

**EXHIBIT A**  
**SCHEDULE AND SUPPLEMENTARY TERMS AND CONDITIONS**  
*Name of Facility or Project*

**ADDENDUM A to EXHIBIT A**

**SUBCONTRACT SUMMARY**

Subcontract Term: The term of this Subcontract shall be \_\_\_\_\_.

Site Location: The contract work area will be \_\_\_\_\_.

General Work Outline: The Subcontractor shall furnish all properly qualified management, supervision, personnel, materials, supplies, tools, transportation, loading and unloading, and equipment with appropriate accessories (except as provided by Fermilab) and shall plan, schedule, coordinate and assure effective performance of all services described herein. The Subcontractor shall \_\_\_\_\_

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\_\_\_\_\_.

Illustrations, Designs, or Drawings: Not applicable, or in Paragraph 20 and attached to this document.

Material/equipment Furnished by Fermilab: All material, supplies, tools, equipment, and vehicles shall be furnished by the Subcontractor, except the following: \_\_\_\_\_

\_\_\_\_\_.

Services Furnished by Fermilab: Fermilab will supply site specific training such as Subcontractor Site Orientation, Oxygen Deficiency Hazards, Radiation Worker, and General Employee Radiation Training. In addition Fermilab personnel may be required to disable and restore utility systems.

Fermilab actively supports recycling of construction and demolition waste. Small quantities (less than 5 cubic yards) generated by a project can usually be disposed in a designated Fermilab provided recycling dumpster. Large quantities of metals can usually be disposed through the Fermilab metal recycling program.

Shop Drawings, Maintenance Manuals, and Bills of Material: Shop drawings, plans, procedures, as-builts (equipment model, serial number, and ratings, raceway type and length, wire length and gauge, and

copies of revised panel legends), maintenance manuals, Bills of Material (including purchased as well as Fermilab supplied materials), and other submittals shall be provided for Fermilab approval as requested. Adequate time shall be allowed for approval prior to commencement of work.

Inspection Visits and Technical Questions: Arrangement of inspection visits and the answering of technical questions should be directed to \_\_\_\_\_.

Access to the Work Site: Access to the Project area shall be through the Wilson Street Fermilab entrance located off Kirk Road, \_\_\_\_\_.

Facilities: 120v single phase and 208v (20a) three phase power is (not) available \_\_\_\_\_.

No remote storage or staging area(s) shall be provided by Fermilab.

Drinking Water and Toilet Facilities: Drinking water and toilet facilities are (not) available \_\_\_\_\_.

Items affecting Work Planning:

- a. All subcontractor employees will be required to successfully complete a 1.5 hour Fermilab provided contractor orientation and general employee radiation training.
- b. No work shall be initiated until a hazard analysis (HA) has been completed (ref. ¶13.4).
- c. The subcontractor is restricted from using the Wilson Hall elevators for moving materials and equipment during the hours of 7:30 a.m. - 9:00 a.m. and 11:30 am -1:00 p.m.

Environmental Issues Particular to this Project: \_\_\_\_\_

Project Duration, Schedule, and Milestones: \_\_\_\_\_

Subcontractor's Field Superintendent, Foreman, Working Foreman, or a Tradesman: if qualified, may serve as the Field Superintendent, Safety Officer and/or Competent Person for the work.

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Technical Specifications: Specifications for the project Subcontract are contained as an attachment at Paragraph 20.0 below, and include: \_\_\_\_\_

\_\_\_\_\_.

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**1.0 SITE LOCATION**

The contract work area is located on the Fermi National Accelerator Laboratory (Fermilab) Site, approximately three (3) miles east of the city of Batavia in DuPage and/or Kane County, Illinois. Refer to the ADDENDUM A, SUBCONTRACT SUMMARY for the exact project location on the Fermilab site.

**2.0 SCOPE OF WORK**

**2.1** THE SUBCONTRACTOR SHALL FURNISH all supervision, labor, materials, tools, equipment, and appurtenances (except as described in **Section 3.0 & 4.0** herein) necessary to perform diligently and fully all work as described in the drawings and/or technical specifications listed in the ADDENDUM A, SUBCONTRACT SUMMARY.

**2.2** JOB COORDINATION on the job site at Fermilab is accomplished through the Coordinator, or Construction Coordinator (CC), including direction regarding safety.

All modifications to the Subcontract shall come from the procurement administrator (PA), or designee, in writing. The PA or designee is the sole entity that can modify the contract or initiate change orders.

**2.3** DRAWINGS and TECHNICAL SPECIFICATIONS governing the work are listed in the ADDENDUM A, SUBCONTRACT SUMMARY.

**2.4** GENERAL WORK OUTLINE: refer to the ADDENDUM A, SUBCONTRACT SUMMARY for a brief outline of the work to be completed under this Subcontract.

**2.5** THE SUBCONTRACTOR'S RESPONSIBILITY is in no way limited to the general work outline under the ADDENDUM A, SUBCONTRACT SUMMARY. The Subcontractor shall perform all work required to complete the work in accordance with drawings, specifications, or other Fermilab directions.

**2.6** DESCRIPTIONS and QUANTITIES LISTED in the ADDENDUM A, SUBCONTRACT SUMMARY are general in nature and are only intended to describe the range and complexity of this scope of work. They are not to be used as the basis for establishing a bid price. Specific quantities and definitions of the scope of work for bidding purposes shall be based solely on estimates from the drawings, specifications and information obtained from examination of the work site.

**3.0 FERMILAB FURNISHED MATERIALS**

**3.1** MATERIALS FURNISHED BY FERMILAB: refer to the ADDENDUM A, SUBCONTRACT SUMMARY for information regarding materials furnished by Fermilab.

**3.2** THE SUBCONTRACTOR shall be responsible for loading, transporting and unloading Fermilab furnished material at the locations as directed or indicated on the drawings and/or in the specifications.

**4.0 SERVICES FURNISHED BY FERMILAB**

**4.1** SERVICES FURNISHED BY FERMILAB: refer to the ADDENDUM A, SUBCONTRACT SUMMARY for information regarding services furnished by Fermilab.

**4.2** FERMILAB FURNISHED SERVICES which must be coordinated with the Subcontractor's work, such as requests for de-energizing electrical equipment or any utility shutdown (electrical, mechanical ducts, sprinklers, alarms, water, etc.), shall be arranged through Fermilab with at least two (2) full work days advance notice from the Subcontractor, except for use of radiography sources, which will require five (5) full work days advance notice.

**4.3** ELECTRONIC VERSIONS of drawings or specifications, if available, may be provided by Fermilab to the Subcontractor for use in preparation of shop drawings or submittals. Fermilab assumes no responsibility for the information contained on the drawings, including but not limited to drawing scale, dimensions, and details.

**5.0 JOB CONDITIONS**

**5.1** INSPECTION VISITS and TECHNICAL QUESTIONS may be directed to the Fermilab representative listed in the ADDENDUM A, SUBCONTRACT SUMMARY.

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**5.2 ACCESS TO the WORK SITE:** refer to the ADDENDUM A, SUBCONTRACT SUMMARY for site access information.

**5.3 SITE ACCESS and HAULING** shall be subject to the following conditions:

- a. All roads shall remain open to emergency traffic at all times.
- b. All equipment and vehicles shall be confined to operating along defined construction roads and access routes. No overland hauling or off-road travel shall be permitted in order to avoid damage to wetland areas, wooded areas, archaeological sites, survey monuments or other areas to be preserved in their natural state.
- c. Interruption of normal traffic patterns or temporary road closings necessitated by movement of equipment or delivery of materials or utility installations shall require advance notice as outlined in Section 6.6, and shall require proper barricades, signage and flag persons to safely divert normal traffic.
- d. Traffic on paved roads shall be restricted to rubber-tired vehicles. Where crawler mounted equipment is required to cross paved roads or areas, the pavement shall be suitably protected from damage to the satisfaction of the CC.
- e. Upon project completion, the Subcontractor shall restore damaged areas to original conditions, including repairs to landscaping, structures, culverts, fencing, or utilities.
- f. Debris and litter on any roads caused by the Subcontractor's operations shall be removed immediately by the Subcontractor to the satisfaction of the CC.
- g. Illinois Rules of the Road shall apply to the Subcontractor's use of all existing roads.

**5.4 TRANSPORTATION of EQUIPMENT and MATERIALS** used by the Subcontractor at the job site shall be furnished by the Subcontractor at his own expense. The Subcontractor shall also be responsible for minimizing any interference with local traffic, other Subcontractors, or Fermilab operations. The Subcontractor shall work with Fermilab to establish a schedule for major material deliveries and site hauling of excavated materials. No material shall be stored beyond the project limits unless prior written arrangements have been made with Fermilab.

**5.5 PARKING** of the Subcontractor's and the Sub-tier contractor's vehicles shall be confined to the Subcontractor's project area or general public parking spaces.

**5.6 TEMPORARY SERVICES and FACILITIES** during the project period shall be furnished, installed, and paid for by the Subcontractor. The Subcontractor shall plan, organize, layout, and maintain the project site in a manner to insure an environmentally healthful working area. The Subcontractor shall be responsible for the work areas of his/her subcontractors and shall enforce similar conditions on them.

All temporary installations shall be subject to Fermilab approval.

- a. Temporary lighting shall be installed throughout the project to provide safe access and exit conditions and adequate lighting for the various work operations. The installation shall comply with the National Electrical Code (NFPA 70).
- b. Telephone service may be available at the work area. Dedicated or additional telephone service, if required by the CC for the project, will be provided by and paid for by the Subcontractor.
- c. Electric power may be furnished by Fermilab for the Subcontractor's use. Refer to the ADDENDUM A, SUBCONTRACT SUMMARY for site specific service. Installation of Subcontractor's electrical power distribution, when required, shall include ground-fault circuit protection and shall be subject to Fermilab approval.
- d. Drinking water and toilet facilities shall be supplied by the Subcontractor unless specifically provided for by Fermilab in the ADDENDUM A, SUBCONTRACT SUMMARY. Subcontractor provided drinking water shall be adequate and clean and shall be dispensed from a fully enclosed sanitary water container with individual paper drinking cups. The Subcontractor shall provide an adequately serviced chemical toilet for every twenty (20) personnel on the project. Drinking water supply, toilet type, and locations shall be approved by Fermilab.
- e. Temporary fire protection shall be in accordance with the ANSI and AGCA protection requirements A10.2. An approved

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fire extinguisher shall be provided by the Subcontractor on all trucks and similar equipment, at all enclosures, and at on-site project offices. Each extinguisher shall be inspected monthly and a date tag certifying adequacy of the charge and workability of the extinguisher shall be affixed. The Subcontractor shall remove the extinguishers at the conclusion of the job.

- f. Temporary ventilation shall be sufficient to provide a safe working environment for project personnel. Subcontractor shall provide exhaust and supply air fans, ducting and other equipment as needed.
- g. Temporary heating shall include heating devices, protective coverings and temporary enclosures as necessary to protect the work and to provide a safe working environment for personnel. Coal or kerosene type salamanders, pots or open fires shall not be permitted. Where permanent heating equipment has been installed and made operational prior to completion of the project, the Subcontractor may request temporary use of such equipment, at no cost, provided it is properly maintained by the Subcontractor and that all required warranties are extended to include the period of use by the Subcontractor prior to Final Acceptance of the project by Fermilab.
- h. Temporary drainage shall be sufficient to remove standing water and prevent flooding within the work limits. Subcontractor shall furnish pumping equipment and other dewatering equipment as needed. Pump discharges shall be intercepted by silt removal or sedimentation basins before being directed to natural drainage courses and away from adjacent work limits of other subcontractors.
- i. Temporary closures, dust partitions, or solid barriers shall be constructed of fire resistive or noncombustible materials, or treated or coated with fire retardant material as specified in the Fermilab Environment, Safety, and Health Manual (FESHM) Chapter 6040.1.

**5.7 OFF-SITE DISPOSAL** of trash, debris, demolished material, pallets, crates, rubbish and all waste material, except as stated otherwise, shall be the responsibility of the Subcontractor. The Subcontractor shall practice waste minimization where possible. He/she shall furnish all necessary dumpsters or similar containers to prevent dispersion

of project debris both within and outside of the project site. All disposals shall be in accordance with FL-3, Fermilab Construction Subcontract Terms and Conditions, and shall be consistent with the requirements set forth by the Resource Conservation and Recovery Act (RCRA), Toxic Substance Control Act (TSCA), 40 CFR Parts 262-265 and Illinois Administrative Code Title 35, Sub-title G-Waste Disposal. Where waste streams are generated that are classified as special waste and/or hazardous waste, the Subcontractor shall provide the names, addresses, and USEPA identification numbers for both the waste transporter and the treatment, storage, and disposal facility. A certification of receipt shall be furnished to Fermilab assuring that all hazardous and toxic waste has reached the designated disposal facility.

**6.0 ITEMS AFFECTING WORK PLANNING**

**6.1 EXISTING STRUCTURES & EQUIPMENT** shall be carefully protected by the Subcontractor during all phases of the project work. The Subcontractor shall exercise extreme care during the entire project and shall work in full and close cooperation with Fermilab to protect the adjacent structures, equipment, and particularly the occupants.

**6.2 EXISTING UTILITIES** shall be protected by the Subcontractor during all phases of the project work.

**6.3 WORK BY OTHERS:** Fermilab personnel and other Subcontractors may be working in the vicinity of the work of this Subcontractor. In these instances, the Subcontractor will be required to coordinate work with others to avoid interferences or delays.

**6.4 ITEMS AFFECTING WORK PLANNING** include, but are not limited to: Subcontractor employee orientation training, limited project site access, radioactive material handling, survey control by Fermilab, subcontractor use of nuclear density meters or other radiographic testing equipment, and testing of materials and or assemblies by Fermilab. Items particular to this project will be found in the ADDENDUM A, SUBCONTRACT SUMMARY.

**6.5 ENVIRONMENTAL ISSUES AFFECTING THE WORK**

- a. Soil erosion and sediment control plan (SESCP): On all projects involving excavations, the following requirements apply.
  - 1. Erosion control structures: \_\_\_\_\_ Subcontractor shall have all required erosion control

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devices required by the SESCO (if required) and as shown on the drawings, in place prior to commencing any work for which they are required. As the work evolves, additional interim control structures may be required in order to protect waterways and/or comply with permit terms and conditions. Costs for installation and maintenance of these structures shall be considered incidental to the project and included in the original proposal. The Subcontractor shall install all such structures within one day of notification by Fermilab.

2. Maintenance of erosion control structures: Subcontractor shall be required to perform inspections of all control structures and to maintain all control devices until final stabilization of all disturbed areas.

3. Temporary and permanent seeding and stabilization: The Subcontractor shall be required to follow seeding dates and requirements as specified and in accordance with the Illinois Urban Manual. The Subcontractor shall be responsible for providing vegetated surfaces as outlined or specified by Fermilab. Erosion control structures shall not be removed until final acceptance of vegetation by Fermilab.

b. Environmental issues particular to this project will be found in the ADDENDUM A, SUBCONTRACT SUMMARY.

**6.6** ADVANCE NOTICE of 48 hours minimum (i.e. 2 workdays) shall be given to Fermilab in writing prior to the following actions. Subcontractor notification to Fermilab shall not imply permission by Fermilab to begin work activity.

- Interruption of road traffic
- Closure of any roads
- Connection to or interruption of any existing underground utility
- Intended use of ICW from any hydrant
- Connection to temporary electric power sources
- Intended activity beyond the specified project limits
- Intended access to or work within a confined space

- Connection to or interruption of any existing 13.8kV power system
- Sawcutting or core drilling at manholes, foundation, and paved areas
- Excavation

**6.7** SUBCONTRACTOR USE OF RADIO-ACTIVE SOURCES FOR TESTING is subject to monitoring and oversight by Fermilab: Five day advanced notice is required prior to on-site use.

**6.8** EMPLOYEE IDENTIFICATION BADGING may be required for subcontractor employee access onto the Fermilab site. Subcontractor employees must complete a form and take a photo to obtain an ID card. Once badges are obtained, they shall be worn in accordance with Fermilab requirements including at all times while on the Fermilab site.

**7.0 COMMENCEMENT, PROSECUTION and COMPLETION OF THE WORK**

**7.1** THE SUBCONTRACTOR SHALL COMMENCE WORK under this Subcontract when directed to do so by Fermilab, prosecute the work with diligence and energy, and complete the work as specified.

**7.2** Fermilab will award the Subcontract as soon as feasible after the bid date. Within ten working days after award, the Subcontractor shall submit the following to Fermilab for acceptance:

- Hazard Analysis for typical work of the trade
- Soil Erosion and Sediment Control Plan (if required by Section 6.5)

Initial versions of these documents must be accepted by Fermilab prior to commencement of work. These documents will continue to evolve throughout the work process with additions and changes.

The requirements for each of these are outlined in subsequent sections of this Exhibit.

**7.3** A DETAILED SCHEDULE, if required by Fermilab, shall be submitted for the entire project by the Subcontractor and updated during the course of the subcontract.

**7.4** FERMILAB CLOSURE: The Fermilab site closes for major holidays and limited project activity occurs on these days:

The following days are Fermilab Holidays.

- New Year's Day
- Martin Luther King's day
- Memorial Day
- Independence Day

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- Labor Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Eve (half-day)
- Christmas
- New Year's Eve (half-day)

If any of these holidays fall on a weekend day, a weekday will be used for the holiday. Consult the CC for the exact dates. Fermilab will not normally utilize the Subcontractor's tradesmen on Fermilab holidays. The Subcontractor will not be reimbursed for any non-work days.

**7.5 ACCEPTANCE** shall be made by Fermilab after completion of all work as directed or required by the Drawings and/or Technical Specifications.

**8.0 PAYMENT**

Invoicing and payment provisions (including progress payments when applicable) shall be contained in the subcontract documents, and reviewed with the CC before commencement of work.

**9.0 THEFT**

**9.1 THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR** necessary precautions to safeguard material and equipment at the job site.

**9.2 IN THE EVENT OF THEFT OF SUBCONTRACTOR PROPERTY,** Fermilab property, and/or Government property, the Subcontractor shall immediately notify Security Dispatch by telephone (630) 840-3414 and the CC.

**9.3 A WRITTEN REPORT** shall be sent to Security, MS-326, as soon as possible. This report shall include:

- a. Name and phone number of person making report.
- b. Description of missing property; i.e., make and color (if available), model number, serial number and value. Indicate ownership; and if Government, furnish Government identification number.
- c. Date and time theft took place or was discovered.
- d. Date and time property was last known to be in its proper place.
- e. Any other information, which may be pertinent.
- f. Submit a copy of the report to the CC.

**10.0 AS-BUILT DRAWINGS**

IN LIEU OF THE AS-BUILT SHOP DRAWINGS specified in the FL-3, **Fermilab Construction Subcontract Terms and Conditions**, the Subcontractor shall maintain and provide As-Built drawings for all projects with drawings used to define the work scope, or as directed by the Construction Coordinator.

**11.0 SPECIFICATIONS and DRAWINGS**

When drawings define the work scope, Fermilab will provide no more than 5 copies of conformed (project) drawings and Technical Specifications. Additional copies will be the responsibility of the Subcontractor.

**12.0 SUBMITTALS, SHOP DRAWINGS and MATERIAL SAMPLES**

SHOP DRAWINGS, MATERIAL SAMPLES, and OPERATION and MAINTENANCE MANUALS shall be submitted for all materials and assemblies used on the project which are normally required in the industry, or are required by Fermilab for clarification of the sourced items

**13.0 INTEGRATED SAFETY MANAGEMENT**

**13.1 OVERVIEW:** Fermilab subscribes to the philosophy of Integrated Safety Management (ISM) by following the program outlined in this section. Fermilab requires its subcontractors and sub-tier subcontractors to do the same. ISM is a system for performing work safely and in an environmentally responsible manner. The term "integrated" is used to indicate that the Environment, Safety & Health (ES&H) management systems are normal and natural elements of doing work. The intent is to integrate the management of ES&H with the management of the other primary elements of project: quality, cost, and schedule.

**13.2 ES&H PROGRAM:** The subcontractor shall have an ES&H program that is commensurate with the complexity and nature of the work activities. When required by Fermilab, or on all subcontracts that require performance bonding (usually projects > \$100,000), the subcontractor shall submit to Fermilab three (3) copies of the ES&H Plan. This Plan is to describe the Subcontractor's overall commitment to safety and measures that will be taken specific to this project work scope and site.

A standard company ES&H plan submitted in response to proposal requirements may require modification after subcontract award (paragraph 13.3 below). The modified plan shall consider the nature

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of work or hazards unique to Fermilab. It shall be submitted for approval to the Fermilab Procurement Administrator within ten (10) days of award of the subcontract. Once approved by Fermilab, the Subcontractor is required to comply with the requirements set forth in their plan.

The ES&H Plan is to address the Subcontractor's commitment to each of the following principals. A brief explanation and key elements to be addressed follows each:

a. Line management responsibility for safety

Line management shall be responsible and accountable for the protection of the employees, the public, and the environment.

*Examples of expected items to support this statement are:*

- Statement of ES&H policy and goals;
- Workforce is held accountable for strict compliance with subcontractor's ES&H plan;
- Process for progressive discipline;
- Means of holding sub-tier contractors accountable for compliance with ES&H requirements;
- Evidence of worker participation;
- Participation of management in safety meetings, inspection, and documentation;
- Process for employees to identify and help resolve ES&H issues quickly, including stop work authority; and
- Management support without hint of retribution or harassment.

b. Clear roles and responsibilities. The roles and responsibilities, and authority at all levels of the organization, including potential sub-tier subcontractors are clearly identified.

*Examples of expected items to support this statement are:*

- ES&H and Quality Control responsibilities for principals, field superintendent, foremen, competent person, ES&H officer, and workforce are documented; and
- Stop work authority.

c. Competence commensurate with responsibility. Personnel possess the experience, knowledge, skills, and abilities that are necessary to discharge their responsibilities.

*Examples of expected items to support this statement are:*

- Identification of required training & experience of field superintendent, foremen, competent person, ES&H personnel, and workforce;
- Identification of process for documenting completion of training;
- Process for assuring sub-tier contractors are adequately skilled to perform their work activities; and
- Training for employees and sub-tiers employees on Integrated Safety Management and hazard analysis.

d. Balanced priorities: Resources are effectively allocated to address safety, programmatic, and operational considerations. Protecting the public, the workers, and the environment shall be a priority whenever activities are planned and performed.

*Examples of expected items to support this statement are:*

- Management commitment of resources to adequately implement their ES&H program;
- Selection process for sub-tier contractors that include cost, quality, schedule adherence, and safety performance; and
- Process for subcontractor to authorize start of work by sub-tier contractors.

e. Identification of safety standards and requirements. Before work commences, the associated hazards are evaluated and an agreed upon set of safety standards and requirements are established which will provide adequate assurance that the public, the workers, and the environment are protected from adverse consequences.

*Examples of expected items to support this statement are:*

- Subcontractor ES&H Program Plan, by reference;
- Subcontractor QC Program Plan, by reference; and
- Hazard analysis process which includes defining scope of work, analysis of hazards, identification of hazard controls, requirement to perform work within these controls, and means to provide feedback and improvement.

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- f. Hazard controls tailored to work being performed. Administrative and engineering controls, tailored to the work being performed, are present to prevent and mitigate hazards.

*Examples of expected items to support this statement are:*

- Hazard analysis process;
- Subcontractor ES&H Program Plan, by reference;
- Planning and selection of appropriate and effective protective measures;
- Active regimen of workplace inspections and prompt abatement of identified hazards; and
- Inspections, assessment, and audits of sub-tier contractor's adherence to ES&H and QC program.
- Daily work planning and hazard reviews at the worker level.

- g. Operations authorization. The conditions and requirements to be satisfied for operations to be initiated and conducted are clearly established and understood by all.

*Examples of expected items to support this statement are:*

- Process to assure workers are informed of hazards and required protective measures before work is allowed to begin;
- Process to assure workers, including sub-tier contractors are appropriately trained to do their job safely;
- Process to assure that when an incident occurs, the scene is secured until the incident investigation is complete.
- Investigation process includes analysis, examination of trends and lessons learned, and a means to report to Fermilab in a timely manner.
- Process to assure that applicable Fermilab permits are in place prior to allowing work to commence.

**13.3** The ES&H PLAN SHALL INCLUDE site-specific information of the Subcontractor's activities at Fermilab. The ES&H Plan shall encompass all applicable aspects of 29 CFR 1910, "OSHA Safety and Health Standards for General Industry" and 29 CFR 1926, "Safety and Health Regulations for Construction". In addition, the plan should describe the following:

- a. Basic safety and health provisions

- Emergency Action/Response Plan
- Accident Investigation Program
- Recording and Reporting of Injuries
- Housekeeping
- Hazard Communication Plan
- Personal Protective Equipment
- Fire Protection And Prevention

- b. Hazard analysis process

- How hazards are identified and analyzed
- Preventive controls
- Periodic inspection program

- c. Waste handling and disposal

- Characterization of waste
- Packaging and labeling requirements
- Assurance that appropriate transportation and handling facilities will be used

- d. Erosion control & environmental protection

- Stormwater Pollution Prevention Plan (SWPPP) - when required
- Erosion/Sediment Control Plan(s).

- e. Other programs (as dictated by the scope of this work)

- Control of Hazardous Energy (Lockout/Tagout)
- Confined Space Entry
- Hearing Conservation
- Ionizing Radiation
- Nonionizing radiation
- Lead, Beryllium, or Other Metals
- Electrical (including Power Transmission And Distribution)
- Welding And Cutting
- Scaffolds
- Fall Protection
- Excavations
- Signs, Signals, And, Barricades
- Tools - Hand And Power
- Ladders & Stairways
- Commercial Diving Operations
- Motor Vehicles, Mechanized Equipment, And Marine Operations
- Cranes, Derricks, Hoists, Elevators, And Conveyors

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- Steel Erection
- Demolition

This program description (“ES&H Plan”) shall be submitted to the Procurement Administrator within 10 days of award of the contract. The authorization to start work will not be issued until this plan has been accepted by Fermilab. This document is a living program and updates that reflect changes to processes and plans shall be submitted as changes are made. Changes may be required for acceptance of the plan by Fermilab prior to starting work. Once accepted by Fermilab, the Subcontractor shall be required to comply with the requirements set forth in their plan. Once accepted, all revisions shall be submitted to Fermilab for review and acceptance.

Any sub-tier subcontractors employed by the Subcontractor must either agree in writing to follow the Subcontractor’s ES&H Program Plan or submit to the Subcontractor for acceptance (2) copies of the Sub-tier subcontractor’s ES&H Plan. A copy shall be provided to Fermilab for information.

**13.4 PROJECT SPECIFIC ES&H**

a. Hazard analysis (HA)

1. The Fermilab Hazard Analysis (HA) process is based on the 2002 OSHA 3071 publication: Job Hazard Analysis (JHA)  
<http://www.osha.gov/Publications/osha3071.pdf>. Fermilab’s HA process differs from the OSHA JHA by requiring a review of the environmental impacts and their mitigation with the work hazard analysis. The Fermilab form for recording the HA is available at  
PDF <https://esh-docdb.fnal.gov:440/cgi-bin/RetrieveFile?docid=1277&version=1&filename=7010-%20Subcontractor%20Performance%20Assessment%20Form.pdf> or  
WORD <https://esh-docdb.fnal.gov:440/cgi-bin/ShowDocument?docid=1209>.
2. Hazard analysis development requires input from both the Subcontractor performing project work, knowing and

understanding the typical hazards associated with each specific trade, and the Fermilab CC, familiar with local hazards, environmental concerns unique to the project area, and other concurrent activities.

3. Subcontractors shall develop HA’s, incorporate Fermilab specific input, and submit and retain HA records in the standardized format. The initial HA must be accepted by Fermilab prior to commencement of work. It shall include typical, anticipated work tasks.
4. The HA details the specific hazards or environmental impacts associated with the work activities and mitigating actions (including PPE) that the subcontractor and Sub-tier subcontractors shall take to reduce or eliminate the risk of injury or other damage. Material Safety Data Sheets (MSDS) of products that may significantly impact the safety of Fermilab or subcontractor personnel are to be submitted as part of this analysis. An accepted HA shall be required for all work activities.
5. Fermilab will review the HA of each new work task for completeness and conformance with OSHA, industry, and environmental standards. The Subcontractor shall incorporate any necessary changes.
6. Alterations to the work process due to changing work or environmental conditions shall be included in the HA process. The HA must be revised and reviewed by the Subcontractor Competent Person for each activity.
7. Specific procedures in the areas of fall protection, excavation, confined space, hoisting and rigging, lockout/tagout, and use of hazardous material may be required as job conditions dictate.
8. The subcontractor shall provide a job-specific safety orientation to all subcontractor and sub-tier subcontractor employees based upon the current project HA. Each employee will sign the HA to indicate having received the orientation. As the HA is updated, the

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- subcontractor and sub-tier subcontractor employees shall be advised of the new information and re-sign the document.
- b. Stop work authority: Any Fermilab employee may stop a work activity if there is imminent danger of serious injury, fatality, or major environmental release. If the hazard cannot be abated in a timely manner, the work activity shall be stopped through the use of a Stop Work Order. Work shall not be permitted to continue until the hazardous situation has been eliminated and Fermilab has issued a Restart Work Order.
- c. Competent person. The subcontractor shall identify a Competent Person as the designated Subcontractor employee with the knowledge of OSHA and other related safety standards and who has the authority to enforce such standards in the field. Should more than one work shift be required on this project, the Subcontractor shall identify and assign a Competent Person for each shift. Fermilab requires that the Competent Person or alternate (should it be necessary for the identified Competent Person to be absent) shall be available on the Fermilab site at all times during which work activities are taking place, to support the ES&H program. Duties related to ES&H shall take precedence over other duties.
1. The Subcontractor Competent Person shall attend the pre-project meeting and all other safety related meetings.
  2. The Subcontractor Competent Person shall maintain a list of alternate Competent Persons in the event he/she is not present on site. The alternate Competent Person shall have the qualifications as required in the above paragraph.
  3. A separate competent person may be assigned by the Subcontractor or by sub-tier contractors for specific activities, such as excavations or scaffolding. The competent person for these individual activities must meet the requirements established in the OSHA definition. The Subcontractor's Competent Person shall maintain a list of the names of the Sub-tier subcontractor competent persons for

specific activities. The Fermilab Coordinator shall be notified of changes and additions 24 hours in advance. The list shall be continually updated no later than 24 hours after the change or addition of the competent person on this project site. The list shall be submitted to the Fermilab Coordinator in writing and is to be posted at the project site.

Depending on the complexity and requirements of the project, the Competent Person may also serve as the project superintendent and/or Safety Officer. See the ADDENDUM A, SUBCONTRACT SUMMARY.

- d. The Subcontractor shall ensure and demonstrate that Sub-tier contractor personnel are aware of the ES&H requirements of the job. The Sub-tier subcontractors working for the Subcontractor shall follow and perform all required ES&H programs defined by the Subcontractor's approved and accepted ES&H program for the job site.
- e. Fermilab coordinators and safety:
1. Coordinator, or Construction Coordinator (CC). The CC shall be the first line contact with the Subcontractor's field organization on behalf of Fermilab. The CC shall be responsible for ensuring that the Subcontractor is in compliance with the provisions of this subcontract, follows the established and accepted ES&H program for all work at the site, and that specific features of work are performed in accordance with the precautions listed in the hazard analysis for that work activity.
  2. Not used.
  3. ES&H Safety Coordinator: The ES&H Safety Coordinator may make project site visits to provide support to the CC for Laboratory oversight of the subcontractor's safety program. Any deficiencies noted shall be brought to the attention of the CC for follow up with the Subcontractor. As noted in this Exhibit, Section 13.4.b, the ES&H

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Safety Coordinator has authority to stop work activities for imminent danger, fatality, or major environmental release, but does not have authority to direct changes in the work scope of the project or the Subcontractor's means and methods of construction. All such direction must be from the CC.

f. Reporting requirements

1. All emergencies and accidents occurring at the Fermilab site must be reported immediately by dialing extension 3131 from a Fermilab phone or 630-840-3131. The accident must be reported immediately to the CC. The types of emergencies to be reported include: fire, explosion, and injury/illness. Security incident, vehicle accident, radiation incident, utility failure, tornado sighting, and hazardous material spill or release should also be reported.
2. All incident scenes involving injuries shall be preserved and secured by the Subcontractor to enable Fermilab and DOE to conduct any necessary investigations. After any necessary emergency response is made, the scene shall be left unchanged and protected until the CC is notified and releases the incident site for work to continue.
3. The Subcontractor must investigate all incidents. The Subcontractor shall submit, within 48 hours of an incident, a written report of an investigation. Fermilab shall provide the Subcontractor with the specific report forms that are to be completed.

g. Subcontractor Training:

1. All Subcontractors working at Fermilab shall attend Subcontractor Orientation. Subcontractor Orientation is a forty-five minute presentation conducted weekdays at 7:30 a.m. All Subcontractor employees will receive a card documenting attendance. This training must be repeated every two years.
2. The Subcontractor shall be responsible for assuring that their employees and

sub-tier Subcontractor employees, who do not speak English, understand all ES&H requirements. The Subcontractor must be able to communicate any necessary instructions to those employees.

3. Subcontractors shall maintain and provide to Fermilab upon request any and all records related to ES&H training that was provided by the Subcontractor or others and received by Subcontractor employees performing subcontractor activities at Fermilab. Records of safety meetings, which include training, shall also be maintained by the Subcontractor and provided to Fermilab.

4. All Subcontractors performing work at Fermilab shall provide to their employees any necessary ES&H training as may be required by Federal/State regulations and as appropriate for their Subcontract activities at Fermilab. Exceptions involve hazards, which are unusual for the trade of the Subcontractor's employees. In particular, Fermilab normally provides appropriate training for Subcontractors working in radiation areas or oxygen deficient hazard areas, and expected emergency response.

- h. The Subcontractor's Field Superintendent has daily line responsibility for implementing and enforcing the Subcontractor's ES&H program at the job site. He/she shall correct unsafe practices, enforce appropriate safety regulations, assure proper safety training for all personnel and conduct required safety meetings of field personnel. He/she shall inspect the job site regularly to ensure compliance with OSHA and company regulations. The Field Superintendent or designee must be present on the Fermilab site whenever work activities are ongoing. See the ADDENDUM A, SUBCONTRACT SUMMARY for additional responsibilities.

**13.5 SUBCONTRACTOR SAFETY and HEALTH RECORDS**

- a. Subcontractors shall maintain and provide to Fermilab upon request, any and all occupational safety and environmental records. Such records include, but are not

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limited to, the records required to be maintained by federal/state regulation. Such records include OSHA injury/illness logs, training records, inspection records, safety meetings, and accident investigations. Additional records appropriate for the Subcontractor's activities shall also be maintained and provided to Fermilab upon request (e.g., crane inspections, welding certifications, etc.).

- b. If the Subcontractor intends to administer first aid or Cardio Pulmonary Resuscitation (CPR), the Subcontractor must comply with 29 CFR 1926, and have available the list of names of any employee who will administer first aid or CPR, along with current certifications.

**14.0 ES&H WORK PROCEDURES**

**14.1 PRE-AWARD MEETING:** Prior to Subcontract award Fermilab may hold a meeting with the Subcontractor. The Subcontractor's Supervisory and Competent Person(s) are expected to attend. If the HA has not been submitted for review, it is to be submitted at this meeting. Fermilab will award the contract after all contractual submissions and approvals have been satisfactorily completed.

**14.2 ONGOING INSPECTIONS:** After the start of work and throughout the entire project period, the Subcontractor shall monitor and inspect its work area and operations for compliance with his/her approved ES&H plan. Field superintendents and Competent Persons for both Subcontractor and Sub-tier contractor personnel are expected to conduct these inspections and correct any deficiencies found. These inspections shall be documented. Records shall be available for review upon request.

**14.3 JOB-SITE ES&H MEETINGS:**

- a. Daily work planning meetings in the form of daily briefings shall be conducted by the Subcontractor with his employees to discuss the planned work activities, review the applicable hazard analysis, and allow for employee questions and feedback regarding the work activity.
- b. Weekly toolbox meetings of approximately five minutes duration shall be conducted at the job site by the various area/job foreman or superintendents for their specific crafts. These meetings shall emphasize the current project operations and provide an opportunity for

inspection of tools and personal protective equipment.

- c. d. The CC shall be invited to weekly meetings and documentation of these meetings shall be submitted by the Subcontractor to the CC within two days of the meeting date, if requested.

**14.4 WORK COMPLETION and CLEAN-UP:** All contractor work shall be completed by the Subcontractor and all clean-up operations shall be in compliance with their ES&H program. Requested documentation for all aspects of the ES&H program shall be complete and in place before Subcontract close-out. All excess materials, equipment, waste materials and rubbish shall be properly disposed of from the project site.

**14.5 NOTIFICATION OF NON-COMPLIANCE:** The Coordinator will notify the Subcontractor of deficiencies in the ES&H aspects of the work. The Subcontractor shall take immediate corrective action after receipt of such notice.

**15.0 SPECIFIC ES&H REQUIREMENTS AT THE CONSTRUCTION SITE**

**15.1 FERMILAB CONSTRUCTION PERMITS:** Fermilab conducts work through the use of on-site permits. All required permits will be identified to the Subcontractor by Fermilab, who will arrange for all necessary permits. There is no cost to the Subcontractor for any Laboratory permits. No work activity shall be performed without the required permits. Activities requiring permits include, but are not limited to, work notification, electrical work, cutting and burning, excavation, modification to drinking water or sewer systems, long term fire protection system disablements, bringing radioactive sources on site, working with/on radioactive material, working in radiological areas, and moving government or Fermilab property off site. (Fermilab confined space entry permits are required only when Fermilab employees or scientific users enter the space or serve as Entry Supervisor. Otherwise, subcontractors use their own permits as specified in their program.) The Subcontractor will comply with all restrictions or provisions listed on permits. All requests for permits shall be made 48 hours (or at least 2 working days) prior to the need for the permit.

- a. Excavation Permit: An Excavation Permit from Fermilab is required before any digging can begin at a project site. Existing known HIDDEN utilities shall be located by Fermilab in advance of excavation activities. The

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Subcontractor shall request such locating service through the CC. Requests for location marking are fulfilled on a weekly basis; the submittal deadline is close of business Monday, and signed permits are available on Friday. The Subcontractor shall plan his work accordingly. No excavation shall proceed without an Excavation Permit, signed by the Subcontractor Competent Person and attached to the HA. This locating service does not relieve the Subcontractor of his responsibility to use proper excavating techniques to find hidden utilities prior to excavating.

- b. Burning/Welding Permit: The CC will contact the Fermilab Fire Department (FFD) and secure the Burn Permit. Members of the FFD will meet with the CC (and possibly the Subcontractor), examine the proposed operation, prescribe precautions, assure appropriate instruction has been completed, and then issue a written Burn Permit.

Fire watches must be maintained during burning, welding, or other fire or spark generating work and for a minimum of thirty minutes after work is complete.

It is the Subcontractor's responsibility to furnish the proper number and type of fire extinguishers for any welding, cutting, or brazing activities as specified in the Burn Permit. The extinguishers must be located in clear sight and no farther than 50 feet from the work areas.

All welding shall be in accordance with the requirements of the American Welding Society (AWS) Standard: Safety in Welding, Cutting, and Allied Process (ANSI/ASC Z49.1-94).

UL or FM listed check valves shall be installed on oxygen-fuel torch cutting equipment.

No alarms, safety devices, etc., will be disabled without prior approval of the Coordinator. The Subcontractor shall make a specific request to the Coordinator at least 48 hours before disablement.

**15.2 WORK ON EXISTING UTILITIES:** No work shall be performed on existing in-service piping systems without prior approval and coordination of the system outage. Requests for such outages shall be made at least 48 hours in advance. Pressure shall be relieved on all piping systems before opening up

and starting work. Lockout/tagout shall be used as required by the Fermilab Environment, Safety, and Health Manual (FESHM) Chapter 5120. "Hot Tap" connections shall not be permitted unless specified by the job and specific procedures have been submitted and accepted by Fermilab.

**15.3 PERSONNEL PROTECTIVE EQUIPMENT** must be provided in accordance with OSHA and NFPA, including NFPA 70E.

- a. Hard hats shall be furnished by the Subcontractor and shall be worn in the project work areas as designated in the Hazard Analysis and/or applicable OSHA standards. Hard hat shall meet the ANSI Z89.1 standard as required by 29 CFR 1926.100 and bear the "Z89.1" designation. Hard hats shall be worn with the brim facing forward. "Cowboy type hard hats" are not allowed. High voltage exposure work requires hard hats that meet the ANSI Z89.2 standard and bear the "Z89.2a" designation.
- b. Safety glasses with side shields shall be furnished by the Subcontractor and shall be worn in the project work areas as designated in the Hazard Analysis and/or applicable OSHA standards. Safety glasses shall meet the ANSI Z87.1 standards.
- c. Clothing suitable for the work and weather conditions is required. In construction areas, the minimum shall be short (1/4 length) sleeve shirt, long trousers, and hard sole leatherwork boots providing ankle protection. In addition, any work that presents a greater hazard to the feet or toes requires the use of steel toes or metatarsal guards. Canvas, tennis, or deck shoes are not permitted within the construction work area.
- d. NFPA 70E identifies specific protection required based upon the arc-flash potential of exposed electrical components.

**15.4 WORK IN CONFINED SPACES:**

- a. Fermilab shall identify all existing confined work spaces to the Subcontractor.
- b. If a Subcontractor is required to enter a permit-required confined space as part of their contract with Fermilab, the subcontractor shall provide Fermilab with the following at the pre-construction meeting or at least 1 week prior to entry:

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1. A written copy of their confined space entry program.
  2. Training records for potential entrants, attendants, and entry supervisors.
  3. Evidence that all air monitoring equipment is properly calibrated within the calibration period specified by the subcontractor's program or manufacturer's instructions. This may be in the form of a calibration log, certification indicator on the instrument, or other means. It is imperative that the equipment used by the Subcontractor be capable of monitoring for the contaminants associated with the confined space to be entered.
- c. It will be the Subcontractor's responsibility to provide all of their own personal protective equipment (PPE), such as lifelines, harnesses, respirators, tripods, ventilators, etc., as specified by the entry permit.
- d. In addition to complying with the permit space requirements listed above, each Subcontractor retained to perform permit-required confined space entry operations shall:
1. Obtain any available information regarding permit space hazards and entry operations from the CC.
  2. Coordinate entry operations with Fermilab, when both Fermilab personnel and Subcontractor personnel will be working in or near permit spaces.
  3. Prior to entry, inform Fermilab of the specific permit space procedures the Subcontractor will follow.
  4. Inform the Fermilab Fire Department and the CC prior to entering the space.
  5. Inform Fermilab of any unanticipated hazards encountered during confined space entry.
  6. Provide Fermilab with a copy of the Subcontractor's confined space permit, reclassification form or written certification once the work has been completed.

**15.5 OPEN BURNING**, fire barrels, coal or kerosene type salamanders, or open flame heating devices that have exposed fuel below the flame shall

be prohibited. Spark arresters shall be provided on all stacks or burning devices having forced drafts. Temporary heating devices, used in any enclosed building, room, or structure, shall be 1) listed by UL, FM, ETL, or other approval-testing laboratory and 2) vented to the outside. Flammable liquid fixed heaters shall be 1) listed by UL, FM, ETL, or other approval-testing laboratory and 2) equipped with a primary safety control to stop flow of fuel in the event of a flame failure. Barometric or gravity oil feeds are not acceptable primary safety controls.

**15.6 SMOKING IS PROHIBITED** in locations where flammable and/or combustible materials are stored. "No smoking" signs shall be posted in these areas. Smoking is prohibited in all Fermilab buildings except in designated areas.

**15.7 LOCKOUT/TAGOUT PROCEDURES** shall be enforced. Subcontractor personnel must be trained in lockout/tagout prior to participating in lockout/tagout of hazardous energy sources and working on lockout/tagout systems or equipment. The Subcontractor's employees and sub-tier contractor's shall comply with the requirements of NFPA 70E

**15.8 GROUND FAULT CIRCUIT INTERRUPTER** protection shall be provided for electric hand held tools, portable generators, temporary electrical extension cords and other wiring, etc. The assured equipment-grounding program is not an acceptable alternative.

**15.9 THE USE OF EXPLOSIVES IS NOT PERMITTED** without prior written approval of the Fermilab Director or his designee.

**15.10 VEHICLES AND EQUIPMENT:**

- a. Operators must have an appropriate, valid driver's license when operating vehicles on site. Seat belts are required to be provided and worn for the operators and passengers of all vehicles. Cell phones and other electronic equipment shall not be used while vehicles are in motion.
- b. All vehicles and mobile powered equipment, except automobiles and pickup trucks, shall have reverse signal alarms (a.k.a. backup alarms) audible above the surrounding noise level. If backup alarms are not present on the equipment, a spotter (other than the driver of the vehicle) must be present to warn pedestrians and the drivers of other moving equipment.

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- c. If required by the equipment manufacturer, roll over protection structures shall be provided.
- d. The equipment manufacturer must approve any modifications to lifting and hoisting equipment.
- e. Above ground fuel storage tanks for vehicles shall not be permitted on the Fermilab site. Fuel tanks mounted on pick-up trucks shall conform to the requirements of the Illinois State Fire Marshall's Office. Such vehicles shall be removed from the Fermilab site at the end of each workday. Refueling of equipment while the motor is running is prohibited. During refueling from truck-mounted fuel tanks or with portable fuel cans, etc, a 20-pound (minimum) A-B-C dry chemical fire extinguisher must be present. Maintenance and fueling areas used by the Subcontractor shall be properly graded and maintained and shall be located a minimum of 100 feet away from a wetland or water body boundary so that no adverse effect on the environment is done.
- f. All hand and power tools must be checked prior to use on each shift to assure that they are maintained in a safe condition. Any deficiencies shall be repaired, or defective parts replaced, before continued use.  

The Subcontractor must inspect all heavy equipment before use on site, prior to use on each shift, and during use to make sure it is in safe operating condition. Defective equipment shall be removed from service. The Subcontractor is to assure that inspection records are complete and up-to-date and that operating manuals are available. No modifications or additions, which affect the capacity or safe operation of the equipment, shall be made without the manufacturer's written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly. In no case shall the original safety factor of the equipment be reduced.
- g. All tools and equipment brought on site by the Subcontractor are subject to inspection by Fermilab. Items found to be out of compliance shall be immediately removed from service, tagged out of service, and taken off the site by the Subcontractor by the end of the work shift.

**15.11 OXYGEN DEFICIENT HAZARDS (ODH):** Fermilab has policies and procedures governing work in ODH areas, and will communicate specific requirements and work practices to the Subcontractor.

Subcontractor and sub-subcontractor personnel who must enter designated Oxygen Deficient Hazard areas must have a level of medical fitness acceptable to Fermilab prior to entry. This assessment is part of Oxygen Deficiency Hazard Training. Fermilab will provide training, oxygen monitoring, and emergency evacuation equipment.

**15.12 RADIATION PROTECTION:** Fermilab has policies and procedures governing radiological work, and will communicate specific requirements and work practices to the Subcontractor.

Fermilab will provide subcontractor personnel radiological training (for T&M contracts this can be billed at the current rate for normal working hours), radiation dosimeters, protective clothing, and disposal of such clothing and other materials removed from radiological work areas. All potentially exposed material must be surveyed prior to removal from site.

**15.13 EMERGENCY EGRESS ROUTES** shall be kept clear at all times. Emergency shelter locations and specific evacuation procedures will be provided by the CC. The Subcontractor shall communicate this information to his employees and all sub-subcontractors. Unless otherwise directed by the CC, the Subcontractor personnel shall participate in emergency drills.

**15.14 SPECIFIC HEALTH and SAFETY REQUIREMENTS (INCLUDING TRAINING),** if any, particular to this project will be found in the ADDENDUM A, SUBCONTRACT SUMMARY.

**16.0 ENVIRONMENTAL PROTECTION**

All construction work on the Fermilab site shall comply with all applicable environmental executive orders, laws, regulations, and permits. All Subcontractors and sub-subcontractors shall conduct their activities in an environmentally sound manner that limits the risks to the environment and protects the public health.

**16.1 PREVENTIVE MEASURES**

- a. Erosion and sedimentation shall be controlled for any project involving excavation. Erosion controls shall be in place where applicable, and installed in accordance with Illinois Urban Manual specifications.

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- b. Excavation at or adjacent to streams tributaries, or other drainage outfalls shall be done only after notification to the Coordinator. The Coordinator will inform the Subcontractor if any wetlands are present in work area and what protective measures are necessary.
- c. Unexpected environmental impacts shall be immediately reported to Fermilab and quickly mitigated by the Subcontractor.
- d. Flammable and/or combustible liquids, fuels, and oils shall be in secondary containment adequate to contain 100% of the contents of the container. Storage of these materials, plus maintenance and fueling areas used by the Subcontractor, shall be properly graded and maintained and shall be located a minimum of 100 feet away from a wetland or water body boundary so that adverse effects on the environment are eliminated. Liquid transfers shall be carried out in such a way as to ensure that no contamination of ground surfaces occur.
- e. The Subcontractor shall make routine inspections to assure that all motorized equipment is free of leaks of petroleum and other toxic or hazardous materials. The Subcontractor shall keep sufficient cleanup supplies on hand (e.g. oil dry, absorbent booms, etc.) to contain/absorb any spill or leak of fuels, oils, etc. that could potentially leak from his equipment. If a spill or leak should occur, the Subcontractor should immediately take appropriate steps to contain spills, move equipment out of sensitive areas (near wetland or water body) and immediately notify Fermilab at phone x3131.

**16.2. AT THE CLOSE OF EVERY WORKDAY,** the Subcontractor's Field Superintendent shall inspect the complete project site to insure that all erosion controls, drainage patterns, excavations and staging areas are in environmentally sound condition for the weather conditions anticipated.

**16.3 SPECIFIC ENVIRONMENTAL PROTECTION REQUIREMENTS** (including training) particular to this project will be found in the ADDENDUM A, SUBCONTRACT SUMMARY.

**17.0 VARIANCES:** Requests for exceptions of the environmental, safety and health conditions specified in Paragraphs 13 – 16 must be submitted in writing to Fermilab.

**18.0 NOT APPLICABLE**

**19.0 QUALITY CONTROL:** The Subcontractor is responsible for all activities necessary to manage, control, and document work so as to ensure compliance with the Subcontract documents. The Subcontractor's responsibility includes ensuring adequate Quality Control services are provided for work accomplished on- and off-site by his/her organization, suppliers, sub-tier contractors, technical laboratories, and consultants. The work activities include safety, submittal management, testing and inspection, and all other functions relating to the requirement for quality construction.

**19.1 IMPLEMENTATION:** The Subcontractor shall ensure that the project, including work by sub-tier contractors and suppliers, complies with the requirements of the subcontract.

**19.2 WEEKLY COORDINATION MEETINGS:** During the progress of the project, weekly coordination meetings may (at Fermilab's discretion) be held with the Subcontractor and other interested parties from Fermilab. During these meetings work completed will be reviewed, work planned for the coming week will be discussed, and ES&H issues will be resolved.

**19.3 TESTING:** The Subcontractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to Subcontract requirements.

**19.4 COMPLETION INSPECTIONS**

a. Beneficial use inspection: This Fermilab inspection will coincide with any Fermilab beneficial use milestone dates. The Subcontractor's deficiency list with status noted shall be attached to the Beneficial Use documentation. The Subcontractor shall provide a 10-day notice to Fermilab before this inspection is performed.

b. Punchlist inspection: Once the Subcontractor believes the work is substantially complete, he shall update his deficiency list. With a 10-day notice the Fermilab representatives will convene for a Punchlist Inspection, to verify that the Subcontractor's deficiency list is accurate, and to add items if necessary.

c. Final acceptance inspection: The Subcontractor's Quality Control Inspection personnel, plus the superintendent or other primary management person shall be in attendance at this inspection. Additional

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Fermilab personnel may also be in attendance. The Subcontractor shall give at least 5 days notice prior to the Final Acceptance Inspection, which will be formally scheduled by Fermilab.

**19.5 DOCUMENTATION**

- a. Daily Report: The Subcontractor shall maintain current records providing factual evidence that required activities and/or tests have been performed. These records shall be submitted at the coordination meeting. These records shall include the work of sub-tier contractors and suppliers.
- b. Periodic coordination minutes: Depending on the scale and scope of the subcontract effort, Fermilab will conduct periodic coordination meetings, and will prepare minutes, including a list of deficient items, corrective actions, and status of these items. These minutes will be signed by the Subcontractor, and will become part of the Fermilab project file.
- c. Deficiency list: As segments of the work are completed, the Subcontractor shall update the

list of outstanding deficient items which do not conform to the approved subcontract documents and their current status. This list will be kept current during the project and made part of the Periodic Coordination Minutes (see above). The final version of this list will be prepared by the Subcontractor prior to notifying Fermilab to perform the Punchlist inspection.

- d. Fermilab will add to the Subcontractor's deficiency list during the Punchlist inspection and transmit this to the Subcontractor for corrective action.

**19.6 NOTIFICATION OF NONCOMPLIANCE:** The CC will notify the Subcontractor of deficiencies in the quality of the project. The Subcontractor shall take immediate corrective action after receipt of such notice.

**20.0 ATTACHMENTS:** *Appendix 1 – Fermilab Hazard Analysis Form Add place for Plans and spec listing*