

# ADDENDUM A

## Supplementary Terms and Conditions

This Addendum A and the corresponding Exhibit A together comprise the project specific requirements that are supplementary to the requirements of the Fermilab Subcontract General Provisions contained in FL-1 and the Fermilab Construction Subcontract Terms and Conditions contained in FL-3.

## Project Information

Project Name: **SBN Far Detector Building**  
FESS/Engineering Project No. 6-7-93  
Issue Date: March 30, 2015

## Fermilab Project Team

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### Note

*Items and descriptions highlighted (see example below) indicate additional information, descriptions and requirements are contained in Addendum A.*

Example:  
Refer to **ADDENDUM A, SECTION 1.1** for the specific...

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02221	BACKFILLING and COMPACTING for STRUCTURES and PAVEMENTS
02222	EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES
02230	EMBANKMENT
02280	TEMPORARY UTILITY SUPPORT SYSTEMS
02311	ROUGH GRADING
02370	EROSION CONTROL
02500	ROADWAYS
02501	CONCRETE SIDEWALKS, APRONS AND STOOPS
02530	SANITARY SEWERAGE
02607	MANHOLES AND COVERS
02619	HIGH DENSITY POLYETHYLENE (HDPE) SOLID WALL WATER PIPE
02630	STORM SEWERS AND CULVERTS
02920	TOPSOIL
02930	FERTILIZING and SEEDING

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**SBN FD Site Work – FESS/Engineering Project 6-7-94B**

01524	CONSTRUCTION WASTE MANAGEMENT AND RECYCLING
01810	GENERAL REQUIREMENTS – DOE GUIDING PRINCIPLES
01815	GENERAL COMMISSIONING REQUIREMENTS

**DIVISION 2 – SITE CONSTRUCTION**

02070	SELECTIVE DEMOLITION
02100	SITE PREPARATION
02220	EXCAVATING FOR STRUCTURES and PAVEMENTS
02221	BACKFILLING and COMPACTING for STRUCTURES and PAVEMENTS
02222	EXCAVATING, BACKFILLING AND COMPACTING FOR UTILITIES
02230	EMBANKMENT
02280	TEMPORARY UTILITY SUPPORT SYSTEMS
02311	ROUGH GRADING
02370	EROSION CONTROL
02500	ROADWAYS
02501	CONCRETE SIDEWALKS, APRONS AND STOOPS
02530	SANITARY SEWERAGE

- 02607 MANHOLES AND COVERS
- 02619 HIGH DENSITY POLYETHYLENE (HDPE)  
SOLID WALL WATER PIPE
- 02630 STORM SEWERS AND CULVERTS
- 02920 TOPSOIL
- 02930 FERTILIZING and SEEDING

DIVISION 15 - MECHANICAL

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DIVISION 16 – ELECTRICAL

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- 16950 TESTING ELECTRICAL SYSTEMS

## 1.0 Site Location

The project is located in the Neutrino Campus area on the western side of the Fermi National Accelerator Laboratory (Fermilab) site, approximately three (3) miles east of the city of Batavia, in Kane County, Illinois.

## 2.0 Scope of Work

The Subcontractor's scope of work is in no way limited to the general work outline described below. The Subcontractor shall perform all work required to complete the construction work in strict accordance with the drawings and/or specifications. The description and quantities listed below 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 cost proposal. Specific quantities and definitions of the scope of work for bidding purposes shall be based solely on estimates developed by the Offerer from the drawings, specifications, Exhibit A and information obtained from examination of the project site.

The project is consists of the work:

**Base Bid** – The lump sum base bid will consist of all labor, equipment, transportation, overhead, bonding costs, safety oversight, quality control oversight and supervision as required to mobilize, procure, install, relocate and construct the work packages known as SBN FD Site Work (FESS/Engineering Project 6-7-94B) and SBN Far Detector Building (FESS/Engineering Project No. 6-7-93) including the following:

### SBN FD Site Work (FESS/Engineering Project 6-7-94B)

This project includes the site work required to extend utilities, construct roadways and parking areas including:

1. Install and maintain storm water pollution prevention measures;
2. Extend existing electrical service;
3. Construct new electrical substation;
4. Extend existing communication service;
5. Extend existing domestic water service;
6. Extend existing industrial cooling water service;
7. Construction of new roadways and parking areas;
8. Preparation of the specified submittals;
9. Acceptance testing of the completed system, including documentation;
10. Final grading and clean-up.

### SBN Far Detector Building (FESS/Engineering Project 6-7-93)

This project will construct the SBN Far Detector Building, an industrial-type structure with a built up roof and metal siding on a braced structural steel frame system, and a cast-in-place reinforced concrete structure under the majority of the building. The building and below grade areas are outfitted to provide the environment to construct, support and operate, the scientific equipment anticipated to be installed in the building. This work includes:

1. Excavation and stockpiling of soils and removed materials;
2. Construction of below grade cast-in-place concrete enclosures;
3. Construction of steel framed, metal sided building;
4. Built up roofing system with skylights;
5. Mechanical systems installation;

6. Electrical systems installation;
7. Fire protection systems installation;
8. Installation of Fermilab provided overhead bridge crane;
9. Preparation of the specified submittals;
10. Acceptance testing of the completed system, including documentation;
11. Final grading and clean-up.

**Alternates** – Provide a separate lump sum price for all labor, equipment, transportation, overhead, bonding costs, safety oversight, quality control oversight and supervision as required to mobilize, procure, install and construct each of the following alternates:

**Alternate No. 1 – Mezzanine Level Platform**

This alternate includes the structural steel framing, metal grating and handrails described on Drawing S-4 (Mezzanine Level Framing Plan) and S-20 (Mezzanine Framing Details). All steel embedment required for the steel framing will be installed as part of the base scope of work.

**Alternate No. 3 – Tank Foundations North of Building**

In order to accommodate the installation of the physics equipment, portions of the site work north of the SBN Far Detector Building will be required to be installed in the summer of 2017 after the beneficial occupancy of the majority of the work. This work includes the tank foundations indicated on 6-7-94B, drawing C-11 and the mechanical screen indicated on 6-7-93, drawing A-15. This alternate requests a lump sum price for this work since it will require a separate mobilization and may be removed from the subcontract scope of work.

### **3.0 Items Affecting Work Planning**

#### **1. Funding Limitations:**

- All funds are not presently available for this subcontract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.
- It is anticipated that approximately 75% of the total funding is currently available. The remaining funding is anticipated in October 2015.
- The Subcontractor must notify Fermilab at the point when the Fermilab amount payable reaches eighty-five percent (85%) of the total amount obligated to the Subcontract (including potential termination costs). The Subcontractor must then notify Fermilab of any need for additional funds over the amount obligated. If additional funds cannot be obligated, Fermilab will terminate the Subcontract.

2. The site entrance gate hours of operation are:

**Pine Street gate:** Open 24/7.

**Batavia Road gate:** 6:30 a.m. to 11 p.m., 7 days a week

**Wilson Street gate:** 6:30 a.m. to 3:30 p.m., Monday through Friday

*Please note that truck traffic entering or leaving the Fermilab site after 3:30 p.m. will use the Pine Street gate.*

3. All material removed from the building requires radiological survey by Fermilab ES&H group prior to being removed from the site. All items shall be stockpiled east of the building in designated locations as directed by the Fermilab Construction Coordinator. After Fermilab surveys the items, Fermilab will clearly mark that offsite removal is approved.
4. Access to the MINOS Service Building and NOvA Surface Building must be maintained at all times for emergency vehicles. The Subcontractor will develop and implement work procedures to ensure that utility extensions, site work, road work and related activities maintain access during the construction process.

### 3.2 Environmental Issues Affecting the Work

- 1 Environmental Protection, Erosion Control including adherence to the Project-specific Storm Water Pollution Prevention Plan (SWPPP). The SWPPP, along with Notice of Intent (NOI) has been submitted to the Illinois Environmental Protection Agency (IEPA) by Fermilab for a project specific permit issued under the Laboratory's General NPDES Permit No. ILR10, issued from the IEPA to Fermilab for construction site activities. No earthwork will be permitted to commence until the Subcontractor has reviewed, formally accepted and signed the SWPPP. Included in the erosion control scope of work is the installation and maintenance of all control devices, soil stabilization and all other requirements of contract documents. All sub-tier sub-contractors are required to sign and adhere to the provisions of the SWPPP.
- 2 The project area contains 0.17 acres of identified wetland that will be mitigated by the purchase of wetland credit by Fermilab prior to the Notice To Proceed (NTP) for this work. The remaining wetland areas will be protected throughout the construction work.
- 3 This project falls under the oversight of the Kane-DuPage Soil & Water Conservation District. These specific requirements are indicated on the drawings and contained in the letter dated January 26, 2015 included in this Exhibit.

### 3.5 Identification Badging & Subcontractor Employee Orientation

Subcontractor will be required to have Fermilab ID badges.

### 3.6 Materials Furnished by Fermilab

None

### 3.7 Buy American Act

Fermilab maintains a preference for domestic construction material. In accordance with Section 25 of FL-3, Fermilab Construction Subcontract Terms and Conditions, the following construction material or components are exempt from the Buy American Act:  
There are no exemptions noted for this project

### 3.8 Services Furnished by Fermilab

The following services will be provided by Fermilab:

#### 3.8.e – Electrical Power

There is no electrical power available at the project site.

#### 3.8.f – Drinking Water

The Subcontractor will provide potable water for drinking for his use at the project site.

#### 3.8.g – Toilet Facilities

The Subcontractor will provide toilet facilities for his use at the project site.

### 3.12 Parking and Staging Area

The designated parking and staging area for the Subcontractor is indicated on the subcontract documents.

### 3.14 Off-Site Disposal

No regulated waste is anticipated for this project. See Section 3.1, item 7 above for information on prohibition of metal recycling.

### 4.1 Subcontractor's Safety Representative Responsibilities

For this project, the Subcontractor's Field Superintendent can serve as the Subcontractor's Safety Representative.

### 5.3 Construction Schedule

The Subcontractor shall submit with the proposal, a preliminary schedule that includes, at a minimum, the anticipated durations of the milestones shown in red below that describe how the Substantial Completion Milestone will be met.

1. Milestone 0 – 0 Calendar Days - Notice to Proceed  
This marks the start of the project. Subcontractor may begin material submittals and procurement activities.
2. Milestone 1 – XX Calendar Days – Concrete Work Complete  
This milestone marks the point of where cast-in-place concrete foundations and walls are complete and ready for superstructure installation.
3. Milestone 2 – XX Calendar Days – Structural Steel Work Complete  
This milestone marks the point of where structural steel work including is complete.
4. Milestone 3 – XX Calendar Days – Building Envelope Work Complete  
This milestone marks the point of where exterior building envelope work including metal siding, windows and roofing work is complete and the building is weather tight.
5. Milestone 4 – XX Calendar Days – Beneficial Occupancy of Detector Enclosure  
This milestone marks the point of when Fermilab will begin to install the detector and detector related components. In order to meet this milestone, the below grade concrete work, mezzanine level platform (if alternate is accepted) and related work is complete
6. Milestone 5 – XX Calendar Days – Rough-Ins Complete  
This milestone marks the point of where mechanical and electrical rough-ins are complete.
7. Milestone 6 – XX Calendar Days – Crane Installation Start  
This milestone marks the point of where the Subcontractor is ready to start the installation of the Fermilab provided overhead bridge crane.

8. Milestone 7 – **440** Calendar Days – Substantial Completion  
This milestone marks the point of substantial completion of the project including punchlist, clean-up, acceptance testing, and operations & manual and as-built drawing submittals.
9. Milestone 8 – **XX** Calendar Days – Start Installation of Tank Foundations and Mechanical Screen  
This milestone marks the point where the Subcontractor will begin the installation of the concrete tank foundations and mechanical screen north of the SBN Far Detector Building. This work will begin after the installation of the two (2) large detector components through the north wall currently scheduled for the spring of 2017. While the exact date may shift, for scheduling purposes, the Subcontractor should assume that the this work will begin on April 17, 2017
10. Milestone 9 – **XX** Calendar Days –Tank Foundations and Mechanical Screen Complete  
This milestone marks the completion of the concrete tank foundations and mechanical screen north of the SBN Far Detector Building.
11. Milestone 10 – **XX** Calendar Days - Project Complete  
This milestone marks the completion of the project.

Additional pacing milestones may be added by the Subcontractor.

In addition to the requirements in Exhibit A Section 5.4 (Weekly Progress Meetings) the subcontractor shall provide a two week look ahead schedule indicating the following:

- Scheduled work activities to be started, in progress or completed in the succeeding two weeks.
- Status of material submittals.
- Status of RFI's.
- Activities requiring the services or materials provided by Fermilab including permits, survey quality assurance checks, delivery or pick-up of Fermilab supplied materials.

## 5.7 Submittals

Submittals are defined as shop drawings, material samples, operations and maintenance manuals for all materials and assemblies used on the project which are normally required in the construction industry, reference the bid drawings and technical specifications for further details. The following information and requirements pertain to submittals for this project:

1. Shop drawings shall conform to the requirements of Section 5.5 through 5.8 of FL-3, **Fermilab Construction Subcontract Terms and Conditions**;
2. Submittals shall include a cover sheet that includes (at a minimum) the following information:
  - a. Subcontractor name, address, contact information;
  - b. Subcontract purchase order number;
  - c. FESS/E project name and number;
  - d. Specification and/or drawing number that defines the product;
  - e. Confirmation that the submittal complies with 5.5 of FL-3, Fermilab Construction Subcontract Terms and Conditions.
3. The Subcontractor shall submit one (1) one electronic copy of submittals;
4. The Subcontractor shall supply two (2) printed copies and one (1) electronic copy of all operation and maintenance manuals for equipment furnished by the Subcontractor or his Sub-tier contractor prior to final acceptance of the project by Fermilab.
5. Electronic submittals shall be in the "portable document format" (PDF) as developed by Adobe, Incorporated;

6. Fermilab will review submittals and return one (1) electronic copy of all submittals within 10 (ten) working days with one (1) of the following actions:
- "No exception Taken" response on the Subcontractor's shop drawings submittal and **"NET"** as shown on the Material Submittal for Review form indicates the Subcontractor may proceed with procurement, fabrication, manufacture and installation of the material and/or product.
  - "Revise & Resubmit – Fabrication May Proceed" on the Subcontractor's shop drawing submittal and **"R/R"** as shown on the Material Submittal for Review form indicates the Subcontractor may proceed with procurement, fabrication, and manufacture of the material and/or product assuming the noted items on the submittal are incorporated into the final design and/or product. The Subcontractor will revise the shop drawings and resubmit them to Fermilab for approval, but will not be able to erect and/or install any material until he has received either the "No Exception Taken (NET)" or the "Make Corrections and Proceed (MCP)" action by Fermilab.
  - "Make Corrections & Proceed" response on the Subcontractor's shop drawing submittal and **"MCP"** as shown on the "Material Submittal for Review" form indicates the Subcontractor may proceed with procurement, fabrication, manufacture and installation of the material and/or product assuming the noted items on the submittal are incorporated into the final design and/or product.
  - With the "Rejected" response on the Subcontractor's shop drawing submittal and **"R"** as shown on the Material Submittal for Review form, the reasons for the disapproval will be stated on the shop drawing submittal. The Subcontractor will revise the shop drawing submittal to conform with the drawings and specifications and resubmit them to Fermilab for approval. No procurement, fabrication, manufacture or installation shall be performed by the Subcontractor until one of the above actions listed under Section 6(a), 6(b), or 6(c).
  - "For Information Only" response on the Subcontractor's shop drawing submittal and **"FIO"** on the Material Submittal for Review form acknowledges receipt of such items as test results, professional engineering calculations, welding certificates and inspection reports.

### 5.11 Project Bulletin Board

The Subcontractor will provide a Project Bulletin Board that meets the requirements described in Section 32 of FL-3, Fermilab Construction Subcontract Terms and Conditions.

### 5.13 Quality Requirements

No extraordinary quality requirements are anticipated for this project.

### 6.10 Job Site ES&H Meetings

Monthly ES&H meetings shall be conducted by the Subcontractor's Field Superintendent at the job site. The purpose of these meetings is to assist in highlighting and reinforcing the Subcontractor's ES&H Plan. It is expected that these meetings will typically last one (1) hour.