.						
<ol> <li>Includes the requirements for emergency response training.</li> </ol>		-				
g. Safety and Health Inspections						
<ol> <li>Includes specific assignment of responsibilities for a minimum daily jobsite SOH inspection during periods of work activity.</li> </ol>						
<ol> <li>Includes the name(s) of individual(s) responsible for conducting safety inspections. (<i>e.g., PM, safety professional, QC, supervisors, employees</i>)</li> </ol>						
1b. Includes proof of inspector's training / qualifications.						
1c. Indicates when inspections will be conducted.     1d. Indicates procedures for documentation. <i>(Furnished sample forms upon which inspections will be recorded.)</i> 1e. Indicates deficiency tracking system and follow-up procedures.     2. Includes any external inspections / cartifications which may be						
required. ( <i>e.g., US Coast Guard</i> )						
h. Mishap Reporting and Investigation						
1. The plan identifies how, when, and who shall complete the Exposure data (man-hours worked).						
2a. The plan identifies how, when, and who shall complete mishap investigations, reports, and logs. ( <i>The contractor shall report,</i> <i>thoroughly investigate, and analyze all mishaps occurring</i> <i>incidentally to an operation, project or facility for which this manual</i> <i>is applicable.</i> )						
2b. The plan identifies how, when, and who shall make immediate notification of major mishaps. <i>(Mishaps shall be reported as soon as possible but not more than 24 hours afterwards to the KO/COR.)</i>						
2c. Includes how, when, and who will provide notice to the KO/COR when corrective actions are completed. <i>(Implement corrective actions as soon as reasonably possible.)</i>						

Form A-02 U.S. Army Corps of Engl	Date of Inspection				
Accident Prevention Plan Chec					
Based on a risk assessment of contracted activities and on ra applicable safety and occupational health risks and associate procedures (assessments and evaluations), may include but not b	nandat d com e limite	ory OS plianc od to:	SHA co e plans	<i>mpliance programs, t</i> . Using the EM 385-1-1	he Contractor shall address all as a guide, plans, <u>programs,</u>
(1)Include a project-specific compliance plan, as applicable to the wo procedures to control hazards to which the employees of all project em- (2) These procedures shall be coordinated with all project employers procedures, PPE requirements, recordkeeping and reporting requirement (3) The plans shall be prepared prior to the start of any work activitie plans shall be updated throughout the life of the project to include chan as necessary to reflect changing site conditions, construction methods, (4) No activity (DFOW) shall be started on site until the APP is revise	ork being ployers and shi ents, and s on the ges in p person ed and s	g perfor may be all inclu d trainin job site personn nel role ubmitte	med, ar expose de proje g requir e (as mu el, equip s and re ed to the	nd as identified below. Th ed. ect-specific, project-wide ements. uch as the information ca oment, conditions, etc. Ac sponsibilities and constru GDA for acceptance, with	e plans shall incorporate project-wide emergency response and evacuation n be known at that point in time). The Iditional revisions shall be incorporated iction schedules. In the site-specific plans, programs and
procedures required to complete the project.					
i. Plans (Programs, Procedures, Assessments, and Evaluations) required by the Safety Manual	Yes	No	N/A	Remarks (A	iny NO or N/A Item)
1. <u>Fatigue Management Plan (01.A.20)</u>					
2. Emergency Plans (01.E):					
(a) Procedures & Test (01.E.01)		<u> </u>	<u> </u>		
(b) Spill Plans (01.E.01, 06.A.02)			<u> </u>		
(c) Fire Fighting Plan (01.E.01; 19.A)					
(d) Posting of Emergency Telephone Numbers (01.E.05)					
(e) Man overboard/abandon ship (19.A.04)					
(f) Plan for prevention of alcohol and drug abuse (01.C.02 & Specs)					
3. Site Sanitation/Housekeeping Plan (02.B)					
4. Medical Support <u>Agreement</u> . Outline on-site medical support and off-site medical arrangements including rescue and medical duties for those employees who are to perform them, and the name(s) of on-site Contractor personnel trained in first aid and CPR. A minimum of two employees shall be certified in CPR and first-aid per shift/site (03.A.01, <u>03.A.03</u> )					
5. <u>Blood-borne Pathogen Program</u> (03.A.05)					
6. Exposure Control Plan (03.A.05)					
7. Automatic External Defibrillator (AED) Program (03.B.04)					
8. Site Layout Plan (04.A)					
9. Access/Haul Road Plan (04.B)					
10. <u>Hearing Conservation Program</u> (05.C)					
11. Respiratory Protection Plan (05.G)					
12. Health Hazard Control Program (06.A)					
13. Hazard Communication Program (06.B.01)					
14. Process Safety Management Plan (06.B.04)					
15. Lead <u>Compliance</u> Plan (06. <u>C.02</u> & Specifications)					
16. Asbestos Abatement Plan (06. <u>C.03</u> & Specifications)					

Form A-02 U.S. Army Corps of Engi Accident Prevention Plan Chec	Date of Inspection											
Based on a risk assessment of contracted activities and on mandatory OSHA compliance programs, the Contractor shall addres applicable occupational risks and compliance plans. Using the EM 385-1-1 as a guide, plans, procedures, procedures (assessments and evaluations), may include but not be limited to:												
Item Description	Yes	No	N/A	Remarks (Any NO or N/A item)								
i. Plans (Programs, Procedures) continued.												
17. Radiation Safety Program (06.F)												
18. Abrasive Blasting Plan (06.I)												
19. Heat Stress Monitoring Plan ( <u>HSMP</u> ) (06. <u>J.02</u> )												
20. Cold Stress Monitoring Plan ( <u>CSMP</u> ) (06. <u>J.04</u> )												
21. Indoor Air Quality Management Plan (06.L)												
22. Mold Remediation Plan (06.L.04)												
23. Chromium (VI) Exposure Evaluation (06.M)												
24. Crystalline Silica Assessment (06.N.02)												
25. Lighting Plan for Night Operations (07.A.06)												
26. Traffic Control Plan (08.C.05)												
27. Fire Prevention Plan (09.A.01)												
28. Wild Land Fire Management Plan (09.L)												
29. Arc Flash Hazard Analysis (11.B)												
30. <u>Assured Equipment Grounding Control Program</u> (AEGCP), ( <u>11.D.05</u> , <u>Appendix E</u> )												
31. Hazardous Energy Control Program and Procedures (12.A.01)												
32. Standard Pre-Lift Plan – LHE (16.A.03)	ĺ											
33. Critical Lift Plan – <u>LHE</u> (16.H)												
34. Naval Architectural Analysis – LHE (Floating) (16.L)												
35. Floating Plant Inspection and Certification (19.A.01)		<u> </u>										
36. Severe Weather Plan for Marine Activities (19.A.03)	<u> </u>	<u> </u>										
37. Emergency Plan for Marine Activities (19.A.04)												
38. Man Overboard/Abandon Ship Procedures (19.A.04)												
39. Float Plan for Launches, Motorboats, Skiffs (19.F.04)	1											
40. Fall Protection and Prevention Plan (21.D)	<u> </u>											
41. Demolition/ <u>Renovation</u> Plan (to include engineering survey) (23.A)												
42. Rope Access Work Plan (24.H)												
43. Excavation/Trenching Plan (25.A.01)												
44. Fire Prevention and Protection Plan for Underground Construction (26.D.01)												
45. Compressed Air Work Plan for Underground Construction (26.1.01)												
46. Erection and Removal Plan for Formwork and Shoring (27.C)												
47. Precast Concrete Plan (27.D)												

Form A-02
U.S. Army Corps of Engineers
Accident Prevention Plan Checklist (cont'd)

Based on a risk assessment of contracted activities and on mandatory OSHA compliance programs, the Contractor shall address all applicable occupational risks and compliance plans. Using the EM 385-1-1 as a guide, plans, procedures (assessments and evaluations), may include but not be limited to:

Item Description	Yes	No	N/A	Remarks (Any NO or N/A item)
i. Plans (Programs, Procedures) continued.				
48. Lift-slab Plans (27.E)				
49. Masonry Bracing Plan (27. <u>F</u> .01)				
50. Steel Erection Plan ( <u>28.B</u> )				
51. Explosives Safety Site Plan (ESSP) (29.A)				
52. Blasting Plan (29.A; <u>26.J</u> )				
53. Dive Operations Plan (30.A. <u>14</u> , 30.A. <u>16</u> )				
54. Safe Practices Manual for Diving Activities (30.A.15)				
55. Emergency Management Plan for Diving (30.A.18)				
56. Tree Felling/Maintenance Program (31.A.01)				
57. <u>Aircraft/Airfield Construction Safety &amp; Phasing Plan (CSPP)</u> (32.A.02)				
58. <u>Aircraft/Airfield Safety Plan Compliance Document (SPCD)</u> (32.A.02)				
59. Site Safety and Health Plan (HTRW) (33.B)				
60. Confined Space Entry Procedures (34.A.05)				
61. Confined Space Program (34.A.06)				
j. Risk Management Processes (AHAs). Detailed project-specific hazards and controls shall be provided by Activity Hazard Analysis for each activity (DFOW). <u>No work will begin on an activity (DFOW)</u> until the initial AHA has been accepted by the GDA addressing the project-specific hazards. (01.A.14 & 01.A.15) <u>Note: USACE uses the</u> Activity Hazard Analysis (AHA) as part of a total risk management process. Contractors and other individual employer's may use the AHAs or their own version [Job Safety Analyses (JSAs), Job Hazard Analyses (JHAs), or similar Risk Management assessment tools]. These documents are considered equivalent to, and acceptable substitutes for, the USACE's AHA provided the data collected is the same as that required by the AHA.				

Remarks:

Form A-02 U.S. Army Corps of Engineers Accident Prevention Plan Checklist (cont'd)	Date of Inspection
Other Remarks:	

#### CONTRACTOR'S NAME (Address)

DAILY CONTRACTOR	QUALITY	CONTROL	REPORT
------------------	---------	---------	--------

Date: \_\_\_\_\_ Report No. \_\_\_\_\_

Contract No.

Description and Location of Work: \_\_\_\_\_

Weather: (Clear) (P. Cloudy) (Cloudy); Temperature: \_\_\_\_ Min. \_\_\_ Max; \_\_\_\_

Rainfall \_\_\_\_\_ inches

Contractor/Subcontractors and Area of Responsibility

1. Work Performed Today: (Indicate location and description of work performed. Refer to work performed by prime and/or subcontractors by letter in table above.)

2. Results of Surveillance: (Include satisfactory work completed, or deficiencies with action to be taken.)

3. Tests required by Plans and/or Specifications Performed and Results of tests:

4. Verbal Instructions Received: (List any instructions given by Government personnel on construction deficiencies, retesting required, etc., with action to be taken.)

5. Remarks: (Cover delays and any conflicts in plans, specifications, or instructions.)

6. Safety Inspection: (Report violations noted; corrective instructions given; and corrective actions taken.)

7. Equipment Data: (Indicate items of construction equipment, other than hand tools, at jobsite, and whether or not used.)

CONTRACTOR'S VERIFICATION: The above report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications except as noted above.

Contractor's Approved Authorized Representative

#### WEEKLY TEMPORARY ELECTRICAL INSPECTION

Week ending \_\_\_\_\_

Contract No. \_\_\_\_\_

Contract Description \_\_\_\_

The following items were inspected in accordance with requirements in National Electrical Code and Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1.

1. Wire (size, type, condition).

2. Systems and devices (polarity, continuity of ground, resistance to ground).

3. Resistance of ground rods (25 OHMS) measured and recorded.

4. Check GFI for 15/20 amp 120 volt circuits.

5. Plugs and receptacles (type, NEMA rating).

6. Circuit breakers and disconnect (size, type, weatherproof).

- 7. Extension cords (type, UL listed, insulation condition, splices, location).
- 8. Open wiring on insulators, nonmetallic sheathed cable, outside clearance (600 volts or less), Festoon lighting (as applicable).

Signature Electrician/Electrical Engineer

#### MINIMUM STANDARD FOR TEMPORARY ELECTRICAL SERVICE



#### (DIMENSIONS ARE APPROXIMATE)

A. The backboard for temporary service shall consist of not less than 1/2 inch plywood of exterior grade.

B. Numbers above correspond to the item below:

Item 1 - NEMA 3R circuit breaker type panelboard. This panelboard shall consist of 1 two-pole 60 amp main circuit breaker, 4\* one pole 20 AMP branch circuit breakers, and 1\* two pole 20 AMP branch circuit breaker. Breakers shall meet Federal Specifications Standards for Class 1A breakers and shall be plug-in type. (\*Number of breakers to be adjusted to suit the job requirements.)

Item 2 - Duplex grounding type convenience outlets in standard utility type outlet boxes with covers, meeting the NEC and NEMA requirements for wet locations. Connections to the branch circuit breakers shall be grounded by two conductors #12 NMC cable.

Item 3 - (Optional) A single three-conductor grounding type outlet rated for 250 volt service meeting the NEC and NEMA requirements for wet locations. Connections from this outlet to the two pole breaker shall be by two conductor grounded type NMC cable.

Item 4 - 3/4 inch PVC. This shall be used to support extension cords.

Item 5 - NEMA 3R service disconnect safety switch - 60 amp minimum.

C. The panelboard shall be grounded by #6 copper wire connected to a 3/4 inch by 10-foot long ground rod.

D. Service to the panel shall consist of three copper conductor #6 minimum service entrance cable. This cable may enter the top or side of the panelboard.

E. Periodic inspections of systems and devices will be made by the Contractor at intervals not to exceed 1 week, and a report will be submitted indicating the results.

F. All receptacle outlets that provide temporary electrical power during construction, remodeling, maintenance, repair, or demolition shall have ground-fault circuit-interrupter (CFCI) protection for personnel. GFCI protection shall be provided on all circuits serving portable electric hand tools or semi-portable electric power tools (such as block/brick saws, table saws, air compressors, welding machines, and drill presses). See EM 385-1-1 for exceptions.

G. Per EM 385-1-1 all temporary power distribution systems shall be submitted to the field office before installation.

### **FOUNDATION DATA**

Project Title:				
FY:	L.I			
Location:				
A-E Firm:				
A-E Phone No				
1. The following information is project. (A separate CESAS FL project.)	furnished relative to t _ 363 shall be comple	the foundatic eted for each	on analysis for the s n structure involved	subject in the
a. Type of structural system:	(Brief Statement)			
b. General Scope: (Check applicable block	feet by s below)	feet	# of stories	
Slab-on Grade	Baseme	ent Walls:		
Crawl Space	□ (1	) Fixed at 1s	st Floor	
Retaining Walls	□ (2	) Fixed at Fo	ootings	
Areas Recessed below	F.F. (Provide with inf	o for Item 2.	below)	
c. Type of Foundation: (Chec	k applicable blocks a	and fill in load	ds)	
Mat. Foundation	Approx. Max.	. Load on Ma	at. Foundation	K/SF
Spread Footings	🗆 Approx. Max	. Col. Load _	Kips	
☐ Wall Footings	Approx. Max.	. Wall Load _	K/ft.	
Foundation Walls	Grade Beam	S		
Rolled Edge Slab	Combined Fo	ootings (See	Item 2. below)	
Piles	🗆 Underpinning	) (See Item 2	2. below)	
d. Other:				
Pre-Engineered Building:	Yes	,	No	
Basement and/or Crawl Spa	ace Elevation:		MSL	
Finished Floor Elevation:			MSL	

### **FOUNDATION DATA**

2. Specific information and details pertinent to the foundation analysis are attached to this form.

3. Attached is one reproducible copy (Sepia or Cronaflex) of the detail site plan and a plan showing the location of columns and walls. (If the maximum column load exceeds 100 Kips or the maximum wall load exceeds 3 K/ft., the individual load, dead and live, for each footing shall be provided on the location plan of columns and walls.)

4. Boring locations will be determined by Savannah District personnel.

**AE** Representative

Date

#### ACTIVITY HAZARD ANALYSIS

1. Phase of Construction		
2. Location	3. Contract No.	4. Project
5. Prime Contractor	6. Date of Preparatory	7. Estimated Start Date
Potential Safety Hazard	Procedure to Control Hazard	
8. Contractor's Representative (signature)	9.	

SAS Form 9 1 Jan 82

REPORTING OF SAFETY MEETING		
	(INSTALLATION, FIE	LD OFFICE, JOB, ETC.)
THRU EN CD OP RE TO SO		FROM:
DATE:	TIME:	(A.M./P.M.)
NO. EMPLOYEES PRESENT	DURATION	[:
Old Business: (Review report correct any safety deficient business.)	rt of last meeting. cies brought up at	Follow up on action taken or anticipated to last meeting. Discuss any unfinished
New Business: (Discuss any any mishaps or injuries whice	unsafe acts or con ch occurred during	ditions observed since last safety meeting and the week.)
Safety Presentation: (Safet to operation at hand.)	ty talk, movie, or	slide presentation on subject that is relevant
DATE AND TIME OF NEXT MEETIN	лG	
		(Signature and Title)

SAD FL 198, 1 APR 80

COST ESTIMATE ANALYSIS						ON/CONTRA	CTOR	EFFFECTIV	E PRICING	DATE	DATE PREPARED			
PROJECT	CODE (Ch	eck one) B	_C	DRAWING N	NO.		SHEET	OF	SHEETS					
LOCATION								ESTIMATO	R		CHECKED BY			
	QUA	NTITY		L	ABOR		EQU	IPMENT	MATERIAL			SHI	PPING	
TASK DESCRIPTION	# OF UNITS	UNIT AREAS	MIN TOTAL UNIT HRS		UNIT PRICE COST		UNIT PRICE	COST	UNIT PRICE COST		TOTAL	UNIT WT	TOTAL WT	
	<u> </u>													
	<b> </b>													
TOTAL THIS SHEET														

DA Form 5418-R

	TRANSFER AND ACCEPTANCE OF DoD REAL PROPERTY														Form Approved OMB No. 0704-0188			
																PAGE	OF	PAGES
Ine public reporting ourgen for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and conclusion. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, be Department of Defense, Washington Headquarters Service Directorate, Information Management Division, 4800 Mark, Center Dive, Alexandria, VA 22350-3100 (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for															and completing and re ervices, Executive Ser alty for failing to comply	viewing the vices with a		
collection PLEAS	collection of information if itdoes not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE ABOVE ORGANIZATION.																	
1. FR	OM (Organiz	ation Name)			2. DA	TE PRE	T/JOB	4. SERIAL NUMB	ER	8. TR/	ANSAG	CTION	DETAIL	S				
					(YY)	YMMDE	))	NUMBER			Ē	a. MET	HOD (X	all that	apply)		b. WHEN/EVEN	Г (X one)
													CQUISI	ITION BY	CONSTR	UCTION		SERVICE
5. TO	(Organization	- Installation	Code and Nan	ne)	6. RPS			7. CONTRA	CT	7a. PLACED-IN-	-	$\square$	APITAL		/EEN SER	RVICES		SERVICE
					inor	OUDLIN		NOWBER	(3)	(YYYYMMDD)	-		VENTO	DRY ADJ	USTMENT		PARTIAL A	-SERVICE
											Ē	c. TYPE	(X one	e)				
												1	RAFT		FINAL		INTERIM	
9.	10a.	10b.	11.	12. CATCODE	13.	14.	15	AREA 16	17	OTHER 18		19. COST		20.	21.	22. INTER-	23. ITEM	
NO.	NO.	IN OID	CODE	DESCRIPTION	CODI	CODE	PRIMARY	PRIMARY UM	SECOND	ARY SECONDARY UM		0001	s	SOURCE	ORG	EST CODE	REMAR	ĸs
								12										
														1				
																		6
24. ST	ATEMENT	F COMPL	ETION. The	facilities listed hereor	are in	accorda	Ince with	mans	25a A	CCEPTED BY (Tune	od Nan	ne and	Signatu	(00			h DATE SIGNE	
dra	wings, and s	pecification	ns and change	e orders approved by	the aut	horized	represent	tative of			o redri	no and t	กฐกิลเปล	(0)			(YYYYMMDD)	)
a. TRA	NSFERRED B	Y (Typed Na	ame and Signat	ure)	0190 310	0.	b. DATE	SIGNED										
							(YYYY	(MMDD)	C TITI	F (DPW/RPAO)							26 PROPERTY	·
c. TITL	E (Area Engr.	/Base Engr./	/DPW/Construct	tion Agent)					0. 111								VOUCHER	NUMBER

27. CONSTRUCTION DEFICIENCIES (Attach blank sheet for continuations)	28. PROJECT REMARKS (Attach blank sheet for continuations)			
INSTRU				
GENERAL. This form has been designed and issued for use in connection with the transfer of	10a. Facility Number. Assigned in accordance with the Installation/Base Master Numbering Plan.			
military real property between the military departments and to or from other government agencies. It supersedes ENG Forms 290 and 290B (formerly used by the Army and Air Force)	10b. RPUID. Identified in Real Property Inventory.			
and NAVDOCKS Form 2317 (formerly used by the Navy). Existing instructions issued by the military departments relative to the preparation of DD	11. Category Code. The category code describes the facility usage.			
Form 1354 are applicable to this revised form to the extent that the various items and columns on the superseded forms have been retained. The military departments may promulate	12. Catcode Description. The category code name which describes the facility usage.			
additional instructions, as appropriate. For detailed instructions on how to fill out this form please refer to Unified Eacilities Criteria	13. Type. Type of construction: P for Permanent; S for Semi- permanent; T for Temporary.			
(UFC) 1-300-08, dated 16 April 2009 or later.	14. Sustainability Code. Reports whether or not an asset meets the sustainability guidelines set forth			
SPECIFIC DATA ITEMS.	in Section 2(g) of Executive Order 13514. Valid values are: 1 (asset meets the guidelines); 2 (asset does not meet the guidelines); 3 (asset not evaluated); 4 (asset not subject to guidelines).			
1. From. Name of the transferring agency.	<b>15. Area: UM 1.</b> Area unit of measure; use the unit of measure associated with the category code selected in 11.			
<b>2. Date Prepared.</b> Date of actual preparation. Enter all dates in YYYYMMDD format (Example: March 31, 2010 = 20100331).	16. Total Quantity UM 1. The total area for the measure identified in Item 15. Use negative numbers for demolition.			
3. Project/Job Number. Project number on a DD Form 1391 or Individual Job Order	17. Other: UM 2. Unit of Measure 2 is the capacity or other measurement unit (e.g., LF, MB, EA, etc.).			
Number.	18. Total Quantity UM 2. The total capacity/other for the measure identified in Item 17.			
<ol> <li>Serial Number. Sequential serial number assigned by the preparing organization (e.g., 2010-0001).</li> </ol>	<b>19. Cost.</b> Cost for each facility; for capital improvements to existing facilities, show amount of increase only. If there is no increase for the capital improvement, enter N/A.			
5. To. Name and address of the receiving installation, activity, and Service of the Real	20. Fund Source. Enter the Fund Source Code for this item.			
	21. Funding Organization. Enter the code for the organization responsible for acquiring this facility.			
<ol> <li>RPSUID/SITENAME/INSTCODE/INSTNAME. Site Unique Identifier and name or installation code and name where the constructed facility is located.</li> </ol>	22. Interest Code. Enter the code that reflects government interest or ownership in the facility.			
7. Contract Number(s). Contract number(s) for this project.	23. Item Remarks. Remarks pertaining only to the item number identified in Item 9; show cost sharing.			
7a. Placed-In-Service Date. RPA Placed In Service Date. This is the date the asset is actually placed-in-service.	<b>24. Statement of Completion.</b> Typed name, signature, title, and date of signature by the responsible transferring individual or agent.			
	25. Accepted By. Typed name, signature, title, and date of signature by the RPAO or accepting official.			
a. Method of Transaction. Mark (X) as many boxes as apply.	26. Property Voucher Number. Next sequential number assigned by the RPAO in voucher register.			
<ul> <li>b. When/Event. When or event causing preparation of DD Form 1354. X only one box.</li> <li>c. Type. Draft, interim, or final DD Form 1354. X only one box.</li> </ul>	27. Construction Deficiencies. List construction deficiencies in project during contractor turnover inspection.			
9. Item Number. Use a separate item number for each facility, no item number for additional usages.	28. Project Remarks. Project level remarks and continuation of blocks.			

DD FORM 1354 (BACK), AUG 2013

# **1354 CHECKLIST for Project Closeout**

PROJECT NUMBER:				
BUILDING NUMBER:				
DESCRIPTION OF PROJEC	Т:			
Describe description of work; i.e	e., New Construction, Add	lition, Modification,	Renovation, etc	
DRAWING NUMBER :				
TOTAL COST OF BUILDING	Ĵ:	(Cost of buil	ding only, sometimes do	bes not include the
cost of systems or plants. Costs building)	of installed equipment su	ch as water coolers,	urinals, etc. is included	in the cost of the
DEMOLITION COSTS:		(if any)		
ACTUAL PROJECT COMPL	LETION DATE:			
CECMC PROJECT CLOSEC	OUT DATE:			
CATEGORY CODES	NOMENCLAT	TURE	TOTAL COST	TOTAL SF
NUMBER OF FLOORS: OUTSIDE DIMENSIONS: Main building SF	(from outside wall to outs	side wall)		
Wings SF				
Offsets SF				
CONSTRUCTION MATE	RIAL:			
Foundations (such as concrete)	ТҮРЕ			
Floors (such as wood, concrete)	ТҮРЕ			
Walls (such as wood siding)	ТҮРЕ			
Roof (such as built-up, shingle)	TYPE			
UTILITIES ENTERING B	UILDING from STRI	EET:		
<b>Water Line</b> (size of pipe ex: 1 <sup>1</sup> / <sub>2</sub> 2", 3 <sup>1</sup> / <sub>2</sub> )	<sup>2</sup> ", SIZE	LF		
Gas Line (size of pipe)	SIZE	LF		
Sewer Line (size of pipe)	SIZE	LF		
<b>Electrical Service</b> (phase, # wir voltage, amperage capacity)	es, SIZE	LF		

PLANT SY	TEMS - AIR CONDITIONIN	NG			
Category Code	Nomenclature	Unit of Measure	Amount	Cost	Description
800 126	A/C Window Units	TN			
890-120	A/C whidow childs	SF			
000 125	A/C System	TN			
890-125	less than 5 Ton	SF			
890-121	A/C System 5 to 25 ton	TN			
826-122	A/C System (Plant) 25 to 100 ton	TN			
826-123	A/C System (Plant) Over 100 ton	TN			
826-234	A/C System from Central Plant	TN			

NOTE: Choose, which ever best applies. Include actual tonnage for each unit separately.

PLANT SY	TEMS - HEATING				
Category Code	Nomenclature	Unit of Measure	Amount	Cost	Description
821-113	Heating from a Central Plant	MB			
821-115	Heating Plant 750-500 M Btu	MB			
821-116	Heating Plant Over 3500 M Btu	MB			

NOTE: Heating Plants under 750 MB don't need to be broken out as a plant on the DD Form 1354, but do need to be annotated on the Real Property Installed Equipment (RPIE) list. Related equipment such as boilers, hot water pumps, fans, etc., should be reflected in the cost for the plant on the DD Form 1354. See the last page for definition of RPIE and a short listing of RPIE items (not all-inclusive).

ELECTR	CAL SYSTEMS:			
135-583	Telephone Duct Facility	LF	 	
135-586	Telephone Pole	LF	 	
811-147	Emergency Electric Power	kW	 	
	Generation Plant	GA	 	
		Type FUEL	 	
812-223	Primary Overhead Electrical Distribution Line	LF	 	
	Transformers	KVA		
	Power Poles	LF	 	
812-224	Secondary Overhead Electrical	LF	 	
	Distribution Line			
812-225	Primary Underground	LF	 	
	Electrical Distribution Line			
812-226	Secondary Underground Electrical Distribution Line	LF	 	

812-926	Exterior Area Lighting (Street, Parking Area, Safety and Security Lighting) list type, mercury vapor, metal halide, high pressure, low pressure	EA	 	
812-928	Traffic Lights	EA	 	
890-181	Utility Line Duct	LF		
890-187	Utility Vault - Four or More Transformers	SF	 	

## FIRE PROTECTION:

Category Code	Nomenclature	Unit of Measure	Amount	Cost	Description
843-314	Fire Protection Water Main	LF			
843-315	Fire Hydrants	EA			
880-211	Closed Head Automatic Sprinklers	SF HD			
	Open Head <b>Deluge</b> System	SF			
880-212	(normally found only in aircraft hangers)	HD			
	Automatic Fire Detection System	SF			
880-221	associated equip - strobes, lights, bells, heat detectors and pull boxes)	EA			
880-222	Manual Fire Alarm System - pull boxes only	EA			
880-231	CO <sub>2</sub> Fire Suppression System	EA			
880-232	Foam Fire Suppression System	EA			
880-234	Halon 1301 Fire Suppression System	EA			
880-233	Other Fire System	EA			
Choose wh	ichever applies.				

### **SECURITY:**

Category Code	Nomenclature	Unit of Measure	Amount	Cost	Description
872-841	Security Alarm System	EA			
872-247	Fence Security/Vehicle Barriers	LF/LM			
872-248	Fence Interior	LF/LM			
872-845	Security Alarm System	EA			
FACILITY	Y INFRASTRUCTURE:				
Category		Unit of			

Category Code	Nomenclature	Unit of Measure	Amount	Cost	Description
824-464	<b>Gas Lines</b> (piping) list size and type (plastic, steel) in description block	LF			
831-169	Sewage Septic Tank - tank size	KG			
832-266	Sanitary <b>Sewer</b> - list size line and type material	LF			

842-245	Water Distribution Mains - list size and type	LF	 	
851-143	Curbs & Gutters	LF	 	
851-145	<b>Driveway</b> - list type, Asphalt, Concrete, Gravel	SY	 	
951 147	Road - list type, Asphalt,	SY	 	
031-14/	Concrete, Gravel	LF	 	
852-261	Vehicle Parking, Operations	SY	 	
852-262	Vehicle Parking, Non-Org	SY	 	
852-289	<b>Sidewalk</b> - list thickness and type of material	SY	 	
871-183	Storm Drain	LF	 	
872-245	Fence, Boundary	LF	 	
872-247	Fence, Security	LF	 	
872-248	Fence, Interior	LF	 	
890-269	<b>Cathodic Protection System</b>	EA	 	

NOTE: Generally, this 1354 Checklist for Category Codes to identify a Facility Infrastructure will suffice without have to reference the entire AF Category Codebook. However sometimes you will have to consult the AF Category Codebook or Real Property office for assistance.

# **ITEMS OFTEN FOUND IN SPECIALIZED FACILITIES**

(Special Purpose)

INDUSTR	IAL SHOP AREAS:				
Category Code	Item	UM	Amount	Cost	Description
RPIE	Air Compressors	HP			
RPIE	Hoists, Cranes-Fixed	TN			
RPIE	Hydraulic Lifts	TN			
RPIE	Emergency Shower	EA			
?	Fixed Spray Paint Booth	SF			
890-158	Loading and Unloading Platform	SF			
832-255	Industrial Waste Main	LF			
890-144	Compressed Air Distribution	LF			

NOTE: Identify RPIE. Size, Amount or unit of measure (there is No Category Code for RPIE items).

CHAPEL:				
Category Code	Item	UM	Amount	Description
RPIE	Pews	EA		
RPIE	Altars	EA		
RPIE	Lecterns	EA		
RPIE	Pulpit	EA		
THEATER	R:			
Category Code	Item	UM	Amount	Description
RPIE	Theater Seats Secured to Floor	EA		

BILLETIN	NG /TLF/VOQ:			
Category Code	Item	UM	Amount	Description
RPIE	Built-in Household Dishwasher	EA		
RPIE	Garbage Disposal	EA		
RPIE	Range Hood with Exhaust Fan	EA		
RPIE	Water Softener (house hold type)	EA		
MWR FA	CILITIES:			
Category Code	Item	UM	Amount	Description
RPIE	Dishwashers (built-in)	EA		
RPIE	Walk-in Refrigerators (built-in)	EA		
RPIE	Garbage Disposal Unit	EA		
RPIE	Range Hood with Exhaust Fan	EA		
RPIE	PA Systems (built-in)	EA		
RPIE	Vault (built-in)	EA		
RPIE	Stage and Auditorium Curtains	EA		
RPIE	Playground Equipment (permanently affixed)	EA		
RPIE	Bowling Alley Lanes, Approaches, Ball Returns	EA		
890-158	Loading and Unloading Platform	SF		
Post Office	e:			
Category Code	Item	UM	Amount	Description
RPIE	Post Office Lock Boxes	EA		

EA

# **ADDITION or ALTERATION to a FACILITY:**

	Item	Yes	No
a.	Outside dimensions of addition		
b.	Foundation		
c.	Floors		
d.	Walls		
e.	Roof		
f.	Utility plants or systems added, replaced, or removed		
g.	Real property installed equipment removed, added, or replaced		
h.	Demolition costs		
i.	Addition or deletion of related facilities		

- j. Addition or deletion of porches, sheds, balconies, mezzanines, etc.
- k. Real property installed equipment (RPIE) removed, installed, or replaced with a larger or smaller unit

NOTE: Whenever a project calls for an Addition to an Existing Building or Facility. Use the 1354 checklist above paying close attention to f, g, h, and k.

# **REAL PROPERTY INSTALLED EQUIPMENT:** are those items of

government-owned or leased accessory equipment apparatus and fixtures that are essential to the function of the real property and are permanently attached to, integrated into or are on government owned or leased property.

NOTE: RPIE cannot be on an organizational account known as the TA (Table of Allowance) for it to be a RPIE item i.e., an authorized dishwasher (clipper) in the Dinning Facility should be on their organizational Table of Allowances and cannot be a RIPIE item. However a dishwasher in the housing area, or billeting is definitely a RPIE item. The difference is the Dinning Facility is authorized a dishwasher on their TA therefore it cannot be RIPIE.

Item	UM/Size	Amount	Description
Commode			
Dehumidifiers			
Elevators			
Evaporative Coolers	CFM		
Exhaust Fan			
Forced Air Heating			
Heating Plant Under 750 MB	MB		
Hot Water Heater	GAL		
Lavatory			
Other Heating			
Refrigerated Drinking Fountain			
Theater-type Seats Secured			
to Floor			
Urinal			
Utility Sink			

#### Examples of NON-RPIE Items:

Note: Not All-Inclusive

Air Dryers/Compressors supporting communication lines	Portable Buildings, Air Conditioners, Water Chillers
Bicycle Storage Lockers/Metal Lockers (removable)	Projection Screens
Compressed Natural Gas Dispensing Systems	Sawdust Collectors
Emergency Power Systems (EPS)	Stationary Acetylene Generators
HEMP/TEMPEST shielding equipment	Systems Furniture
Ice-Making Machines	Venetian Blinds
Intercom Equipment	Walk-In Coolers (if free standing)
Prewired Workstations	Window Shades
Power Conditioning Continuation Interfacing Equipment	Compressed Air System and Water Cooling/Recycling
(PCCIE) – this includes Uninterrupible Power Supply	System
(UPS)	
Public Address System	Satellite Cable Television Antennas

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DD FORM 1532 (BACK), AUG 96

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REPORT CONTROL SYMBOL: Form Approved. OMB No. 0704-0188

PEST MANAGEMENT MAINTENANCE RECORD

The public reporting burden for this collection of information is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Department of Defense, Executive Services Directorate (0704-0188). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ORGANIZATION.

MEASUREMENT UNITS MSF = 1,000 square feet MCF - 1,000 cubic feet

LFF = Linear feet AC = Acres

 ORIGIN OF WORK
 SC
 = Service or trouble call

 SW = Scheduled work
 SC = Service or trouble call
 R = Routine inspection

DD FORM 1532-1, AUG 96

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REMARKS

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DD FORM 1532-1 (BACK), AUG 96

(Attach additional card to continue record)

**Department of Homeland Security** U.S. Citizenship and Immigration Services

### Read all instructions carefully before completing this form.

Anti-Discrimination Notice. It is illegal to discriminate against any work-authorized individual in hiring, discharge, recruitment or referral for a fee, or in the employment eligibility verification (Form I-9 and E-Verify) process based on that individual's citizenship status, immigration status or national origin. Employers CANNOT specify which document(s) they will accept from an employee. The refusal to hire an individual because the documentation presented has a future expiration date may also constitute illegal discrimination. For more information, call the Office of Special Counsel for Immigration-Related Unfair Employment Practices (OSC) at 1-800-255-7688 (employees), 1-800-255-8155 (employers), or 1-800-237-2515 (TDD), or visit <u>www.justice.gov/crt/about/osc</u>.

#### What Is the Purpose of This Form?

Employers must complete Form I-9 to document verification of the identity and employment authorization of each new employee (both citizen and noncitizen) hired after November 6, 1986, to work in the United States. In the Commonwealth of the Northern Mariana Islands (CNMI), employers must complete Form I-9 to document verification of the identity and employment authorization of each new employee (both citizen and noncitizen) hired after November 27, 2011. Employers should have used Form I-9 CNMI between November 28, 2009 and November 27, 2011.

#### **General Instructions**

Employers are responsible for completing and retaining Form I-9. For the purpose of completing this form, the term "employer" means all employers, including those recruiters and referrers for a fee who are agricultural associations, agricultural employers, or farm labor contractors.

Form I-9 is made up of three sections. Employers may be fined if the form is not complete. Employers are responsible for retaining completed forms. Do not mail completed forms to U.S. Citizenship and Immigration Services (USCIS) or Immigration and Customs Enforcement (ICE).

#### Section 1. Employee Information and Attestation

Newly hired employees must complete and sign Section 1 of Form I-9 no later than the first day of employment. Section 1 should never be completed before the employee has accepted a job offer.

Provide the following information to complete Section 1:

**Name:** Provide your full legal last name, first name, and middle initial. Your last name is your family name or surname. If you have two last names or a hyphenated last name, include both names in the last name field. Your first name is your given name. Your middle initial is the first letter of your second given name, or the first letter of your middle name, if any.

Other names used: Provide all other names used, if any (including maiden name). If you have had no other legal names, write "N/A."

Address: Provide the address where you currently live, including Street Number and Name, Apartment Number (if applicable), City, State, and Zip Code. Do not provide a post office box address (P.O. Box). Only border commuters from Canada or Mexico may use an international address in this field.

**Date of Birth:** Provide your date of birth in the mm/dd/yyyy format. For example, January 23, 1950, should be written as 01/23/1950.

**U.S. Social Security Number:** Provide your 9-digit Social Security number. Providing your Social Security number is voluntary. However, if your employer participates in E-Verify, you must provide your Social Security number.

**E-mail Address and Telephone Number (Optional):** You may provide your e-mail address and telephone number. Department of Homeland Security (DHS) may contact you if DHS learns of a potential mismatch between the information provided and the information in DHS or Social Security Administration (SSA) records. You may write "N/A" if you choose not to provide this information.

All employees must attest in Section 1, under penalty of perjury, to their citizenship or immigration status by checking one of the following four boxes provided on the form:

#### 1. A citizen of the United States

- 2. A noncitizen national of the United States: Noncitizen nationals of the United States are persons born in American Samoa, certain former citizens of the former Trust Territory of the Pacific Islands, and certain children of noncitizen nationals born abroad.
- 3. A lawful permanent resident: A lawful permanent resident is any person who is not a U.S. citizen and who resides in the United States under legally recognized and lawfully recorded permanent residence as an immigrant. The term "lawful permanent resident" includes conditional residents. If you check this box, write either your Alien Registration Number (A-Number) or USCIS Number in the field next to your selection. At this time, the USCIS Number is the same as the A-Number without the "A" prefix.
- 4. An alien authorized to work: If you are not a citizen or national of the United States or a lawful permanent resident, but are authorized to work in the United States, check this box.

If you check this box:

- a. Record the date that your employment authorization expires, if any. Aliens whose employment authorization does not expire, such as refugees, asylees, and certain citizens of the Federated States of Micronesia, the Republic of the Marshall Islands, or Palau, may write "N/A" on this line.
- b. Next, enter your Alien Registration Number (A-Number)/USCIS Number. At this time, the USCIS Number is the same as your A-Number without the "A" prefix. If you have not received an A-Number/USCIS Number, record your Admission Number. You can find your Admission Number on Form I-94, "Arrival-Departure Record," or as directed by USCIS or U.S. Customs and Border Protection (CBP).
  - (1) If you obtained your admission number from CBP in connection with your arrival in the United States, then also record information about the foreign passport you used to enter the United States (number and country of issuance).
  - (2) If you obtained your admission number from USCIS *within the United States*, or you entered the United States without a foreign passport, you must write "N/A" in the Foreign Passport Number and Country of Issuance fields.

Sign your name in the "Signature of Employee" block and record the date you completed and signed Section 1. By signing and dating this form, you attest that the citizenship or immigration status you selected is correct and that you are aware that you may be imprisoned and/or fined for making false statements or using false documentation when completing this form. To fully complete this form, you must present to your employer documentation that establishes your identity and employment authorization. Choose which documents to present from the Lists of Acceptable Documents, found on the last page of this form. You must present this documentation no later than the third day after beginning employment, although you may present the required documentation before this date.

#### Preparer and/or Translator Certification

The Preparer and/or Translator Certification must be completed if the employee requires assistance to complete Section 1 (e.g., the employee needs the instructions or responses translated, someone other than the employee fills out the information blocks, or someone with disabilities needs additional assistance). The employee must still sign Section 1.

#### Minors and Certain Employees with Disabilities (Special Placement)

Parents or legal guardians assisting minors (individuals under 18) and certain employees with disabilities should review the guidelines in the *Handbook for Employers: Instructions for Completing Form I-9 (M-274)* on <u>www.uscis.gov/</u> <u>1-9Central</u> before completing Section 1. These individuals have special procedures for establishing identity if they cannot present an identity document for Form I-9. The special procedures include (1) the parent or legal guardian filling out Section 1 and writing "minor under age 18" or "special placement," whichever applies, in the employee signature block; and (2) the employer writing "minor under age 18" or "special placement" under List B in Section 2.

#### Section 2. Employer or Authorized Representative Review and Verification

Before completing Section 2, employers must ensure that Section 1 is completed properly and on time. Employers may not ask an individual to complete Section 1 before he or she has accepted a job offer.

Employers or their authorized representative must complete Section 2 by examining evidence of identity and employment authorization within 3 business days of the employee's first day of employment. For example, if an employee begins employment on Monday, the employer must complete Section 2 by Thursday of that week. However, if an employer hires an individual for less than 3 business days, Section 2 must be completed no later than the first day of employment. An employer may complete Form I-9 before the first day of employment if the employer has offered the individual a job and the individual has accepted.

Employers cannot specify which document(s) employees may present from the Lists of Acceptable Documents, found on the last page of Form 1-9, to establish identity and employment authorization. Employees must present one selection from List A OR a combination of one selection from List B and one selection from List C. List A contains documents that show both identity and employment authorization. Some List A documents are combination documents. The employee must present combination documents together to be considered a List A document. For example, a foreign passport and a Form I-94 containing an endorsement of the alien's nonimmigrant status must be presented together to be considered a List A document. List B contains documents that show identity only, and List C contains documents that show employment authorization only. If an employee presents a List A document, he or she should **not** present a List B and List C document, and vice versa. If an employee participates in E-Verify, the List B document must include a photograph.

In the field below the Section 2 introduction, employers must enter the last name, first name and middle initial, if any, that the employee entered in Section 1. This will help to identify the pages of the form should they get separated.

Employers or their authorized representative must:

- 1. Physically examine each original document the employee presents to determine if it reasonably appears to be genuine and to relate to the person presenting it. The person who examines the documents must be the same person who signs Section 2. The examiner of the documents and the employee must both be physically present during the examination of the employee's documents.
- 2. Record the document title shown on the Lists of Acceptable Documents, issuing authority, document number and expiration date (if any) from the original document(s) the employee presents. You may write "N/A" in any unused fields.

If the employee is a student or exchange visitor who presented a foreign passport with a Form I-94, the employer should also enter in Section 2:

- a. The student's Form I-20 or DS-2019 number (Student and Exchange Visitor Information System-SEVIS Number); and the program end date from Form I-20 or DS-2019.
- 3. Under Certification, enter the employee's first day of employment. Temporary staffing agencies may enter the first day the employee was placed in a job pool. Recruiters and recruiters for a fee do not enter the employee's first day of employment.
- 4. Provide the name and title of the person completing Section 2 in the Signature of Employer or Authorized Representative field.
- 5. Sign and date the attestation on the date Section 2 is completed,
- 6. Record the employer's business name and address.
- 7. Return the employee's documentation.

Employers may, but are not required to, photocopy the document(s) presented. If photocopies are made, they should be made for ALL new hires or reverifications. Photocopies must be retained and presented with Form I-9 in case of an inspection by DHS or other federal government agency. Employers must always complete Section 2 even if they photocopy an employee's document(s). Making photocopies of an employee's document(s) cannot take the place of completing Form I-9. Employers are still responsible for completing and retaining Form I-9.

#### **Unexpired Documents**

Generally, only unexpired, original documentation is acceptable. The only exception is that an employee may present a certified copy of a birth certificate. Additionally, in some instances, a document that appears to be expired may be acceptable if the expiration date shown on the face of the document has been extended, such as for individuals with temporary protected status. Refer to the *Handbook for Employers: Instructions for Completing Form I-9 (M-274)* or I-9 Central (www.uscis.gov/I-9Central) for examples.

#### Receipts

If an employee is unable to present a required document (or documents), the employee can present an acceptable receipt in lieu of a document from the Lists of Acceptable Documents on the last page of this form. Receipts showing that a person has applied for an initial grant of employment authorization, or for renewal of employment authorization, are not acceptable. Employers cannot accept receipts if employment will last less than 3 days. Receipts are acceptable when completing Form I-9 for a new hire or when reverification is required.

Employees must present receipts within 3 business days of their first day of employment, or in the case of reverification, by the date that reverification is required, and must present valid replacement documents within the time frames described below.

There are three types of acceptable receipts:

- 1. A receipt showing that the employee has applied to replace a document that was lost, stolen or damaged. The employee must present the actual document within 90 days from the date of hire.
- 2. The arrival portion of Form I-94/I-94A with a temporary I-551 stamp and a photograph of the individual. The employee must present the actual Permanent Resident Card (Form I-551) by the expiration date of the temporary I-551 stamp, or, if there is no expiration date, within 1 year from the date of issue.
- The departure portion of Form I-94/I-94A with a refugee admission stamp. The employee must present an unexpired Employment Authorization Document (Form I-766) or a combination of a List B document and an unrestricted Social Security card within 90 days.

When the employee provides an acceptable receipt, the employer should:

- 1. Record the document title in Section 2 under the sections titled List A, List B, or List C, as applicable.
- 2. Write the word "receipt" and its document number in the "Document Number" field. Record the last day that the receipt is valid in the "Expiration Date" field.

By the end of the receipt validity period, the employer should:

- 1. Cross out the word "receipt" and any accompanying document number and expiration date.
- 2. Record the number and other required document information from the actual document presented.
- 3. Initial and date the change.

See the Handbook for Employers: Instructions for Completing Form I-9 (M-274) at <u>www.uscis.gov/l-9Central</u> for more information on receipts.

#### Section 3. Reverification and Rehires

Employers or their authorized representatives should complete Section 3 when reverifying that an employee is authorized to work. When rehiring an employee within 3 years of the date Form I-9 was originally completed, employers have the option to complete a new Form I-9 or complete Section 3. When completing Section 3 in either a reverification or rehire situation, if the employee's name has changed, record the name change in Block A.

For employees who provide an employment authorization expiration date in Section 1, employers must reverify employment authorization on or before the date provided.

Some employees may write "N/A" in the space provided for the expiration date in Section 1 if they are aliens whose employment authorization does not expire (e.g., asylees, refugees, certain citizens of the Federated States of Micronesia, the Republic of the Marshall Islands, or Palau). Reverification does not apply for such employees unless they chose to present evidence of employment authorization in Section 2 that contains an expiration date and requires reverification, such as Form I-766, Employment Authorization Document.

Reverification applies if evidence of employment authorization (List A or List C document) presented in Section 2 expires. However, employers should not reverify:

- 1. U.S. citizens and noncitizen nationals; or
- 2. Lawful permanent residents who presented a Permanent Resident Card (Form I-551) for Section 2.

Reverification does not apply to List B documents.

If both Section 1 and Section 2 indicate expiration dates triggering the reverification requirement, the employer should reverify by the earlier date.

For reverification, an employee must present unexpired documentation from either List A or List C showing he or she is still authorized to work. Employers CANNOT require the employee to present a particular document from List A or List C. The employee may choose which document to present.

To complete Section 3, employers should follow these instructions:

- 1. Complete Block A if an employee's name has changed at the time you complete Section 3.
- 2. Complete Block B with the date of rehire if you rehire an employee within 3 years of the date this form was originally completed, and the employee is still authorized to be employed on the same basis as previously indicated on this form. Also complete the "Signature of Employer or Authorized Representative" block.
- 3. Complete Block C if:
  - a. The employment authorization or employment authorization document of a current employee is about to expire and requires reverification; or
  - **b.** You rehire an employee within 3 years of the date this form was originally completed and his or her employment authorization document has expired. (Complete Block B for this employee as well.)

To complete Block C:

- **a.** Examine either a List A or List C document the employee presents that shows that the employee is currently authorized to work in the United States; and
- b. Record the document title, document number, and expiration date (if any).
- 4. After completing block A, B or C, complete the "Signature of Employer or Authorized Representative" block, including the date.

For reverification purposes, employers may either complete Section 3 of a new Form I-9 or Section 3 of the previously completed Form I-9. Any new pages of Form I-9 completed during reverification must be attached to the employee's original Form I-9. If you choose to complete Section 3 of a new Form I-9, you may attach just the page containing Section 3, with the employee's name entered at the top of the page, to the employee's original Form I-9. If there is a more current version of Form I-9 at the time of reverification, you must complete Section 3 of that version of the form.

#### What Is the Filing Fee?

There is no fee for completing Form I-9. This form is not filed with USCIS or any government agency. Form I-9 must be retained by the employer and made available for inspection by U.S. Government officials as specified in the "USCIS Privacy Act Statement" below.

#### **USCIS Forms and Information**

For more detailed information about completing Form I-9, employers and employees should refer to the Handbook for Employers: Instructions for Completing Form I-9 (M-274).

You can also obtain information about Form I-9 from the USCIS Web site at <u>www.uscis.gov/I-9Central</u>, by e-mailing USCIS at <u>I-9Central@dhs.gov</u>, or by calling **1-888-464-4218**. For TDD (hearing impaired), call **1-877-875-6028**.

To obtain USCIS forms or the *Handbook for Employers*, you can download them from the USCIS Web site at <u>www.uscis.</u> <u>gov/forms</u>. You may order USCIS forms by calling our toll-free number at **1-800-870-3676**. You may also obtain forms and information by contacting the USCIS National Customer Service Center at **1-800-375-5283**. For TDD (hearing impaired), call **1-800-767-1833**.

Information about E-Verify, a free and voluntary program that allows participating employers to electronically verify the employment eligibility of their newly hired employees, can be obtained from the USCIS Web site at <u>www.dhs.gov/E-Verify</u>, by e-mailing USCIS at <u>E-Verify@dhs.gov</u> or by calling 1-888-464-4218. For TDD (hearing impaired), call 1-877-875-6028.

Employees with questions about Form I-9 and/or E-Verify can reach the USCIS employee hotline by calling **1-888-897-7781**. For TDD (hearing impaired), call **1-877-875-6028**.

#### Photocopying and Retaining Form I-9

A blank Form I-9 may be reproduced, provided all sides are copied. The instructions and Lists of Acceptable Documents must be available to all employees completing this form. Employers must retain each employee's completed Form I-9 for as long as the individual works for the employer. Employers are required to retain the pages of the form on which the employee and employer enter data. If copies of documentation presented by the employee are made, those copies must also be kept with the form. Once the individual's employment ends, the employer must retain this form for either 3 years after the date of hire or 1 year after the date employment ended, whichever is later.

Form I-9 may be signed and retained electronically, in compliance with Department of Homeland Security regulations at 8 CFR 274a.2.

#### **USCIS Privacy Act Statement**

AUTHORITIES: The authority for collecting this information is the Immigration Reform and Control Act of 1986, Public Law 99-603 (8 USC 1324a).

**PURPOSE:** This information is collected by employers to comply with the requirements of the Immigration Reform and Control Act of 1986. This law requires that employers verify the identity and employment authorization of individuals they hire for employment to preclude the unlawful hiring, or recruiting or referring for a fee, of aliens who are not authorized to work in the United States.

**DISCLOSURE:** Submission of the information required in this form is voluntary. However, failure of the employer to ensure proper completion of this form for each employee may result in the imposition of civil or criminal penalties. In addition, employing individuals knowing that they are unauthorized to work in the United States may subject the employer to civil and/or criminal penalties.

**ROUTINE USES:** This information will be used by employers as a record of their basis for determining eligibility of an employee to work in the United States. The employer will keep this form and make it available for inspection by authorized officials of the Department of Homeland Security, Department of Labor, and Office of Special Counsel for Immigration-Related Unfair Employment Practices.

#### Paperwork Reduction Act

An agency may not conduct or sponsor an information collection and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The public reporting burden for this collection of information is estimated at 35 minutes per response, including the time for reviewing instructions and completing and retaining the form. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: U.S. Citizenship and Immigration Services, Regulatory Coordination Division, Office of Policy and Strategy, 20 Massachusetts Avenue NW, Washington, DC 20529-2140; OMB No. 1615-0047. Do not mail your completed Form I-9 to this address.



### **Employment Eligibility Verification**

#### Department of Homeland Security

U.S. Citizenship and Immigration Services

START HERE. Read instructions carefully before completing this form. The instructions must be available during completion of this form. ANTI-DISCRIMINATION NOTICE: It is illegal to discriminate against work-authorized individuals. Employers CANNOT specify which document(s) they will accept from an employee. The refusal to hire an individual because the documentation presented has a future expiration date may also constitute illegal discrimination.

ast Name ( <i>Family Name</i> )	First Nam	e (Given Name	e) Middle Initial	Other Name	es Used (i	f any)
Address (Street Number and Name)	,	Apt. Number	City or Town	:	State	Zip Code
Date of Birth (mm/dd/yyyy) U.S. Soci	al Security Number	E-mail Addres	55		Telepi	hone Number
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] A citizen of the United States						
] A noncitizen national of the Uni	ted States (See in	structions)				
] A lawful permanent resident (Al	ien Registration N	lumber/USCI	S Number):		<del>,</del>	
An alien authorized to work until (e (See instructions)	xpiration date, if app	blicable, mm/do	Иуууу)	. Some alien	is may wri	te "N/A" in this field.
For aliens authorized to work, p	rovide your Alien	Registration I	Number/USCIS Number <b>O</b> F	₹ Form I-94	4 Admiss	ion Number:
1. Alien Registration Number/Us <b>OR</b>	SCIS Number:				Do N	3-D Barcode ot Write in This Spac
2. Form I-94 Admission Numbe	r:					
If you obtained your admissic States, include the following:	n number from C	BP in connec	tion with your arrival in the	United		
Foreign Passport Number:	<u></u>				L	· · · · ·
Country of Issuance:						
Some aliens may write "N/A"	on the Foreign Pa	assport Numb	er and Country of Issuance	e fields. (Se	e instruc	tions)
ignature of Employee:		·····		Date (mm	/dd/yyyy):	
reparer and/or Translator Ce	ertification (To b	e completed	and signed if Section 1 is p	repared by	a persor	n other than the
ttest, under penalty of perjury, formation is true and correct.	that I have assis	ted in the co	mpletion of this form and	that to the	e best of	my knowledge the
gnature of Preparer or Translator:					Date (i	mm/dd/yyyy):
ast Name (Family Name)			First Name (Give	in Name)	_,I,, ,,,,	
			<i>2</i>			

#### Section 2. Employer or Authorized Representative Review and Verification

(Employers or their authorized representative must complete and sign Section 2 within 3 business days of the employee's first day of employment. You must physically examine one document from List A OR examine a combination of one document from List B and one document from List C as listed on the "Lists of Acceptable Documents" on the next page of this form. For each document you review, record the following information: document title, issuing authority, document number, and expiration date, if any.)

#### Employee Last Name, First Name and Middle Initial from Section 1:

List A Identity and Employment Authorization	OR List B Identity	AND	List C Employment Authorization
Document Title:	Document Title:	Doc	ument Title;
Issuing Authority:	Issuing Authority:	Issu	ing Authority:
Document Number:	Document Number:	Doc	ument Number:
Expiration Date (if any)(mm/dd/yyyy):	Expiration Date (if any)(mm/dd/yyyy):	Ехр	iration Date (if any)(mm/dd/yyyy):
Document Title:			an an an Arabita da ann an Arabita da a
Issuing Authority:			
Document Number:			
Expiration Date (if any)(mm/dd/yyyy):			2 D Downedda
Document Title:			Do Not Write in This Space
Issuing Authority:			
Document Number:			
Expiration Date (if any)(mm/dd/yyyy):			

#### Certification

I attest, under penalty of perjury, that (1) I have examined the document(s) presented by the above-named employee, (2) the above-listed document(s) appear to be genuine and to relate to the employee named, and (3) to the best of my knowledge the employee is authorized to work in the United States.

The employee's first day of employment (mm/dd/yyyy):	_ (See instructions for exemptions.)
--	--------------------------------------

Signature of Employer or Authorized Rep	resentative	Date (	mm/dd/yyyy)		Title of Employer or	Authorized	Representative
Last Name (Family Name)	First Name (Gi	iven Name	e)	Emplo	l oyer's Business or Or	ganization 1	Vame
Employer's Business or Organization Add	ress (Street Number an	nd Name)	City or Tow	n		State	Zip Code
Section 3. Reverification and A. New Name ( <i>if applicable</i> ) Last Name ( <i>i</i>	<b>d Rehires</b> (To be c Family Name) First Nar	completed ne (Given	d and signe Name)	d by e Mi	employer or authoriddle Initial B. Date o	<i>zed repres</i> f Rehire <i>(if i</i>	entative.) applicable) (mm/dd/yyyy):
C. If employee's previous grant of employn presented that establishes current empl	nent authorization has ex oyment authorization in t	cpired, pro	vide the inform	nation w.	for the document from	n List A or Li	st C the employee
Document Title:	Dot	cument N	umber:		, , , , , , , , , , , , , , , , ,	Expiration D	Date (if any)(mm/dd/yyyy):
l attest, under penalty of perjury, that the employee presented document(s	t to the best of my kn ), the document(s) I I	rowledge have exa	, this emplo mined appe	oyee i ear to	is authorized to wo be genuine and to	ork in the L relate to t	Inited States, and if he individual.
Signature of Employer or Authorized Rep	resentative: Dat	te (mm/dd	/yyyy):	Prin	t Name of Employer o	or Authorize	d Representative:

### LISTS OF ACCEPTABLE DOCUMENTS All documents must be UNEXPIRED

Employees may present one selection from List A or a combination of one selection from List B and one selection from List C.

	LIST A Documents that Establish Both Identity and Employment Authorization	OR	LIST B Documents that Establish Identity At	1D	LIST C Documents that Establish Employment Authorization
1. U 2. F 7 3. f 1 1 7 4. E	U.S. Passport or U.S. Passport Card Permanent Resident Card or Alien Registration Receipt Card (Form I-551) Foreign passport that contains a temporary I-551 stamp or temporary I-551 printed notation on a machine- readable immigrant visa Employment Authorization Document hat contains a photograph (Form		<ol> <li>Driver's license or ID card issued by a State or outlying possession of the United States provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address</li> <li>ID card issued by federal, state or local government agencies or entities, provided it contains a photograph or information such as name, date of birth,</li> </ol>	2.	<ul> <li>A Social Security Account Number card, unless the card includes one of the following restrictions:</li> <li>(1) NOT VALID FOR EMPLOYMENT</li> <li>(2) VALID FOR WORK ONLY WITH INS AUTHORIZATION</li> <li>(3) VALID FOR WORK ONLY WITH DHS AUTHORIZATION</li> <li>Certification of Birth Abroad issued by the Department of State (Form)</li> </ul>
5. F t t	<ul> <li>For a nonimmigrant alien authorized to work for a specific employer because of his or her status;</li> <li>a. Foreign passport; and</li> <li>b. Form I-94 or Form I-94A that has the following;</li> </ul>		<ul> <li>gender, height, eye color, and address</li> <li>School ID card with a photograph</li> <li>Voter's registration card</li> <li>U.S. Military card or draft record</li> <li>Military dependent's ID card</li> <li>U.S. Coast Guard Merchant Mariner</li> </ul>	3. 4. 5. 6.	Certification of Report of Birth issued by the Department of State (Form DS-1350) Original or certified copy of birth certificate issued by a State, county, municipal authority, or territory of the United States
	<ul> <li>(1) The same name as the passport; and</li> <li>(2) An endorsement of the alien's nonimmigrant status as long as that period of endorsement has not yet expired and the</li> </ul>		Card Native American tribal document Driver's license issued by a Canadian government authority		bearing an official seal Native American tribal document U.S. Citizen ID Card (Form I-197)
6. F M II I C	proposed employment is not in conflict with any restrictions or limitations identified on the form. Passport from the Federated States of Micronesia (FSM) or the Republic of he Marshall Islands (RMI) with Form -94 or Form I-94A indicating nonimmigrant admission under the Compact of Free Association Between he United States and the FSM or RMI		<ul> <li>For persons under age 18 who are unable to present a document listed above:</li> <li>0. School record or report card</li> <li>1. Clinic, doctor, or hospital record</li> <li>2. Day-care or nursery school record</li> </ul>	8.	Resident Citizen in the United States (Form I-179) Employment authorization document issued by the Department of Homeland Security

Illustrations of many of these documents appear in Part 8 of the Handbook for Employers (M-274).

Refer to Section 2 of the instructions, titled "Employer or Authorized Representative Review and Verification," for more information about acceptable receipts.
## FORM 16-1

#### Certificate of Compliance for LHE and Rigging

This form is applicable to all Contractor Load Handling Equipment (LHE) and Rigging Gear being brought onto the project site and applies to all cranes, derricks and any other hoisting equipment used to lift suspended loads.

This certificate shall be signed by an official of the company that provides LHE/cranes and rigging gear for any application under this contract.

Contracting Officer's Point of Contact: (Government Designated Representative)	Phone #:
Prime Contractor/Phone #:	Contract Number:
SSHO/QC:	Phone #:
LHE Manufacturer/Type/Capacity:	
LHE Operator(s) Name(s):	
<ol> <li>I certify that:</li> <li>The above noted LHE and all rigging gear conform to the E OSHA regulations (host country regulations in foreign countrie standards.</li> <li>The operator(s) noted above has been trained, qualified an accordance with the requirements in Section 16, EM 385-1-1 f above noted LHE.</li> <li>The operator(s) noted above has been trained not to bypas LHE operations.</li> <li>The operator(s), rigger(s) and company official (staff) are a notification to the GDA of any incident or accident involving th Company Official Signature:</li> </ol>	EM 385-1-1, applicable es) and applicable ASME nd designated in for the operation of the ess safety devices during ware that immediate is equipment is required. Date:
<b>Post on Crane/LHE</b> . (In Cab and Contractor's Office for each LHE brought onto L	JSACE Project/Property)

Reset Form

### FORM 16-2

#### Standard Pre-Lift Plan (LHE)/Checklist

Date:	Job #:	Location:
Time:	Completed By (Competent Persor	n):

Note: Applies to Cranes, Derricks, Hoists and Power-Operated equipment that can be used to hoist, lower and/or horizontally move a suspended load (includes excavators, forklifts, Rough Terrain equipment, etc., when used with rigging).

Cra	ne Considerations	Yes	No
1	Are the lifts within the crane's rated capacities? (based on boom height, radius)		
2	Boom deflections considered?		
3	Have all potential crane boom obstructions been identified?		
4	Have environmental considerations been addressed? (wind, weather, lightning)		
5	Have electrical hazards been addressed (overhead /underground)		
	- Clearance distances established?		
	- Is a spotter required?		
	- Public Utility contact required?		
6	Crane swing radius properly barricaded and personnel advised of hazards?		
	Comments:		
			ļ
			1
Cra	ne Considerations	Yes	No
Cra 1	ne Considerations Weights and Centers of Gravity (COG) have been determined?	Yes	No
Cra 1 2	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift?	Yes	No
Cra 1 2 3	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads?	Yes	No
Cra 1 2 3 4	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed?	Yes	No
Cra 1 2 3 4 5	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free?	Yes	No
Cra 1 2 3 4 5 6	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight?	Yes	No
Cra 1 2 3 4 5 6 7	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues)	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H?	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H? Comments:	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H? Comments:	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H? Comments:	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H? Comments:	Yes	No
Cra 1 2 3 4 5 6 7 8	ne Considerations Weights and Centers of Gravity (COG) have been determined? Anything inside/outside the loads that could shift during the lift? Does rigging need protection from the loads? All anchor bolts, hold-downs, or fasteners have been removed? Potential for binding: are load cells required to verify the loads are free? Attachment points rated to take load weight? Are the loads structurally capable of being lifted? (bending/twisting issues) Is a Critical Lift Plan required per EM 385-1-1, Section 16.H? Comments:	Yes	No

Rig	ging	Yes	No
1	All rigging has been inspected by a Qualified Rigger?		
2	Have sling angles been calculated?		
3	Are shackles correctly sized for the sling eyes?		
4	Are softeners needed?		
	Comments:		
Per	sonnel	Yes	No
1	The roles, responsibilities and qualifications for personnel have been defined?		
	(Operator, Lift Supervisor, Rigger, Signal Person)		
2	A Pre-Lift meeting has been conducted?		
3	Personnel trained per the EM?		
	Comments:		
Are	a Preparation	Yes	No
1	The locations for the load landings has been selected and prepared?		
2	Blocking and/or cribbing available to set the loads on?		
3	Travel paths have been determined and cordoned off?		
4	Other personnel in the area have been notified of the lifts?		
5	Have ground bearing support questions been addressed?		
	Comments:		
	Crane Operator: Date:		

Rigger(s):	 Date:	

Signal Person:	 Date:	
-		

Other:		Date:	
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## FORM 16-3

### Critical Lift Plan

		U	.S. Army (	of Engineers				
			CRITIC	AL LI	FT PLAN			
	For use of the	nis form, see	EM 385-1-1, 3	Section	16. Proponent agency is Crane HHWG.			
Date:					Prepared By:			
Location:					USACE District:			
A "critical lift" can be Critical lifts include lifts	e defined as a	ny non-rout	ine crane lift	requirii	ng detailed planning and additional or unusua	al safety pi	recal	itions.
	be lifted,	swung or pla	aced out of t	he opei	rator's view (except Change 6 exemption)	menrequi	re ui	000010
; lifts made with more	than one cra	ine; lifts invo	lving non-rol	ıtine or	technically difficult rigging arrangement; hoi	isting pers	onne	l with a
A. TOTAL LOAD				-	E. CRANE PLACEMENT (Mobile Cran	nes Only)		
1. Load Weight				lbs	1. Maximum Bearing Pressure			PSF
2. Wt. of Aux. Block				lbs	Note: Bearing Pressure Calculations must be attached on Pr	Page 3.		
3. Wt. of Main Block				lbs	2. Ground Conditions Suitable for Lo	oad?		YES / NO
4. Wt. of Lifiting Bea	m			lbs	Note: Ground Condition Calculations must be attached on P	Page 3.		
5. Wt. of Sling/Shac	kles			lbs	3. High Voltage or Electrical Hazard	ls?		YES / NO
6. Wt. of Jib/Ext. (ere	cted/stowed)			lbs	Note: If Eleictrical Hazards are present they must be shown	on Page 4.		
7. Wt. of Hoist Rope				lbs	4. Obstructions to Lift or Swing?			YES / NO
8. Other:				lbs	Note: If Obstructions are present they must be shown on Pa	age 4.		
TOTAL	WEIGHT			]	5. Travel with Load Required?	_		YES / NO
Note: Source of load weight (Drawi	ngs, Calcs, etc.) r	nust be attached o	on Page 2.		6. Other?			
B. CRANE					F. OPERATOR QUALIFICATIONS			
1. Type of Crane	Mobile Hyd	traulic Truc	k		1. Certified Operator?	_		YES / NO
2. Maximum Crane C	apacity			_lbs.	2. Option?			NEO ( NO
3. Radius (Maximum)	•			_ft.	3. Certified for Type, Class & Capac	city?		YES / NO
4. Radius (Minimum)						(TO)		(110)
5. Boom Length (Max	(imum)			_TL.	G. PRE-LIFT CHECKLIST (7	res)   I	V/A	(NO)
7. Cropp Copposity (N	mum)			-11. Ibo	2. Diaging Inspected			
7. Crane Capacity (N	/iax Radius)			_IDS.	2. Rigging inspected			
0. Boom Angle (Mexic	mum)			_iDS.	4. Overhead Hazard Check			
10 Boom Angle (Maxin	num)			_uey.	4. Overhead Flazard Check			
11. Gross Load of Cra	nunn)			_uey. Ihe	6 Counterweight Check			
12 Lift is	% of the C	rane's rate	d canacity	_ 103.	7 Operator Qualifications			
13. If lib/Ext is to be	used:		a capacity		8 Signal Person Qualifications			
	L enath			ft	9 Rigger Qualifications			
	Offset			ft	10 Load Chart in Crane			
14. Rated Capacity of	Jib/Ext.			 lbs	11. Load Test			-
C. HOIST ROPE	Main	Aux 1	Aux 2		12. Tag Lines			
1. # of Parts					13. Wind Conditions			
2. Rope Diamter					14. Traffic Hazard Check			
3. Capacity					15. Site Control			
D. RIGGING					16. Signatures			
1. Hitch Type(s)					H. SIGNATURES			
2. No. of Slings:		Size:			1. Crane Operator			
3. Sling Type:					2. Rigger			
4. Sling Assembly Ca	apacity:			lbs.	3. Signal Person			
5. Shackle Size(s):					4. Lift Supervisor			
6. Shackle Rated Ca	pacity(s)			lbs.	5. Other			
					6. Other			· · · · · · · · · · · · · · · · · · ·

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TRANSMITT	AL OF SHOP DRAWINGS, E MANUFACTURER'S CEF For use of this form, see ER 415-1	EQUIPMENT DA STIFICATES OF 1-10; the proponent a	TA, MATER COMPLIAN agency is CEC	IIAL SAMPLES ICE N-CE.	s, or	ATE	TRANS	MITTAL NO.		
	SECTION I - RE	EQUEST FOR APPR	<b>SOVAL OF THE</b>	EFOLLOWING ITE	EMS (This se	ction will be initi	ated by the con	tractor)		
TO:	FRO	:W		CONT	RACT NO.			CHECK ONE:	EW TRANSMIT	FF
SPECIFICATION SI	EC. NO. (Cover only one section with	ı each transmittal)	PROJECT TIT	LE AND LOCATIC	Z	THIS TRA		FOR: (Check one)	DA/CR	DA/GA
ITEM NO.	DESCRIPTION OF SUP	BMITTAL ITEM		SUBMITTAL	NO.	CONTRACT	DOCUMENT	CONTRACTOR	VARIATION Enter "Y" if	USACE ACTION
(See Note 3)	(Type size, model n	number/etc.)	ŭ	TYPE CODE (See Note 8)	OF	SPEC. PARA. NO.	DRAWING SHEET NO.	REVIEW CODE	requesting a variation (See Note 6)	CODE (Note 9)
a.	b.			ů	q.	ë	ų	ರು	, н.	
REMARKS	,				I certify that strict confor	the above subm mance with the o	nitted items had	been reviewed in d is and specification	letail and are cor is except as othe	rect and in rwise stated.
					151-13 	NAME OF CON	TRACTOR	SIGNA	ATURE OF CON	TRACTOR
			SECTIO	N II - APPROVAL	ACTION					
ENCLOSURES RET	ruRNED (List by item No.)	NAME AND TIT	LE OF APPRO	VING AUTHORIT	~	SIGNA	TURE OF APP	ROVING AUTHO	RITY DATI	U U
ENG FORM 402	5-R, MAR 2012	REI	PLACES EDIT	ION OF MAR 95, V	NHICH IS OF	I SSOLETE.				Page 1 of 2

INSTRUC	LIONS			
1. Section I will be initiated by the Contractor in the required number of copies.				
<ol> <li>Each Transmittal shall be numbered consecutively. The Transmittal Number typically incl number. The second part is a sequential number for the submittals under that spec secti original Transmittal Number and begin numbering the resubmittal packages sequentially</li> </ol>	udes two on. If the after the	o parts separated by a e Transmittal is a resu decimal.	dash (-). The first part is th bmittal, then add a decimal	e specification section point to the end of the
3. The "Item No." for each entry on this form will be the same "Item No." as indicated on EN	g forn	A 4288-R.		
4. Submittals requiring expeditious handling will be submitted on a separate ENG Form 402	5-R.			
5. Items transmitted on each transmittal form will be from the same specification section. Do transmittal.	o not con	nbine submittal inform	ation from different specifica	ation sections in a single
<ol><li>If the data submitted are intentionally in variance with the contract requirements, indicate detailed reason for the variation.</li></ol>	a variati	on in column h, and e	nter a statement in the Rem	arks block describing he
8. When submittal items are transmitted, indicate the "Submittal Type" ( <i>SD-01 through SD-</i>	11) in col	lumn c of Section I.		
Submittal types are the following:				
SD-01         - Preconstruction         SD-02         - Shop Drawings         SD-03         - Product Data           SD-07         - Certificates         SD-08         - Manufacturer's Instructions         SD-09         - Manu	SD ufacturer	-04 - Samples 's Field Reports	SD-05 - Design Data SD-10 - O&M Data	SD-06 - Test Reports SD-11 - Closeout
<ol><li>For each submittal item, the Contractor will assign Submittal Action Codes in column g of Action Codes in column i of Section I. The Submittal Action Codes are:</li></ol>	Section	I. The U.S. Army Cor	os of Engineers approving a	authority will assign Submittal
A Approved as submitted.	1	Receipt acknowledgec		
B Approved, except as noted on drawings. Resubmission not required.	1	Receipt acknowledgec	, does not comply with cont	ract requirements, as noted.
C – Approved, except as noted on drawings. Refer to attached comments.	1	Other action required (	Specify)	
Resubmission required.	1	Government concurs v	vith intermediate design. (F	or D-B contracts)
<ul> <li>D Will be returned by separate correspondence.</li> <li>E Disapproved. Refer to attached comments.</li> </ul>	1	Design submittal is ac	ceptable for release for cons	struction. (For D-B contracts)
0. Approval of items does not relieve the contractor from complying with all the requiremen	ts of the	contract.		

Page 2 of 2

# REAL PROPERTY INVENTORY

ITEM		Т	ALLY		TOTAL
COMMODES					
LAVATORIES					
URINALS					
EXHAUST FAN (9")					
EXHAUST FAN (OTHER)					
WATER COOLER					
HOTWATER HEATER					
MOP SINK					
AC PLANT	LS 5 TN.	5-25 TN.	25-100 TN.	OVER 100 TN.	
AS (WINDOW TYPE)					
FIRE ALARM SYSTEM	MANUAL	HALON	SPRINKLER		
EMERGENCY LIGHTS					
UNIT HEATER					
STRIP HEATER					
COOLING TOWER					
WALK-IN COOLER					
AIR CURTAIN					
EYE WASH					
SHOWERS					
BOILER	GAS FIRED	OIL FIRED	STEA	М	
FUEL TANK	UNDERGROUND		OUT	SIDE	

# REAL PROPERTY INVENTORY

ITEM	TALLY	TOTAL
WASH BASIN		
AIR COMPRESSOR		
HOISTS		
INVENTORY BY:		DATA:
RECONCILED BY:		DATA:

# REAL PROPERTY INVENTORY

ITEM	TALLY	TOTAL
INVENTORIED BY:		DATE:
RECONCILED BY:		DATE:

AFZA-DE-	-RJ (420-10c) Date:
MEMORANI	DUM FOR DEH ENVIRONMENTAL OFFICE
SUBJECT:	Landfill Permit Application
1. Fill	in the following information for each Contractor vehicle:
a.	Landfill to Be Used: Sanitary Demolition Both
b.	Company Name:
c.	Contract Number:
d.	Project Title:
e.	Project Location:
f.	Date of Notice to Proceed:
g.	Project Length (In Days):
h.	Vehicle Make:
i.	Vehicle License Plate Number:
j.	Contract Inspector:

2. Note: Applications must be forwarded to the Environmental Office by a Government Official (e.g., Contracting Officer's Representative or Project Inspector). Applications delivered on any working day will be processed and available for pickup the following workday by 0830.

#### Hazardous Material Purchase Request for Contractors



Email to: 78ceg.cev.hazmat@robins.af.mil

Fax to: 926-6056

This form must be completed for all hazardous materials purchased by contractors for use on Robins AFB and approval must be granted prior to transportation onto Robins AFB. The purpose of this form is to ensure compliance with AFI 32-7086 and OSHA HAZCOM, ensuring that hazardous materials are approved prior to transportation onto Robins AFB and a current MSDS is available in HMMS.

REQUESTER'S INFORMATION														
Date:							Comp	bany Name	:					
Requester:							<u>.</u>							
Phone Number:							Fax	x Number:						
Issue Point (HDSC):														
	•		PR	ODU	ст і	INF	ORMATIC	ON						
Manufacturer:														
Product Name:														
Product Number:								Is the ite	m a kitî	)	YES	NC	)	
Supplier/Vendor:												_		
Stock Number:														
Container Size	(Part	t A)				(	Part B)		(Par	t C)				
(Unit of Measure):	(Part	tD)				(	Part E)		(Par	tF)				
Quantity To Purchase:														
	(Part	t A)				(	Part B)		(Par	t C)				
HIVINIS MISDS #:	(Part	tD)				(	Part E)		(Par	tF)				
(1) If the MSDS is not entered in HMMS for the exact product you plan to purchase (same manufacturer, sam								ne						
product, and same conte	ainer s	ize) th	en y	ου πι	ist F	FIRS	T submit a	an AF 3952 t	o the Ha	zMc	at Cell.			
(2) If the MSDS is entered in	h HMM	1S for t	he e	exact p	proc	duct	but is INA	CTIVE you n	nust FIRS	Τsι	ıbmit a	curre	ent	
manufacturer's MSDS to	the H	lazMat	Cel	l for u	pda	iting	g.							
			R	EVIEV	NEF	r Co	OMMENT	S	1		<del>.</del>		1	
HMMS MSDS is for the sa	me m	anufa	ctur	er an	d p	rod	luct?		YES		NO			
HMMS MSDS is active?		YES		NO			HazCode	e C Item?	YES		NO			
If the item is a F	lazCo	de C it	ет	and t	her	re is	s no active	e license, th	e reque	st is	s denie	d.		
License Code:							License	Expiration:	_					
Request Approved?		YES		NO			Control	Number:						
Comments:														
Approver Signature:								Da	te:					
HMMS Serial Numbers:														
Requester must sul	omit t	he HN	1M:	S Seri	al N	lun	nbers to t	he Approv	er to clo	ose	the rec	ues	t.	
QUESTIONS: 78 CEG/CE/	AN HAZ	ZMAT (7	78ce	g.cev.ł	nazn	nat@	@robins.af.	mil)						

ENVIRONMENTAL POCs: Jennifer Tribble (327-8372) and Chris Langston (327-4168)

## DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OM 0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 (See reverse for public burden disclosure.)

1. Type of Federal Action:	2. Status of Federal	al Action: 3. Report Type:						
a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	a. bid/offer/ap b. initial awar c. post-award	plication d	a. initial filing b. material change For Material Change Only: yearquarter date of last report					
4. Name and Address of Reporting Entit	y:	5. If Reporting Entit	ty in No. 4 is Subawardee, Enter Name					
☐ Prime ☐ Subawarde Tier	ee <u>,</u> if known:	and Address of I	Prime:					
Congressional District if known		Congressional Dis	strict if known					
6. Federal Department/Agency:		7. Federal Program I	Name/Description:					
		CFDA Number, if a	applicable:					
8. Federal Action Number, if known:		9. Award Amount, if \$	known:					
<b>10. a. Name and Address of Lobbying Er</b> ( <i>if individual, last name, first name, MI</i> )	tity	<b>b. Individuals Perfor</b> different from No. 1( (last name, first nam	r <b>ming Services</b> (including address if 0a) ne, MI) <b>:</b>					
	(attach Continuation Shee	et(s) SF-LLL-A, if necessary)						
11. Amount of Payment (check all that apply	<i>י</i> ):	13. Type of Paymen	it (check all that apply):					
<ul> <li>\$ □ actu</li> <li>12. Form of Payment (check all that apply):</li> <li>□ a. cash</li> <li>□ b. in-kind; specify: nature</li> <li>value</li> </ul>	al 🗆 planned	<ul> <li>a. retainer</li> <li>b. one-time</li> <li>c. commiss</li> <li>d. continger</li> <li>e. deferred</li> <li>f. other; sp</li> </ul>	e fee sion nt fee ecify:					
14. Brief Description of Services Performe or Member(s) contacted, for Payment	ed or to be Performed indicated in Item 11:	d and Date(s) of Serv	vice, including officer(s), employee(s),					
15 Continuation Sheet(s) SE-LLL-A attack								
<ol> <li>16. Information requested through this form is aur section 1352. This disclosure of lobbyig representation of fact upon which reliance was placed by th transaction was made or entered into. This dis to</li> </ol>	horized by title 31 U.S.C activities is a materia e tier above when this closure is required pursuant	Signature: Print Name: Title:						
31 U.S.C. 1352 . This information will be reported annually and will be available for public inspection	to the Congress semi- n. Any person who fails to	Telephone No. <u>:</u>	Date:					
Federal Use Only:			Authorized for Local Reproduction					

#### INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

- 1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
- 2. Identify the status of the covered Federal action.
- 3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
- 4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
- 5. If the organization filing the report in item 4 checks "Subawardee", then enter the full name, address, city, state and zip code of the prime Federal recipient. Include Congressional District, if known.
- 6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
- 7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
- 8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
- 9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
- 10. (a) Enter the full name, address, city, state and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.
  - (b) Enter the full names of the individuals(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
- 11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.
- 12. Check the appropriate box(es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.
- 13. Check the appropriate box(es). Check all boxes that apply. If other, specify nature.

Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

### DISCLOSURE OF LOBBYING ACTIVITIES CONTINUATION SHEET

Reporting Entity:	 	Page	of _			
				A (h. a nia	and familianal	

#### CONTRACTOR HAZARDOUS MATERIAL INVENTORY LOG (EPRCA)

 PRIME COMPANY NAME:
 CONTRACT NO:

PROJECT TITLE / LOCATION:

Material Name	Manufacturer	MSDS Number	State (i.e. Liquid. Solid. Gas)	Storage	Quantity	Quality (lbs/gals) used in Calendar Year [ ]
				Average Daily	Max Daily	

Contractor(s) certifies that the hazardous material(s) removed from installation will be used/reused for its intended purpose.

Compa	ny Using Material Listed Above	Compa	ny Representative's Signature		
Submitted	By: Printed Name	Phone:	Fax:	Date:	
Contracting Officer		Phone:	Fax:	Pag e of	

#### CONTRACTOR HAZARDOUS MATERIAL INVENTORY LOG (EPRCA) Continuation Sheet

PRIME COMPANY NAME:

CONTRACT NO: \_\_\_\_\_

PROJECT TITLE / LOCATION:

Material Name	Manufacturer	MSDS Number	State (i.e. Liquid Solid Gas)	Storage Quantity		Quality (lbs/gals) used in
		Tumoer	(i.e. Elquia, Sona, Sus)	Average Daily	Max Daily	

Page \_\_\_\_ of \_\_\_\_

#### CONTRACTOR-FURNISHED SPOIL, DISPOSAL AREAS

This bid under Invitation No. Fill in solicitation Number

for \_\_\_\_\_

#### List Title of solicitation

is based on using the following spoil disposal area(s) which are not shown on the contract drawings.

1. DESCRIPTION:

2. LOCATION:

3. OWNER AND ADDRESS:

4. SIZE OF AREA(S):

5. FILL HEIGHT OR OTHER SPOILING RESTRICTIONS:

6. CAPACITY OF AREA(S) (Cu. Yds.):

7. TIME LIMITATION FOR USE OF AREA(S):

8. NUMBER AND TYPE OF ROAD CROSSING(S) REQUIRED:

9. DIKING REQUIRED:

10. PLANNED LOCATION OF SPILLWAY(S):

Written evidence of consent by owner(s) for use of spoil disposal area(s) is attached.

Written evidence of the consent of the owner(s) for use of property involved in obtaining access to the spoil disposal areas is attached.

Written evidence of consent for the use of such disposal area(s) by applicable conservation and pollution agencies are attached.

Sketch(es), to the same scale as the contract drawings, showing the location(s) of spoil area(s) to be used and access thereto are attached.

Name of Company

Signature of Bidder

Date