

S P E C I F I C A T I O N S

Project No. 437-16-250

Fargo VA Health Care System Fargo, ND

Improve Bldg. 1 Mechanical Room Exhaust



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Medical Center
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July 26, 2017

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**DEPARTMENT OF VETERANS AFFAIRS
VHA MASTER SPECIFICATIONS**

**TABLE OF CONTENTS
Section 00 01 10**

	DIVISION 00 - SPECIAL SECTIONS	DATE
00 01 15	List of Drawing Sheets	07-15
	DIVISION 01 - GENERAL REQUIREMENTS	
01 00 00	General Requirements	11-15
01 33 23	Shop Drawings, Product Data, and Samples	02-17
01 35 26	Safety Requirements	02-17
01 74 19	Construction Waste Management	09-13
	DIVISION 02 - EXISTING CONDITIONS	
02 41 00	Demolition	02-15
	DIVISION 06 - WOOD AND PLASTIC	
06 10 00	Rough Carpentry	10-15
	DIVISION 07 - THERMAL AND MOISTURE PROTECTION	
07 22 00	Roof and Deck Insulation	01-16
07 53 23	Ethylene-Propylene-Diene-Monomer Roofing	02-16
07 60 00	Flashing and Sheet Metal	07-14
07 81 00	Applied Fireproofing	10-15
07 84 00	Firestopping	02-16
07 92 00	Joint Sealants	10-15
	DIVISION 08 - DOORS AND WINDOWS	
08 31 13	Access Doors and Frames	02-16
	DIVISION 09 - FINISHES	
09 22 16	Non-Structural Metal Framing	05-16
09 29 00	Gypsum Board	11-14
09 51 00	Acoustical Ceilings	12-16
09 65 13	Resilient Base and Accessories	02-16
09 91 00	Painting	01-16
	DIVISION 23 - HEATING, VENTILATING, AND AIR CONDITIONING (HVAC)	
23 05 11	Common Work Results for HVAC	02-15
23 05 93	Testing, Adjusting, and Balancing for HVAC	02-15

23 07 11	HVAC and Boiler Plant Insulation	02-15
23 09 23	Direct-Digital Control System for HVAC	09-11
23 31 00	HVAC Ducts and Casings	03-13
23 34 00	HVAC Fans	02-15
23 37 00	Air Outlets and Inlets	02-15
	DIVISION 26 - ELECTRICAL	
26 05 11	Requirements for Electrical Installations	01-16
26 05 19	Low-Voltage Electrical Power Conductors and Cables	01-17
26 05 26	Grounding and Bonding for Electrical Systems	01-17
26 05 33	Raceway and Boxes for Electrical Systems	05-14
26 27 26	Wiring Devices	01-16

SECTION 00 01 15
LIST OF DRAWING SHEETS

The drawings listed below accompanying this specification form a part of
the contract.

<u>Drawing No.</u>	<u>Title</u>
X-1	COVER SHEET
A-1	ARCHITECTURAL PLANS
H-1	BASEMENT FLOOR - AREA E HVAC PLAN
H-2	FIRST FLOOR - AREA E HVAC PLAN
H-3	SECOND FLOOR - AREA E HVAC PLAN
H-4	THIRD AND FOURTH FLOOR - AREA E HVAC PLAN
H-5	HVAC SCHEDULES AND DETAILS
E-1	PARTIAL BASEMENT AND PARTIAL ROOF PLAN - ELECTRICAL

- - - END - - -

SECTION 01 00 00
GENERAL REQUIREMENTS

TABLE OF CONTENTS

1.1 SAFETY REQUIREMENTS.....	1
1.2 GENERAL INTENTION.....	1
1.3 STATEMENT OF BID ITEM(S).....	1
1.4 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR.....	1
1.5 CONSTRUCTION SECURITY REQUIREMENTS.....	1
1.6 OPERATIONS AND STORAGE AREAS.....	2
1.7 ALTERATIONS.....	5
1.8 DISPOSAL AND RETENTION.....	7
1.9 RESTORATION.....	7
1.10 LAYOUT OF WORK.....	8
1.11 AS-BUILT DRAWINGS.....	8
1.12 USE OF ROADWAYS.....	9
1.13 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT.....	9
1.14 TEMPORARY USE OF EXISTING ELEVATORS.....	10
1.15 TEMPORARY TOILETS.....	10
1.16 AVAILABILITY AND USE OF UTILITY SERVICES.....	11
1.17 TESTS.....	11
1.18 INSTRUCTIONS.....	12
1.19 LOCAL FARGO CONSTRUCTION CONTRACTOR ORIENTATION AND POLICIES...	13

**SECTION 01 00 00
GENERAL REQUIREMENTS**

1.1 SAFETY REQUIREMENTS

- A. Refer to section 01 35 26, SAFETY REQUIREMENTS for safety and infection control requirements.

1.2 GENERAL INTENTION

- A. Contractor shall completely prepare site for building operations, including demolition and removal of existing structures, and furnish labor and materials and perform work for the installation of new intake and exhaust fans and ductwork and associated demolition and rough-in as required by drawings and specifications.
- B. Only one organized site visit will be conducted per FAR 52.236-27 Alternate I
- C. Offices of JPK Engineering, LLC, as Consulting Engineers, will render certain technical services during construction. Such services shall be considered as advisory to the Government and shall not be construed as expressing or implying a contractual act of the Government without affirmations by Contracting Officer.
- D. All employees of general contractor and subcontractors shall comply with VA security management program and be identified by project and employer.

1.3 STATEMENT OF BID ITEM(S)

- A. ITEM 1, Mechanical Work: Work includes all labor, material, equipment and supervision to perform the required mechanical construction work on this project including installing new intake and exhaust fans and ductwork to provide mechanical room ventilation.

1.4 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

- A. Drawings and contract documents may be obtained from the website where the solicitation is posted. Additional copies will be at Contractor's expense.

1.5 CONSTRUCTION SECURITY REQUIREMENTS

- A. Security Plan:

1. The security plan defines both physical and administrative security procedures that will remain effective for the entire duration of the project.
2. The Contractor is responsible for assuring that all sub-contractors working on the project and their employees also comply with these regulations.

B. Security Procedures:

1. Contractor's employees shall not enter the project site without appropriate badge. They may also be subject to inspection of their personal effects when entering or leaving the project site.
2. No photography of VA premises is allowed without written permission of the Contracting Officer.
3. VA reserves the right to close down or shut down the project site and order Contractor's employees off the premises in the event of an emergency. The Contractor may return to the site only with the approval of the Contracting Officer.

C. Document Control:

1. The Contractor is responsible for safekeeping of all drawings, project manual and other project information. This information shall be shared only with those with a specific need to accomplish the project.
2. All paper waste or electronic media such as CD's and diskettes shall be shredded and destroyed in a manner acceptable to the VA.

1.6 OPERATIONS AND STORAGE AREAS

- A. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- B. Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the Contractor only with the approval of the Contracting Officer and shall be built with labor and materials furnished by the Contractor without expense to the Government. The

temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor at its expense upon completion of the work. With the written consent of the Contracting Officer, the buildings and utilities may be abandoned and need not be removed.

- C. The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.
- D. Working space and space available for storing materials shall be as determined by the Project Engineer.
- E. Workmen are subject to rules of Medical Center applicable to their conduct.
- F. Phasing:
 - 1. The Medical Center must maintain its operation 24 hours a day 7 days a week. Therefore, any interruption in service must be scheduled and coordinated with the COR to ensure that no lapses in operation occur. It is the CONTRACTOR'S responsibility to develop a work plan and schedule detailing, at a minimum, the procedures to be employed, the equipment and materials to be used, the interim life safety measure to be used during the work, and a schedule defining the duration of the work with milestone subtasks. The work to be outlined shall include, but not be limited to:
 - 2. To insure such executions, Contractor shall furnish the Project Engineer with a schedule of approximate dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall notify the Project Engineer two weeks in advance of the proposed date of starting work in each specific area of site, building or portion

thereof. Arrange such dates to insure accomplishment of this work in successive phases mutually agreeable to Project Engineer.

- G. All Buildings will be occupied during performance of work.
1. Contractor shall take all measures and provide all material necessary for protecting existing equipment and property in affected areas of construction against dust and debris, so that equipment and affected areas to be used in the Medical Centers operations will not be hindered. Contractor shall permit access to Department of Veterans Affairs personnel through construction areas.
- H. When a building and/or construction site is turned over to Contractor, Contractor shall accept entire responsibility including upkeep and maintenance therefore:
1. Contractor shall maintain a minimum temperature of 4 degrees C (40 degrees F) at all times, except as otherwise specified.
 2. Contractor shall maintain in operating condition existing fire protection and alarm equipment.
- I. Utilities Services: Maintain existing utility services for Medical Center at all times. Provide temporary facilities, labor, materials, equipment, connections, and utilities to assure uninterrupted services. Where necessary to cut existing water, steam, gases, sewer or air pipes, or conduits, wires, cables, etc. of utility services or of fire protection systems and communications systems (including telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by Project Engineer.
1. No utility service such as water, gas, steam, sewers or electricity, or fire protection systems and communications systems may be interrupted without prior approval of Project Engineer. Electrical work shall be accomplished with all affected circuits or equipment de-energized.
 2. Contractor shall submit a request to interrupt any such services to Project Engineer, in writing, 14 days in advance of proposed interruption. Request shall state reason, date, exact time of, and approximate duration of such interruption.

3. Contractor will be advised of approval of request, or of which other date and/or time such interruption will cause least inconvenience to operations of Medical Center. Interruption time approved by Medical Center may occur at other than Contractor's normal working hours.
 4. Major interruptions of any system must be requested, in writing, at least 15 calendar days prior to the desired time and shall be performed as directed by the Project Engineer.
 5. In case of a contract construction emergency, service will be interrupted on approval of Project Engineer.
- J. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, which are to be abandoned but are not required to be entirely removed, shall be sealed, capped or plugged at the main, branch or panel they originate from. The lines shall not be capped in finished areas, but shall be removed and sealed, capped or plugged in ceilings, within furred spaces, in unfinished areas, or within walls or partitions; so that they are completely behind the finished surfaces.
- K. To minimize interference of construction activities with flow of Medical Center traffic, comply with the following:
1. Keep roads, walks and entrances to grounds, to parking and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles.
- L. Coordinate the work for this contract with other construction operations as directed by Project Engineer. This includes the scheduling of traffic and the use of roadways, as specified in Article, USE OF ROADWAYS.

1.7 ALTERATIONS

- A. Survey: Before any work is started, the Contractor shall make a thorough survey with the Project Engineer of areas of buildings in which alterations occur and areas which are anticipated routes of access, and furnish a report, signed by both, to the Contracting Officer. This report shall list by rooms and spaces:
1. Existence and conditions of items such as plumbing fixtures and accessories, electrical fixtures, equipment, venetian blinds,

- shades, etc., required by drawings to be either reused or relocated, or both.
2. Shall note any discrepancies between drawings and existing conditions at site.
 3. Shall designate areas for working space, materials storage and routes of access to areas within buildings where alterations occur and which have been agreed upon by Contractor and Project Engineer.
- B. Any items required by drawings to be either reused or relocated or both, found during this survey to be nonexistent, or in opinion of Project Engineer, to be in such condition that their use is impossible or impractical, shall be furnished and/or replaced by the Government.
- C. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and Project Engineer together shall make a thorough re-survey of the areas of buildings involved. They shall furnish a report on conditions then existing, of resilient flooring, doors, windows, walls and other surfaces as compared with conditions of same as noted in first condition survey report:
1. Re-survey report shall also list any damage caused by Contractor to such flooring and other surfaces, despite protection measures; and, will form basis for determining extent of repair work required of Contractor to restore damage caused by Contractor's workmen in executing work of this contract.
- D. Protection: Provide the following protective measures:
1. Wherever existing roof surfaces are disturbed they shall be protected against water infiltration. In case of leaks, they shall be repaired immediately upon discovery.
 2. Temporary protection against damage for portions of existing structures and grounds where work is to be done, materials handled and equipment moved and/or relocated.
 3. Protection of interior of existing structures at all times, from damage, dust and weather inclemency. Wherever work is performed, floor surfaces that are to remain in place shall be adequately protected prior to starting work, and this protection shall be maintained intact until all work in the area is completed.

1.8 DISPOSAL AND RETENTION

- A. Materials and equipment accruing from work removed and from demolition of buildings or structures, or parts thereof, shall be disposed of as follows:
1. Reserved items which are to remain property of the Government are noted on drawings or in specifications as items to be stored. Items that remain property of the Government shall be removed or dislodged from present locations in such a manner as to prevent damage which would be detrimental to re-installation and reuse. Store such items until ready for re-installation.
 2. Items not reserved shall become property of the Contractor and be removed by Contractor from Medical Center.
 3. Items of portable equipment and furnishings located in rooms and spaces in which work is to be done under this contract shall remain the property of the Government. When rooms and spaces are vacated by the Department of Veterans Affairs during the alteration period, such items which are NOT required by drawings and specifications to be either relocated or reused will be removed by the Government in advance of work to avoid interfering with Contractor's operation.

1.9 RESTORATION

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work, and do not disturb any ducts, plumbing, steam, gas, or electric work without approval of the Project Engineer. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the Project Engineer before it is disturbed. Materials and workmanship used in restoring work, shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.
- B. Upon completion of contract, deliver work complete and undamaged. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work.

- C. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen to existing piping and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems (including telephone) which are not scheduled for discontinuance or abandonment.

1.10 LAYOUT OF WORK

- A. The Contractor shall lay out the work from Government established base lines and bench marks, indicated on the drawings, and shall be responsible for all existing conditions measurements in connection with the layout. The Contractor shall furnish, at Contractor's own expense, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. The Contractor shall be responsible for executing the work to the lines and grades that may be established or indicated by the Contracting Officer. The Contractor shall also be responsible for maintaining and preserving marks established until authorized to remove them. If such marks are destroyed by the Contractor or through Contractor's negligence before their removal is authorized, the Contracting Officer may replace them and deduct the expense of the replacement from any amounts due or to become due to the Contractor.

1.11 AS-BUILT DRAWINGS

- A. The Contractor shall maintain two full size sets of as-built drawings which will be kept current during construction of the project, to include all contract changes, modifications and clarifications.
- B. All variations shall be shown in the same general detail as used in the contract drawings. To insure compliance, as-built drawings shall be made available for the Project Engineer's review, as often as requested.
- C. Contractor shall deliver two hard copy approved completed sets of as-built drawings and one electronic version (scanned PDF) to the Project Engineer within 15 calendar days after each completed phase and after the acceptance of the project by the Project Engineer.
- D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.12 USE OF ROADWAYS

- A. For hauling, use only established public roads and roads on Medical Center property and, when authorized by the Project Engineer, such temporary roads which are necessary in the performance of contract work. Temporary roads shall be constructed and restoration performed by the Contractor at Contractor's expense. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.

1.13 TEMPORARY USE OF MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Use of new installed mechanical and electrical equipment to provide heat, ventilation, plumbing, light and power will be permitted subject to written approval and compliance with the following provisions:
1. Permission to use each unit or system must be given by Project Engineer in writing. If the equipment is not installed and maintained in accordance with the written agreement and following provisions, the Project Engineer will withdraw permission for use of the equipment.
 2. Electrical installations used by the equipment shall be completed in accordance with the drawings and specifications to prevent damage to the equipment and the electrical systems, i.e. transformers, relays, circuit breakers, fuses, conductors, motor controllers and their overload elements shall be properly sized, coordinated and adjusted. Installation of temporary electrical equipment or devices shall be in accordance with NFPA 70, National Electrical Code, (2014 Edition), Article 590, *Temporary Installations*. Voltage supplied to each item of equipment shall be verified to be correct and it shall be determined that motors are not overloaded. The electrical equipment shall be thoroughly cleaned before using it and again immediately before final inspection including vacuum cleaning and wiping clean interior and exterior surfaces.
 3. Units shall be properly lubricated, balanced, and aligned. Vibrations must be eliminated.
 4. Automatic control systems for preheat coils shall function properly.

- B. Prior to final inspection, the equipment or parts used which show wear and tear beyond normal, shall be replaced with identical replacements, at no additional cost to the Government.
- C. This paragraph shall not reduce the requirements of the mechanical and electrical specifications sections.
- D. Any damage to the equipment or excessive wear due to prolonged use will be repaired replaced by the contractor at the contractor's expense.

1.14 TEMPORARY USE OF EXISTING ELEVATORS

- A. Use of existing elevators for handling building materials and Contractor's personnel will be permitted subject to following provisions:
 - 1. Contractor makes all arrangements with the Project Engineer for use of elevators. The Project Engineer will ascertain that elevators are in proper condition.
 - 2. Contractor covers and provides maximum protection of following elevator components:
 - a. Entrance jambs, heads soffits and threshold plates.
 - b. Entrance columns, canopy, return panels and inside surfaces of car enclosure walls.
 - c. Finish flooring.
 - 3. Government will accept hoisting ropes of elevator and rope of each speed governor if they are worn under normal operation. However, if these ropes are damaged by action of foreign matter such as sand, lime, grit, stones, etc., during temporary use, they shall be removed and replaced by new hoisting ropes at the Contractor's expense.

1.15 TEMPORARY TOILETS

- A. Contractor may have for use of Contractor's workmen, such toilet accommodations as may be assigned to Contractor by Medical Center. Contractor shall keep such places clean and be responsible for any damage done thereto by Contractor's workmen. Failure to maintain satisfactory condition in toilets will deprive Contractor of the privilege to use such toilets.

1.16 AVAILABILITY AND USE OF UTILITY SERVICES

- A. Electricity (for Construction and Testing): Furnish all temporary electric services.
 - 1. Obtain electricity by connecting to the Medical Center electrical distribution system.

1.17 TESTS

- A. Pre-test mechanical and electrical equipment and systems and make corrections required for proper operation of such systems before requesting final tests. Final test will not be conducted unless pre-tested.
- B. Conduct final tests required in various sections of specifications in presence of an authorized representative of the Project Engineer. Contractor shall furnish all labor, materials, equipment, instruments, and forms, to conduct and record such tests.
- C. Mechanical and electrical systems shall be balanced, controlled and coordinated. A system is defined as the entire system which must be coordinated to work together during normal operation to produce results for which the system is designed. For example, air conditioning supply air is only one part of entire system which provides comfort conditions for a building. Other related components are return air, exhaust air, steam, chilled water, refrigerant, hot water, controls and electricity, etc. Another example of a system which involves several components of different disciplines is a boiler installation. Efficient and acceptable boiler operation depends upon the coordination and proper operation of fuel, combustion air, controls, steam, feedwater, condensate and other related components.
- D. All related components as defined above shall be functioning when any system component is tested. Tests shall be completed within a reasonable period of time during which operating and environmental conditions remain reasonably constant and are typical of the design conditions.
- E. Individual test result of any component, where required, will only be accepted when submitted with the test results of related components and of the entire system.

1.18 INSTRUCTIONS

- A. Contractor shall furnish Maintenance and Operating manuals (hard copies and Adobe.pdf electronic) and verbal instructions when required by the various sections of the specifications and as hereinafter specified.
- B. Manuals: Maintenance and operating manuals and one compact disc (two hard copies and one electronic copy each) for each separate piece of equipment shall be delivered to the Project Engineer coincidental with the delivery of the equipment to the job site. Manuals shall be complete, detailed guides for the maintenance and operation of equipment. They shall include complete information necessary for starting, adjusting, maintaining in continuous operation for long periods of time and dismantling and reassembling of the complete units and sub-assembly components. Manuals shall include an index covering all component parts clearly cross-referenced to diagrams and illustrations. Illustrations shall include "exploded" views showing and identifying each separate item. Emphasis shall be placed on the use of special tools and instruments. The function of each piece of equipment, component, accessory and control shall be clearly and thoroughly explained. All necessary precautions for the operation of the equipment and the reason for each precaution shall be clearly set forth. Manuals must reference the exact model, style and size of the piece of equipment and system being furnished. Manuals referencing equipment similar to but of a different model, style, and size than that furnished will not be accepted.
- C. Instructions: Contractor shall provide qualified, factory-trained manufacturers' representatives to give detailed training to assigned Department of Veterans Affairs personnel in the operation and complete maintenance for each piece of equipment. All such training will be at the job site. These requirements are more specifically detailed in the various technical sections. Instructions for different items of equipment that are component parts of a complete system, shall be given in an integrated, progressive manner. All instructors for every piece of component equipment in a system shall be available until instructions for all items included in the system have been completed. This is to assure proper instruction in the operation of inter-related systems. All instruction periods shall be at such times as scheduled by the Project Engineer and shall be considered concluded only when the

Project Engineer is satisfied in regard to complete and thorough coverage. The contractor shall submit a course outline with associated material to the COR for review and approval prior to scheduling training to ensure the subject matter covers the expectations of the VA and the contractual requirements. The Department of Veterans Affairs reserves the right to request the removal of, and substitution for, any instructor who, in the opinion of the Project Engineer, does not demonstrate sufficient qualifications in accordance with requirements for instructors above.

1.19 LOCAL FARGO VA HEALTH CARE SYSTEM CONSTRUCTION CONTRACTOR ORIENTATION AND POLICIES

- A. Contracts: The following staff or resource people will be working with you at the Fargo VA HealthCare System. Please feel free to contact these individuals with any questions:
 - 1. Project Engineer: Matt Hanson (701) 239-3700, ext. 93061 or (701) 239-3760.
- B. Vehicle Traffic Rules: All construction contractors shall park their vehicles in areas assigned by the Contracting Officer or Engineering Service representatives. All persons coming on the premises of the Fargo VA Health Care System must obey the posted traffic and parking rules. Police Service will issue tickets to contractor vehicles parked in areas other than those assigned.
- C. Keys/ID Badges: VA ID badges must be worn while you are on Medical Center premises. Contact Engineering Service to obtain an ID badge and any necessary keys. Contract staff are responsible for the security of keys and ID badges issued to them and may be charged for replacement cost. You must notify Engineering (ext. 3361) personnel immediately to report any loss, theft or suspected reproduction of a Medical Center key or access card.
- D. Smoking: Smoking is prohibited except in designated smoking shelters or areas.
- E. Use of Government Telephones and Fax Machines
 - 1. Government telephones are for official Government business use. Contract staff may use telephones, for local calls only, to contact your place of employment or to address unforeseen events such as injury on the job, work schedule changes etc.

2. The Government fax machine located in the Maintenance Shop Area, may be used for local faxes with the approval of Engineering staff.

F. Housekeeping

1. All construction sites shall be kept clean, orderly and in sanitary condition.
2. All rags/cloth and rubbish soaked with flammable and/or combustible material shall be placed in a covered metal receptacle until being disposed.
3. A clear and unobstructed path must be maintained to all portable fire extinguishers, hose cabinets, pull stations, fire exits and electrical panels.
4. Fire doors and smoke barrier doors shall not be blocked in a manner to prevent their protective operation in the event of a fire.
5. The use of wedges, stops, ropes, or other unapproved methods of holding doors open is prohibited.
6. All indoor trash containers over 20 gallons will be constructed of non-combustible materials and be covered or have a self-extinguishing cover.

G. Storage

1. Any commodities that may be hazardous in combination with each other must be stored so they cannot come in contact with each other.
2. Store flammable and combustible liquids and gasses in approved storage containers.
3. A clear space of 18 inches will be maintained below sprinkler heads.
4. Items stored in tiers will be stacked, blocked, interlocked and limited in height to prevent sliding or collapse.
5. Materials will not be stored directly on the floor.
6. Storage areas will be kept free from accumulation of materials that constitute hazards.
7. Stairwells, stairways and corridors shall not be utilized for storage.

8. Storage will not be permitted within 3 feet of an electric panel in all directions.

H. Hazardous Materials

1. Discovery of any suspected asbestos containing material shall result in the contractor stopping work in the area and reporting the discovery immediately to the Engineering Office (ext. 3361) or one of the contact persons indicated above. Engineering Service shall then evaluate the suspect material and if it contains asbestos shall arrange for the removal of the asbestos.
2. Contractors shall maintain and provide to the VA Project Engineer MSDS's for products used during construction which shall explain the labeling system and all other required information. Report any discovery of an existing hazardous material to Engineering Service, (ext. 3361).

I. Infection Control

1. PURPOSE: To prevent the acquisition of nosocomial infection in patients and healthcare workers during Medical Center renovation or construction activities.
2. The Contractor shall contact Engineering Service (239-3760 or EXT. 3361) prior to beginning construction in any areas so that a Pre-Construction Risk Assessment (PCRA) may be performed and all applicable forms completed. Once completed the Contractor shall obtain a completed and approved copy of a PCRA Form for each area of work in which the Contractor is involved. The Contractor shall conform to all of the requirements (ILSM's, Infection Control Precautions, etc.) as noted on the completed forms. The Contractor shall post a copy of the completed Form outside the construction barrier at each work site in plain view and accessible to VA Staff for verification that requirements noted on PCRA Form are being adhered to.
3. General: The goal of Infection Control is to identify and reduce the risks of acquiring and transmitting infections among patients, employees, service workers and visitors to the Medical Center. During construction or renovation projects, hidden infectious disease hazards may be released into the air, carried on dust

particles, on workers clothing or be present in damp areas or areas where water has collected. One particular organism of concern is a fungal organism know as Aspergillus. Aspergillus can be found in decaying leaves and compost, plaster and drywall, and settled dust. These organisms like many others encountered in our everyday lives usually do not cause problems in healthy people, however a hospital is full of sick patients. Aspergillus and other organisms can cause severe illness and even death in some patients. Therefore, it is critical that everyone do their best to help prevent conditions that might lead to the dispersion of this or other infectious organisms by:

- a. Maintaining barrier walls that keep dust and dirt inside the worksite.
 - b. Maintaining a state of negative air pressure within the construction site to prevent dust and dirt from dispersing into the Medical Center from the worksite. The Contractor shall install bulb type pressure differential monitoring devices or an alarm system in temporary construction barriers and shall monitor and maintain negative air pressure in construction areas.
 - c. Removing demolition debris in a manner that minimizes any contamination of the environment outside the worksite by dust and debris.
 - d. Utilizing walk off mats and making sure clothing is free of loose soil and debris when leaving the construction site.
 - e. Assuring that any water or sludge found during demolition of plumbing or in the construction process is collected and disposed of in a controlled manner.
 - f. Keeping demolition chutes sealed when not in use to maintain dust control. Use a water spray to minimize dust generation when using chutes if possible.
 - g. Using only designated entry and exit pathways.
4. Please feel free to contact Infection Control at ext. 3668 if you have questions or concerns.

5. If you find any needles, syringes, sharp medical objects please do not handle or remove yourself. Contact the Medical Center project COR or Project Engineer at 239-3760 or at Medical Center extension 3361 for removal.
6. Infection control activities are critical in all areas of the Medical Center. Construction activities causing disturbance of existing dust, or generating new dust must be conducted in ways that will minimize dust generation and dispersion.
7. All construction/maintenance workers and contract workers must follow the infection control procedures as described in this guideline.
8. The following infection control procedures shall be followed at a minimum:
 - a. BARRIERS - Complete all critical barriers before construction begins.
 - 1) Construction or renovation sites must be separated from other areas by barriers that keep the dirt and dust inside the work site.
 - 2) The integrity of the barrier walls must assure a complete seal of the construction area from adjacent areas.
 - 3) Temporary barriers and enclosures must be dust proof with airtight seals maintained at the full perimeter of the walls, floors and upper decking, as well as all penetrations. Seal holes, pipes, conduits and punctures appropriately.
 - 4) Tightly sealing doors or an overlapping flap of at least 2 feet in width of a durable poly must be used at points of personnel access, where plastic/poly barriers are approved for use by VA Project Engineer.
 - b. ENVIRONMENTAL CONTROLS
 - 1) Isolate the HVAC system in areas where work is being done to prevent contamination of the duct system.
 - 2) Maintain negative air pressure within work site. Utilize HEPA-filtration units if air is being re-circulated.

- 3) Seal holes, pipes, conduits and punctures appropriately.
- 4) Provide a designated area within the work site where all personnel leaving the work site can vacuum off with a HEPA-filtered vacuum to remove all loose dust and debris from clothing.
- 5) Vacuum with a HEPA-filtered vacuum and/or wet mop frequently at entrance and exit points.
- 6) "Sticky" or walk-off mats shall be utilized immediately outside the construction area to remove dust and soil from shoes, cart wheels, etc. as personnel exit the area. The mats must be large enough to cover the entire exit and changed frequently to prevent accumulation of dust. Contractor shall place a form on a wall adjacent to each mat with space to record date, time and exchanger's signature so VA Staff can monitor that mats are changed at required frequency.
- 7) Contain construction debris during transport in covered containers.
- 8) Debris must be removed from the construction area on a daily basis in covered carts using specified traffic patterns.
- 9) Control, collection and disposal must be provided for any drain liquid or sludge encountered when demolishing plumbing.

c. CLEANING

- 1) The construction zone and adjacent areas must be maintained by wet mopping the area daily or more frequently as needed to minimize dust generation.
- 2) Final cleaning of the area must be completed prior to acceptance of the completed project area by VA.
- 3) Do not remove barriers from work area until the project is completed and area is thoroughly cleaned. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.
- 4) Clothing shall be free of loose soil and debris before exiting the construction zone.

- 5) Personnel entering sterile/invasive procedure areas will be provided with a disposable jump suit, head covering and shoe covers to wear while working in the area. They must be removed when exiting the area and new coverings obtained when reentering the areas.
- 6) Tools and equipment must be damp-wiped prior to entry and exit from sterile and invasive procedure areas.
- 7) Tools and equipment soiled with blood or body fluids must be cleaned with a hospital-approved disinfectant prior to removing from the area.

d. ENVIRONMENTAL MONITORING AND COMPLETION

- 1) Infection Control, in cooperation with Engineering and Safety will make periodic visits to the work site to ensure compliance with the infection control guidelines.
- 2) Whenever safe infection control conditions are not met the appropriate contractor will be notified to correct the conditions immediately.
- 3) All work will be stopped on a project if a hazardous infection control deficiency exists that would result in patients being put at significant risk.
- 4) Water supply lines will be flushed before placing newly renovated or constructed areas into service. Industrial Hygiene will assure that water supply lines are safe for use based upon test results provided by the Contractor for VA review.

J. Construction Safety

1. The Medical Center policy is to provide an environment for patients, visitors and staff that is free from danger. Within the Medical Center, the NFPA Life Safety Code is followed. Interim life safety measures (ILSM's) are applied to all construction projects as necessary and are defined in construction contracts. Minimum ILSM's are:
2. Exits - provide free and unobstructed egress.

3. Free and unobstructed access to emergency department/service for emergency forces.
4. Temporary construction partitions are in accordance with contract requirements.
5. Smoking is permitted in designated areas only.
6. Storage, housekeeping and debris removal policies and procedures that reduce the flammable and combustible fire load are enforced.
7. Hazard surveillance is increased in construction areas.

K. Fire Safety

1. The contractors shall coordinate all construction activities with the VA Engineering Service to determine if fire alarm initiating devices are located within the construction area. Engineering Service shall disable the appropriate alarm initiating devices. Once work in the area is complete it is the contractor's responsibility to contact Engineering Service to have the fire alarm initiation devices enabled.
2. Fire alarm, detection and suppression systems are not to be impaired unless there is work on the system to be performed. If fire alarm, detection and suppression systems are impaired for more than four hours the contractor shall implement a fire watch, at no additional cost to the Government, in compliance with NFPA requirements and shall obtain VA Engineering Service approval.
3. Additional firefighting equipment is provided and employees are trained in its use.
4. Hot works permits and fire extinguishers are required when working with open flames, or hot items and for activities that may generate sparks. Contact Engineering Service to obtain a hot work permit.
5. In the event of a fire alarm, "CODE RED" and the location of a fire will be communicated by an overhead announcement. The "all clear" is authorized by the Fargo Fire Department or by the personnel conducting the fire drill and will be communicated by an overhead announcement. If a fire or fire drill is located in or adjacent to

the construction area, construction contractor staff shall be responsible for the following:

- a. Be alert to the Code RED announcement.
- b. Participate in fire drills.
- c. Follow the RACE Plan (Rescue, Alarm, Contain, Extinguish) if fire is discovered by a construction contractor.
- d. Close all corridor doors within the construction area.
- e. Evacuate the immediate area.

L. Utilities

1. Engineering (ext. 3361) is responsible for all utilities within the Medical Center. If there are problems or failures of the utilities, call extension 3361 during normal business hours (Monday through Friday, 8:00 a.m. to 4:30 p.m.). After hours and on weekends, contact the Police Service at ext. 3251 to report problems and failures. A utilities failure and its type/location will be communicated by a "Utility Failure" overhead announcement.
2. All utility service connections shall be reviewed with and approved by Engineering Service just prior to the connection being made with the existing utility. This condition shall apply to both temporary and permanent connections. This final utility system connection check is meant to ensure the following:
 - a. The Medical Center is prepared for the connection.
 - b. The contractor is prepared for the connection work, which shall include but not be limited to, all safety measures have been taken or are in place, backflow preventers are in place, hot work permits have been issued, fire watch is in place, fire alarm initiation devices have been disabled if necessary, etc.

M. Emergencies

1. "Disaster Alert" - The Medical Center has initiated a process that provides an "all-hazard" approach to disaster management. Construction contractor staff shall ensure corridors are free of

- obstructions and a foreman or representative shall report to the Engineering Service office for further instructions.
2. Hostage Situations - Immediately report to Police Service (ext. 2222), any incident in which the safety of any person is threatened by another.
 3. "Bomb Threat" - React calmly and evacuate. Notify Police Service (ext. 2222) if the threat poses immediate danger to a person or destruction of property. If you discover a suspicious object, do not touch or move the object.
 4. Severe Weather - In the event of an overhead announcement, all personnel are expected to take cover in windowless interior corridors that are not on the top floor of the building.
 5. Armed Assailant - React calmly and evacuate. Avoid area(s) where it has been indicated an armed assailant is in the building or on the ground.

- - - E N D - - -

D not upload this into ILSM EVALUATION

PROJECT:

LOCATION:

START DATE:

Evaluated Item	YES	NO	Joint Commission ILSM Administrative Actions	If answer is "Yes", see actions required to be taken	Training/Review Date
Will any exit be obstructed?	<input type="checkbox"/>	<input type="checkbox"/>	Ensuring unobstructed exits. When alternative exits have been designed, staff members in affected areas must receive additional training. Buildings or areas under construction must maintain escape routes for construction workers at all times, and the means of exiting construction areas are inspected daily.	Personnel in the building will receive training on alternate routes and exits Construction areas will have designated and marked exits to be clear at all times if necessary	Date: Date:
Will any entrance be obstructed to limit the access to emergency services?	<input type="checkbox"/>	<input type="checkbox"/>	Ensuring free and unobstructed access to emergency services and for fire, police, and other emergency forces.	The construction plans will be reviewed to ensure proper access and will be maintained	Date:
Will any fire detection or suppression system be impaired for > 8 hours in a 24 hour period?	<input type="checkbox"/>	<input type="checkbox"/>	Ensuring that the fire detection and suppression systems are in good working order. A temporary but equivalent system must be provided when any fire system is impaired. Temporary systems must be inspected and tested monthly.	Contractor will be briefed to schedule work to minimize time systems impaired and notify appropriate offices prior to system being impaired	Date:
Will construction be open to other areas without any smoke tight barriers?	<input type="checkbox"/>	<input type="checkbox"/>	Ensuring that temporary construction partitions are smoke tight and built of noncombustible of limited combustible materials that will not contribute to the development or spread of fire.	Contractor will be briefed at pre-construction conference of requirement	Date:
Will fire hazard be substantially higher?	<input type="checkbox"/>	<input type="checkbox"/>	Providing additional firefighting equipment and training staff in its use.	Contractor will be briefed at the pre-construction conference for the need to provide adequate firefighting equipment and training construction employees	Date:
Will smoking be permitted in construction areas?	<input type="checkbox"/>	<input type="checkbox"/>	Prohibiting smoking throughout the organization's buildings and in and near construction areas.	Refer to Fargo VA HCS Smoking Policy	Date:
Will storage, housekeeping and debris removal practices increase the fire load?	<input type="checkbox"/>	<input type="checkbox"/>	Developing and enforcing storage, housekeeping, and debris removal practices that reduce the building's flammable and combustible fire load to the lowest feasible level.	Contractor will be briefed at preconstruction conference of requirement	Date:

Evaluated Item	YES	NO	Joint Commission ILSM Administrative Actions	If answer is "Yes", see actions required to be taken	Training/Review Date
Will the fire hazard increase to justify extra fire drills?	<input type="checkbox"/>	<input type="checkbox"/>	Conducting a minimum of two fire drills per shift per quarter.	Safety Department will evaluate effects of work on life safety and determine if there is a need to increase frequency of drills	Date:
Will hazardous conditions substantially increase in or around the buildings to require extra surveillance activities?	<input type="checkbox"/>	<input type="checkbox"/>	Increasing hazard surveillance of buildings, grounds, and equipment, with special attention to excavations, construction areas, construction storage, and field offices.	A Fire Watch will be implemented as needed	Date:
Will structural features of fire safety be impaired?	<input type="checkbox"/>	<input type="checkbox"/>	Training staff to compensate for impaired structural or compartmentalization features of fire safety.	Personnel in the building will receive training in response for life safety deficiencies if necessary	Date:
Will this project affect the life safety features of all areas?	<input type="checkbox"/>	<input type="checkbox"/>	Conducting organization wide safety education programs to promote awareness of LSC building deficiencies, construction hazards, and ILSMs.	Staff will be made aware of deficiencies, hazards, and interim measures during personal contact, training, and/or information channels. ILSM will be posted by project site.	Date:
Other Life Safety Code considerations?	<input type="checkbox"/>	<input type="checkbox"/>		If Ceiling Tiles are out for more than 4 hours a fire watch will be implemented.	Date:

ILSM Required: Yes No

ILSM Issue Date: Evaluation determines no ILSM needed

X

Prepared by _____

X

Reviewed By _____

PRE-CONSTRUCTION RISK ASSESSMENT (PCRA)

Project #	
Project Title:	Est. Start Date:
Area of Construction:	Est. Duration:
Contractor/Supervisor:	
PCRA Completed by:	

SAFETY/ENGINEERING

<u>Y</u>	<u>N</u>		If YES, CIRCLE ILSM from list below or describe other intervention
		Will exits or exit egress routes from occupied areas change?	A, E, H, J, L
		Will the construction area have less than two remote exits?	A, E, H, J, L
		Will there be excessive distance to exit?	A, E, H, J, L
		Will access to Emergency Services become blocked or obstructed?	A, B, I, J, L
		Will any part of the fire protection systems (detection, notification or suppression) be shut down or impaired for >4 hours in a 24-hour period?	C, E, H, I, K
		Will smoke or firewalls be breached?	A, E, G, H
		Will any temporary construction partitions be built?	D
		Will the project result in the accumulation of construction debris?	E, F, G, H
		Will construction affect grounds safety (pits, storage, equipment, etc.)?	H
		Will construction present other life safety hazards?	H, J
		Will protection of hazardous areas be compromised?	H

INTERVENTION

- | | | |
|--|---|---|
| A. Ensure Alternate Egress Routes | E. Additional Fire Fighting Equipment | I. Additional Training of Emergency Personnel |
| B. Ensure Alternate Emergency Access | F. Control Combustible Loads | J. Ensure Additional Employee Education |
| C. Fire Department Notification | G. Conduct 2 Fire Drills Per Shift in All Areas | K. Institute a Fire Watch w/documentation |
| D. Ensure Smoke-Tight Temporary Construction | H. Increase Hazard Surveillance Rounds | L. Post temporary signage |

<u>Y</u>	<u>N</u>	CONSTRUCTION ACTIVITY	If YES, describe intervention
		Will there be any anticipated utility shutdowns? (Communications, electrical, heating/cooling, HVAC, medical gases, vacuum, water, server)	
		Will noise levels be excessive?	
		Will vibration levels be excessive?	
		Will additional security measures be implemented?	

Additional Requirements:

PATIENT SAFETY COORDINATOR

<u>Y</u>	<u>N</u>	CONSTRUCTION ACTIVITY
		Does this project involve a patient care area either directly or adjacent to?
		List:
		Do areas involved have knowledge of construction?
		List:
		Does this project alter patient access building/patient care area, either temporarily or permanently?

If YES, indicate intervention:

Access	1. The new/temporary access path should be intuitive, i.e. easy to follow. 2. Signage should be adequate for decreased visual acuity and at appropriate viewing levels for both ambulating and w/c bound individuals.	3. The access path should be smooth, without tripping hazards. 4. The access path should be handicap accessible.
Construct on Area/Materials	1. Construction areas should not be accessible by unauthorized personnel. 2. Construction areas should be visually identified.	3. Construction materials and tools should be moved and stored appropriately to preclude unauthorized access?
Critical Alarms	Critical clinical alarms shall be functional and audible within and adjacent to the construction zone? Including but not limited to: a. Emergency CODE Systems c. Wander guard technology e. Medication/Nutrition Pumps b. Medical Gas Alarms (Oxygen, Air, Suction) d. Vital Sign Monitoring/Telemetry Systems f. Nurse Call Systems	

Additional Requirements:

INFECTION CONTROL RISK ASSESSMENT

INFECTION CONTROL COORDINATOR

Y	N	CONSTRUCTION ACTIVITY TYPE	Y	N	PATIENT RISK GROUP (may modify as appropriate)
		A: Inspection, non-invasive activity-includes, not limited to removal of ceiling tiles for inspection (1/50 sq ft), painting (not sanding), wall covering, electrical trim work, minor plumbing, activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.			<u>Low Risk-</u> (ex Office Areas)
		B: Small scale, short duration, moderate to high levels-includes but not limited to installation of telephone/computer cabling, access to chase spaces, cutting of walls or ceiling where dust migration can be controlled.			<u>Medium Risk-</u> (ex Cardiology, ECHO, Endoscopy, Nuclear Medicine, Physical Therapy, Radiology/MRI, Respiratory Therapy)
		C: Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies. Includes but not limited to sanding of walls for painting or wall covering; removal of floor coverings, ceiling tiles, and casework; new wall construction; minor duct work or electrical work above the ceilings; major cabling activity; any activity which cannot be completed in a single work shift.			<u>High Risk-</u> (ex CCU, ER, Labor & Delivery, Laboratories (specimen), Newborn Nursery, Outpatient Surgery, Pediatrics, Pharmacy, Post Anesthesia care, Surgical Units)
		D: Major duration and construction activities-Includes, but not limited to: activities that require consecutive work shifts; requires heavy demolition or removal of a complete cabling system; new construction.			<u>Highest Risk-</u> (ex Any area caring for Immunocompromised patients, Burn Unit, Cardiac Cath Lab, Central Sterile Supply, ICU, Medical Unit, Negative pressure isolation rooms, Oncology, Operating rooms including C-section)

Project Class	Patient Risk Group	TYPE A	TYPE B	TYPE C	TYPE D
	LOW Risk	I	II	II	III/IV
	MEDIUM Risk	I	II	III	IV
	HIGH Risk	I	II	III/IV	IV
	HIGHEST Risk	II	III/IV	III/IV	IV

During Construction Project		Upon Completion of Project
CLASS I	<ol style="list-style-type: none"> Execute work by methods to minimize raising dust from construction operations. Immediately replace any ceiling tile displaced for visual inspection. 	
CLASS II	<ol style="list-style-type: none"> Include all items from Class I above Provides active means to prevent air-borne dust from dispersing into atmosphere Water mist work surfaces to control dust while cutting. Seal unused doors with duct tape. Block off and seal air vents. Place dust mat at access points of work area. Contain construction waste before transport in tightly covered containers. Isolate HVAC system in areas where work is being performed to prevent contamination of duct system. 	<ol style="list-style-type: none"> Wipe surfaces with disinfectant. Contain construction waste before transport in tightly covered containers. Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area. Remove isolation of HVAC system in areas where work is being performed.
CLASS III	<ol style="list-style-type: none"> Include all items from Class I/II above Involve Infection Control in design/planning before construction begins. Complete all critical barriers i.e. sheetrock, plywood, plastic, to seal area from non-work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. Maintain negative air pressure within work site utilizing HEPA equipped air filtration units. Cover transport receptacles or carts. Tape covering unless solid lid. 	<ol style="list-style-type: none"> Include all items from Class I/II above Do not remove barriers from work area until completed project is thoroughly cleaned as required by Chief, EMS and Infection Control Coordinator. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction. Vacuum work area with HEPA filtered vacuums. Wet mop area with disinfectant.
CLASS IV	<ol style="list-style-type: none"> Include all items from Class I/II/III above Involve Infection Control in design/planning before construction begins. Seal holes, pipes, conduits, and punctures appropriately. If exiting to a patient care area, construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave the work site. Walk-off mats are recommended to minimize tracking of heavy dirt and dust from construction areas. Shoe covers may be considered in certain areas. 	<ol style="list-style-type: none"> Include all items from Class I/II/III above

ICRA PROJECT CLASS:

Y N **RISK OF TB EXPOSURE** **TYPE OF RISK:**

If yes, describe intervention:

Additional Requirements:

Patient Safety Coordinator/Date

Infection Control Coordinator/Date

IH/Safety Date

Project Engineer/Date

SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 1-1. Refer to Articles titled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21) and, SPECIAL NOTES (VAAR 852.236-91), in GENERAL CONDITIONS.
- 1-2. For the purposes of this contract, samples (including laboratory samples to be tested), test reports, certificates, and manufacturers' literature and data shall also be subject to the previously referenced requirements. The following text refers to all items collectively as SUBMITTALS.
- 1-3. Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:
 - A. Satisfactory written evidence is presented to, and approved by Contracting Officer, that manufacturer cannot make scheduled delivery of approved item or;
 - B. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;
 - C. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Government.
- 1-4. Forward submittals in sufficient time to permit proper consideration and approval action by Government. Time submission to assure adequate lead time for procurement of contract - required items. Delays attributable to untimely and rejected submittals (including any laboratory samples to be tested) will not serve as a basis for extending contract time for completion.
- 1-5. Submittals will be reviewed for compliance with contract requirements by Architect-Engineer, and action thereon will be taken by Architect-Engineer on behalf of the Contracting Officer.
- 1-6. Upon receipt of submittals, Architect-Engineer will assign a file number thereto. Contractor, in any subsequent correspondence, shall refer to this file and identification number to expedite replies relative to previously approved or disapproved submittals.

- 1-7. The Government reserves the right to require additional submittals, whether or not particularly mentioned in this contract.
- 1-8. Schedules called for in specifications and shown on shop drawings shall be submitted for use and information of Department of Veterans Affairs and Architect-Engineer. However, the Contractor shall assume responsibility for coordinating and verifying schedules. The Contracting Officer and Architect-Engineer assumes no responsibility for checking schedules or layout drawings for exact sizes, exact numbers and detailed positioning of items.
- 1-9. Submittals must be submitted by Contractor only and shipped prepaid. Contracting Officer assumes no responsibility for checking quantities or exact numbers included in such submittals.
 - A. Submit samples in single units unless otherwise specified. Submit shop drawings, schedules, manufacturers' literature and data, and certificates in quadruplicate, except where a greater number is specified.
 - B. Submittals will receive consideration only when covered by a transmittal letter signed by Contractor. Letter shall be sent via first class mail and shall contain the VA contract number, VA project number, VA project title, list of items, name of Medical Center, name of Contractor, contract number, applicable specification paragraph numbers, applicable drawing numbers (and other information required for exact identification of location for each item), manufacturer and brand, ASTM or Federal Specification Number (if any) and such additional information as may be required by specifications for particular item being furnished. In addition, catalogs shall be marked to indicate specific items submitted for approval.
 1. A copy of letter must be enclosed with items, and any items received without identification letter will be considered "unclaimed goods" and held for a limited time only.
 2. Each sample, certificate, manufacturers' literature and data shall be labeled to indicate the VA contract number, VA project number, VA project title, the name and location of the Medical Center, name of Contractor, manufacturer, brand, contract number and ASTM or Federal Specification Number as applicable and location(s) on project.

3. Required certificates shall be signed by an authorized representative of manufacturer or supplier of material, and by Contractor.
- C. If submittal samples have been disapproved, resubmit new samples as soon as possible after notification of disapproval. Such new samples shall be marked "Resubmitted Sample" in addition to containing other previously specified information required on label and in transmittal letter.
- D. Approved samples will be kept on file by the Project Engineer at the site until completion of contract, at which time such samples will be disposed of. Where noted in technical sections of specifications, approved samples in good condition may be used in their proper locations in contract work. At completion of contract, samples that are not approved will be disposed of.
- E. Submittal drawings (shop, erection or setting drawings) and schedules, required for work of various trades, shall be checked before submission by technically qualified employees of Contractor for accuracy, completeness and compliance with contract requirements. These drawings and schedules shall be stamped and signed by Contractor certifying to such check.
1. For each drawing required, submit one legible photographic paper or vellum reproducible.
 2. Reproducible shall be full size.
 3. Each drawing shall have marked thereon, VA contract number, VA project number, VA project title, proper descriptive title, including Medical Center location, project number, manufacturer's number, reference to contract drawing number, detail Section Number, and Specification Section Number.
 4. A space 120 mm by 125 mm (4-3/4 by 5 inches) shall be reserved on each drawing to accommodate approval or disapproval stamp.
 5. Submit drawings, ROLLED WITHIN A MAILING TUBE, fully protected for shipment.
 6. One reproducible print of approved or disapproved shop drawings will be forwarded to Contractor.
 7. When work is directly related and involves more than one trade, shop drawings shall be submitted to Architect-Engineer under one cover.
- 1-10. Samples (except laboratory samples), shop drawings, test reports, certificates and manufacturers' literature and data, shall be

submitted for approval to JPK Engineering, LLC, 112 North University Drive, Suite 140, Fargo, ND, 58102.

- 1-11. At the time of transmittal to the Architect-Engineer, the Contractor shall also send a copy of the complete submittal directly to the Project Engineer, Fargo VA Health Care System (437/138), Attn: Engineering Service, 2101 Elm Street, Fargo ND, 58102.

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**SECTION 01 35 26
SAFETY REQUIREMENTS**

TABLE OF CONTENTS

1.1	APPLICABLE PUBLICATIONS	2
1.2	DEFINITIONS	3
1.3	REGULATORY REQUIREMENTS	4
1.4	ACCIDENT PREVENTION PLAN (APP)	4
1.5	ACTIVITY HAZARD ANALYSES (AHAs)	9
1.6	PRECONSTRUCTION CONFERENCE	10
1.7	"SITE SAFETY AND HEALTH OFFICER" (SSHO) and "COMPETENT PERSON" (CP)	11
1.8	TRAINING	12
1.9	INSPECTIONS	13
1.10	ACCIDENTS, OSHA 300 LOGS, AND MAN-HOURS	13
1.11	PERSONAL PROTECTIVE EQUIPMENT (PPE)	14
1.12	INFECTION CONTROL	15
1.13	FIRE SAFETY	22
1.14	ELECTRICAL	23
1.15	FALL PROTECTION	24
1.16	CRANES	25
1.17	CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)	25
1.18	WELDING AND CUTTING	25
1.19	LADDERS	26
1.20	FLOOR & WALL OPENINGS	26

**SECTION 01 35 26
SAFETY REQUIREMENTS**

1.1 APPLICABLE PUBLICATIONS:

A. Latest publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.

B. American Society of Safety Engineers (ASSE):

A10.1-2011.....Pre-Project & Pre-Task Safety and Health
Planning

A10.34-2012.....Protection of the Public on or Adjacent to
Construction Sites

A10.38-2013.....Basic Elements of an Employer's Program to
Provide a Safe and Healthful Work Environment
American National Standard Construction and
Demolition Operations

C. American Society for Testing and Materials (ASTM):

E84-2013.....Surface Burning Characteristics of Building
Materials

D. The Facilities Guidelines Institute (FGI):

FGI Guidelines-2010Guidelines for Design and Construction of
Healthcare Facilities

E. National Fire Protection Association (NFPA):

10-2013.....Standard for Portable Fire Extinguishers

30-2012.....Flammable and Combustible Liquids Code

51B-2014.....Standard for Fire Prevention During Welding,
Cutting and Other Hot Work

70-2014.....National Electrical Code

70B-2013.....Recommended Practice for Electrical Equipment
Maintenance

70E-2012Standard for Electrical Safety in the Workplace

- 99-2012.....Health Care Facilities Code
- 241-2013.....Standard for Safeguarding Construction,
Alteration, and Demolition Operations

F. The Joint Commission (TJC)

- TJC ManualComprehensive Accreditation and Certification
Manual

G. U.S. Occupational Safety and Health Administration (OSHA):

- 29 CFR 1904Reporting and Recording Injuries & Illnesses
- 29 CFR 1910Safety and Health Regulations for General
Industry
- 29 CFR 1926Safety and Health Regulations for Construction
Industry
- CPL 2-0.124.....Multi-Employer Citation Policy

H. VHA Directive 2005-007

1.2 DEFINITIONS:

- A. OSHA "Competent Person" (CP). One who is capable of identifying existing and predictable hazards in the surroundings and working conditions which are unsanitary, hazardous or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them (see 29 CFR 1926.32(f)).
- B. "Qualified Person" means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.
- C. High Visibility Accident. Any mishap which may generate publicity or high visibility.
- D. Medical Treatment. Treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

- E. Recordable Injuries or Illnesses. Any work-related injury or illness that results in:
1. Death, regardless of the time between the injury and death, or the length of the illness;
 2. Days away from work (any time lost after day of injury/illness onset);
 3. Restricted work;
 4. Transfer to another job;
 5. Medical treatment beyond first aid;
 6. Loss of consciousness; or
 7. A significant injury or illness diagnosed by a physician or other licensed health care professional, even if it did not result in (1) through (6) above.

1.3 REGULATORY REQUIREMENTS:

- A. In addition to the detailed requirements included in the provisions of this contract, comply with 29 CFR 1926, comply with 29 CFR 1910 as incorporated by reference within 29 CFR 1926, comply with ASSE A10.34, and all applicable [federal, state, and local] laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards for resolution before starting work. Where the requirements of this specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern except with specific approval and acceptance by the Project Engineer.

1.4 ACCIDENT PREVENTION PLAN (APP):

- A. The APP (aka Construction Safety & Health Plan) shall interface with the Contractor's overall safety and health program. Include any portions of the Contractor's overall safety and health program referenced in the APP in the applicable APP element and ensure it is site-specific. The Government considers the Prime Contractor to be the "controlling authority" for all worksite safety and health of each subcontractor(s). 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.

B. The APP shall be prepared as follows:

1. Written in English by a qualified person who is employed by the Prime Contractor articulating the specific work and hazards pertaining to the contract (model language can be found in ASSE A10.33). Specifically articulating the safety requirements found within these VA contract safety specifications.
2. Address both the Prime Contractors and the subcontractors work operations.
3. State measures to be taken to control hazards associated with materials, services, or equipment provided by suppliers.
4. Address all the elements/sub-elements and in order as follows:
 - a. SIGNATURE SHEET. Title, signature, and phone number of the following:
 - 1) Plan preparer (Qualified Person such as corporate safety staff person or contracted Certified Safety Professional with construction safety experience);
 - 2) Plan approver (company/corporate officers authorized to obligate the company);
 - 3) Plan concurrence (e.g., Chief of Operations, Corporate Chief of Safety, Corporate Industrial Hygienist, project manager or superintendent, project safety professional). Provide concurrence of other applicable corporate and project personnel (Contractor).
 - b. BACKGROUND INFORMATION. List the following:
 - 1) Contractor;
 - 2) VA Contract number;
 - 3) VA Project Number and VA Project name;

- 4) Brief project description, description of work to be performed, and location; phases of work anticipated (these will require an AHA).
- c. STATEMENT OF SAFETY AND HEALTH POLICY. Provide a copy of current corporate/company Safety and Health Policy Statement, detailing commitment to providing a safe and healthful workplace for all employees. The Contractor's written safety program goals, objectives, and accident experience goals for this contract should be provided.
- d. RESPONSIBILITIES AND LINES OF AUTHORITIES. Provide the following:
- 1) A statement of the employer's ultimate responsibility for the implementation of his SOH program;
 - 2) Identification and accountability of personnel responsible for safety at both corporate and project level. Contracts specifically requiring safety or industrial hygiene personnel shall include a copy of their resumes.
 - 3) The names of Competent and/or Qualified Person(s) and proof of competency/qualification to meet specific OSHA Competent/Qualified Person(s) requirements must be attached;
 - 4) Requirements that no work shall be performed unless a designated competent person is present on the job site;
 - 5) Requirements for pre-task Activity Hazard Analysis (AHAs);
 - 6) Lines of authority;
 - 7) Policies and procedures regarding noncompliance with safety requirements (to include disciplinary actions for violation of safety requirements) should be identified;
- e. SUBCONTRACTORS AND SUPPLIERS. If applicable, provide procedures for coordinating SOH activities with other employers on the job site:
- 1) Identification of subcontractors and suppliers (if known);
 - 2) Safety responsibilities of subcontractors and suppliers.
- f. TRAINING.

- 1) Site-specific SOH orientation training at the time of initial hire or assignment to the project for every employee before working on the project site is required.
 - 2) Mandatory training and certifications that are applicable to this project (e.g., explosive actuated tools, fall protection, electrical lockout/NFPA 70E, machine/equipment lockout, confined space, etc.) and any requirements for periodic retraining/recertification are required.
 - 3) Procedures for ongoing safety and health training for supervisors and employees shall be established to address changes in site hazards/conditions.
 - 4) OSHA 10-hour training is required for all workers on site and the OSHA 30-hour training is required for all supervisors, foremen and Trade Competent Persons (CPs).
- g. SAFETY AND HEALTH INSPECTIONS.
- 1) Specific assignment of responsibilities for a minimum daily job site safety and health inspection during periods of work activity: Who will conduct (e.g., "Site Safety and Health CP"), proof of inspector's training/qualifications, when inspections will be conducted, procedures for documentation, deficiency tracking system, and follow-up procedures.
 - 2) Any external inspections/certifications that may be required (e.g., contracted CSP or CSHT)
- h. ACCIDENT INVESTIGATION & REPORTING. The Contractor shall conduct mishap investigations of all OSHA Recordable Incidents. The APP shall include accident/incident investigation procedure & identify person(s) responsible to provide the following to the Resident Engineer or Government Designated Authority:
- 1) Exposure data (man-hours worked);
 - 2) Accident investigations, reports, and logs.
- i. PLANS (PROGRAMS, PROCEDURES) REQUIRED. Based on a risk assessment of contracted activities and on mandatory OSHA compliance programs, the Contractor shall address all applicable

occupational risks in site-specific compliance and accident prevention plans. These Plans shall include but are not be limited to procedures for addressing the risks associates with the following:

- 1) Emergency response;
- 2) Contingency for severe weather;
- 3) Fire Prevention;
- 4) Medical Support;
- 5) Posting of emergency telephone numbers;
- 6) Prevention of alcohol and drug abuse;
- 7) Site sanitation (housekeeping, drinking water, toilets);
- 8) Night operations and lighting;
- 9) Hazard communication program;
- 10) Welding/Cutting "Hot" work;
- 11) Electrical Safe Work Practices (Electrical LOTO/NFPA 70E);
- 12) General Electrical Safety
- 13) Hazardous energy control (Machine LOTO);
- 14) Site-Specific Fall Protection & Prevention;
- 15) Crane Critical lift;
- 16) Respiratory protection;
- 17) Health hazard control program;

C. Submit the APP to the Project Engineer for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES 21 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without an accepted APP.

D. Once accepted by the Project Engineer the APP and attachments will be enforced as part of the contract. Disregarding the provisions of this contract or the accepted APP will be cause for stopping of work, at the

discretion of the Contracting Officer, until the matter has been rectified.

- E. Once work begins, changes to the accepted APP shall be made with the knowledge and concurrence of the Project Engineer project superintendent, project overall designated OSHA Competent Person, and facility Safety Manager. 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/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 ASSE/SAFE A10.34) and the environment.

1.5 ACTIVITY HAZARD ANALYSES (AHAS):

- A. AHAs are also known as Job Hazard Analyses, Job Safety Analyses, and Activity Safety Analyses. Before beginning each work activity involving a type of work presenting hazards not experienced in previous project operations or where a new work crew or sub-contractor is to perform the work, the Contractor(s) performing that work activity shall prepare an AHA (Example electronic AHA forms can be found on the US Army Corps of Engineers web site).
- B. AHAs shall define the activities being performed and identify the work sequences, the specific anticipated hazards, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk.
- C. Work shall not begin until the AHA for the work activity has been accepted by the Project Engineer and discussed with all engaged in the activity, including the Contractor, subcontractor(s), and Government on-site representatives at preparatory and initial control phase meetings.
1. The names of the Competent/Qualified Person(s) required for a particular activity (for example, fall protection, other activities as specified by OSHA and/or other State and Local agencies) shall be identified and included in the AHA. Certification of their competency/qualification shall be submitted to the Government

- Designated Authority (GDA) for acceptance prior to the start of that work activity.
2. The AHA shall be reviewed and modified as necessary to address changing site conditions, operations, or change of competent/qualified person(s).
 - a. If more than one Competent/Qualified Person is used on the AHA activity, a list of names shall be submitted as an attachment to the AHA. Those listed must be Competent/Qualified for the type of work involved in the AHA and familiar with current site safety issues.
 - b. If a new Competent/Qualified Person (not on the original list) is added, the list shall be updated (an administrative action not requiring an updated AHA). The new person shall acknowledge in writing that he or she has reviewed the AHA and is familiar with current site safety issues.
 3. Submit AHAs to the Project Engineer for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES for review at least 21 calendar days prior to the start of each phase. Subsequent AHAs as shall be formatted as amendments to the APP. The analysis should be used during daily inspections to ensure the implementation and effectiveness of the activity's safety and health controls.
 4. The AHA list will be reviewed periodically (at least monthly) at the Contractor supervisory safety meeting and updated as necessary when procedures, scheduling, or hazards change.
 5. Develop the activity hazard analyses using the project schedule as the basis for the activities performed. All activities listed on the project schedule will require an AHA. The AHAs will be developed by the contractor, supplier, or subcontractor and provided to the prime contractor for review and approval and then submitted to the Project Engineer.

1.6 PRECONSTRUCTION CONFERENCE:

- A. Contractor representatives who have a responsibility or significant role in implementation of the accident prevention program, as required by 29 CFR 1926.20(b)(1), on the project shall attend the

preconstruction conference to gain a mutual understanding of its implementation. This includes the project superintendent, subcontractor superintendents, and any other assigned safety and health professionals.

- 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's representative as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, review, and acceptance of AHAs to preclude project delays.
- C. Deficiencies in the submitted APP will be brought to the attention of the Contractor within 21 days of submittal, and the Contractor shall revise the plan to correct deficiencies and re-submit it for acceptance. Do not begin work until there is an accepted APP.

1.7 "SITE SAFETY AND HEALTH OFFICER" (SSHO) AND "COMPETENT PERSON" (CP):

- A. The Prime Contractor shall designate a minimum of one SSHO at each project site that will be identified as the SSHO to administer the Contractor's safety program and government-accepted Accident Prevention Plan. Each subcontractor shall designate a minimum of one CP in compliance with 29 CFR 1926.20 (b)(2) that will be identified as a CP to administer their individual safety programs.
- B. Further, all specialized Competent Persons for the work crews will be supplied by the respective contractor as required by 29 CFR 1926 (i.e. Electrical, Demolition, Fall Protection, Fire Safety/Life Safety, and Ladder.
- C. These Competent Persons can have collateral duties as the subcontractor's superintendent and/or work crew lead persons as well as fill more than one specialized CP role (i.e. Electrical, Demolition, Fall Protection, Fire Safety/Life Safety, and Ladder.
- D. The SSHO or an equally-qualified Designated Representative/alternate will maintain a presence on the site during construction operations in accordance with FAR Clause 52.236-6: *Superintendence by the Contractor*. CPs will maintain presence during their construction activities in

accordance with above mentioned clause. A listing of the designated SSHO and all known CPs shall be submitted prior to the start of work as part of the APP with the training documentation and/or AHA as listed in Section 1.8 below.

- E. The repeated presence of uncontrolled hazards during a contractor's work operations will result in the designated CP as being deemed incompetent and result in the required removal of the employee in accordance with FAR Clause 52.236-5: Material and Workmanship, Paragraph (c).

1.8 TRAINING:

- A. The designated Prime Contractor SSHO must meet the requirements of all applicable OSHA standards and be capable (through training, experience, and qualifications) of ensuring that the requirements of 29 CFR 1926.16 and other appropriate Federal, State and local requirements are met for the project and submit records for approval prior to commencing work on the project. As a minimum the SSHO must have completed the OSHA 30-hour Construction Safety class and have five (5) years of construction industry safety experience or three (3) years if he/she possesses a Certified Safety Professional (CSP) or certified Construction Safety and Health Technician (CSHT) certification or have a safety and health degree from an accredited university or college.
- B. All designated CPs shall have completed the OSHA 30-hour Construction Safety course within the past 5 years.
- C. In addition to the OSHA 30 Hour Construction Safety Course, all CPs with high hazard work operations such as operations involving asbestos, electrical, demolition, work at heights/fall protection, fire safety/life safety, and ladder shall have a specialized formal course in the hazard recognition & control associated with those high hazard work operations. Documented "repeat" deficiencies in the execution of safety requirements will require retaking the requisite formal course.
- D. All other construction workers shall have the OSHA 10-hour Construction Safety Outreach course and any necessary safety training to be able to identify hazards within their work environment.
- E. Submit training records associated with the above training requirements to the Project Engineer for review for compliance with contract

requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES 21 calendar days prior to the date of the preconstruction conference for acceptance.

- F. Prior to any worker for the contractor or subcontractors beginning work, they shall undergo a safety briefing provided by the SSHO or his/her designated representative. As a minimum, this briefing shall include information on the site-specific hazards, construction limits, VAMC safety guidelines, means of egress, break areas, work hours, locations of restrooms, use of VAMC equipment, emergency procedures, accident reporting etc. Documentation shall be provided to the Project Engineer that individuals have undergone contractor's safety briefing.
- G. Ongoing safety training will be accomplished in the form of weekly documented safety meeting.

1.9 INSPECTIONS:

- A. The SSHO shall conduct frequent and regular safety inspections (daily) of the site and each of the subcontractors CPs shall conduct frequent and regular safety inspections (daily) of their work operations as required by 29 CFR 1926.20(b)(2). Each week, the SSHO shall conduct a formal documented inspection of the entire construction areas with the subcontractors' "Trade Safety and Health CPs" present in their work areas. Coordinate with, and report findings and corrective actions weekly to Project Engineer.

1.10 ACCIDENTS, OSHA 300 LOGS, AND MAN-HOURS:

- A. Notify the Project Engineer as soon as practical, but no more than four hours after any accident meeting the definition of OSHA Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$5,000, or any weight handling equipment accident. 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 (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Project Engineer determine whether a government investigation will be conducted.

- B. Conduct an accident investigation for recordable injuries and illnesses, for Medical Treatment defined in paragraph DEFINITIONS, and property damage accidents resulting in at least \$20,000 in damages, to establish the root cause(s) of the accident. Complete the VA Form 2162, and provide the report to the Project Engineer within 3 calendar days of the accident.
- C. A summation of all man-hours worked by the contractor and associated sub-contractors for each month will be reported to the Project Engineer monthly.
- D. A summation of all OSHA recordable accidents experienced on site by the contractor and associated sub-contractors for each month will be provided to the Project Engineer monthly. The contractor and associated sub-contractors' OSHA 300 logs will be made available to the Project Engineer as requested.

1.11 PERSONAL PROTECTIVE EQUIPMENT (PPE):

- A. PPE is governed in all areas by the nature of the work the employee is performing. For example, specific PPE required for performing work on electrical equipment is identified in NFPA 70E, Standard for Electrical Safety in the Workplace.
- B. Mandatory PPE includes:
 - 1. Hard Hats - unless written authorization is given by the Project Engineer in circumstances of work operations that have limited potential for falling object hazards such as during finishing work or minor remodeling. With authorization to relax the requirement of hard hats, if a worker becomes exposed to an overhead falling object hazard, then hard hats would be required in accordance with the OSHA regulations.
 - 2. Safety glasses - unless written authorization is given by the Project Engineer appropriate safety glasses meeting the ANSI Z.87.1 standard must be worn by each person on site.
 - 3. Appropriate Safety Shoes - based on the hazards present, safety shoes meeting the requirements of ASTM F2413-11 shall be worn by each person on site unless written authorization is given by the Project Engineer.

4. Hearing protection - Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks.

1.12 INFECTION CONTROL

- A. Infection Control is critical in all Medical Center facilities. Interior construction activities causing disturbance of existing dust, or creating new dust, must be conducted within ventilation-controlled areas that minimize the flow of airborne particles into patient areas.
- B. An AHA associated with infection control will be performed by VA personnel in accordance with FGI Guidelines (i.e. Infection Control Risk Assessment (ICRA)). The ICRA procedure found on the American Society for Healthcare Engineering (ASHE) website will be utilized. Risk classifications of Class II or lower will require approval by the Project Engineer or Government Designated Authority before beginning any construction work. Risk classifications of Class III or higher will require a permit before beginning any construction work. Infection Control permits will be issued by the Safety Specialist and Infection Control Nurse. The Infection Control Permits will be posted outside the appropriate construction area. More than one permit may be issued for a construction project if the work is located in separate areas requiring separate classes. The required infection control precautions with each class are as follows:
 1. Class I requirements:
 - a. During Construction Work:
 - 1) Execute work by methods to minimize raising dust from construction operations.
 - 2) Ceiling tiles: Immediately replace a ceiling tiles displaced for visual inspection.
 - b. Upon Completion:
 - 1) Clean work area upon completion of task
 - 2) Notify the Project Engineer.
 2. Class II requirements:
 - a. During Construction Work:

- 1) Provide active means to prevent airborne dust from dispersing into atmosphere such as wet methods or tool mounted dust collectors where possible.
- 2) Water mist work surfaces to control dust while cutting.
- 3) Seal unused doors with duct tape.
- 4) Block off and seal air vents.
- 5) Remove or isolate HVAC system in areas where work is being performed.

b. Upon Completion:

- 1) Wipe work surfaces with cleaner/disinfectant.
- 2) Contain construction waste before transport in tightly covered containers.
- 3) Wet mop and/or vacuum with HEPA filtered vacuum before leaving work area.
- 4) Upon completion, restore HVAC system where work was performed

3. Class III requirements:

a. During Construction Work:

- 1) Remove or Isolate HVAC system in area where work is being done to prevent contamination of duct system.
- 2) Complete all critical barriers i.e. sheetrock, plastic, to seal area from non work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. Install construction barriers and ceiling protection carefully, outside of normal work hours.
- 3) Maintain negative air pressure, 0.01 inches of water gauge, within work site utilizing HEPA equipped air filtration units and continuously monitored with a digital display, recording and alarm instrument, which must be calibrated on installation, maintained with periodic calibration and monitored by the contractor.

- 4) Contain construction waste before transport in tightly covered containers.
- 5) Cover transport receptacles or carts. Tape covering unless solid lid.

b. Upon Completion:

- 1) Do not remove barriers from work area until completed project is inspected by the Project Engineer.
- 2) Remove construction barriers and ceiling protection carefully to minimize spreading of dirt and debris associated with construction, outside of normal work hours.
- 3) Vacuum work area with HEPA filtered vacuums.
- 4) Wet mop area with cleaner/disinfectant.
- 5) Upon completion, restore HVAC system where work was performed.

4. Class IV requirements:

a. During Construction Work:

- 1) Isolate HVAC system in area where work is being done to prevent contamination of duct system.
- 2) Complete all critical barriers i.e. sheetrock, plastic, to seal area from non-work area or implement control cube method (cart with plastic covering and sealed connection to work site with HEPA vacuum for vacuuming prior to exit) before construction begins. Install construction barriers and ceiling protection carefully, outside of normal work hours.
- 3) Maintain negative air pressure within work site utilizing HEPA equipped air filtration units.
- 4) Seal holes, pipes, conduits, and punctures.
- 5) Construct anteroom and require all personnel to pass through this room so they can be vacuumed using a HEPA vacuum cleaner before leaving work site or they can wear cloth or paper coveralls that are removed each time they leave work site.

- 6) All personnel entering work site are required to wear shoe covers. Shoe covers must be changed each time the worker exits the work area.

b. Upon Completion:

- 1) Do not remove barriers from work area until completed project is inspected by the Project Engineer.
- 2) Remove construction barriers and ceiling protection carefully to minimize spreading of dirt and debris associated with construction, outside of normal work hours.
- 3) Contain construction waste before transport in tightly covered containers.
- 4) Cover transport receptacles or carts. Tape covering unless solid lid.
- 5) Vacuum work area with HEPA filtered vacuums.
- 6) Wet mop area with cleaner/disinfectant.
- 7) Upon completion, restore HVAC system where work was performed.

C. Barriers shall be erected as required based upon classification (Class III & IV requires barriers) and shall be constructed as follows:

1. Class III and IV - closed door with masking tape applied over the frame and door is acceptable for projects that can be contained in a single room.
2. Construction, demolition or reconstruction not capable of containment within a single room must have the following barriers erected and made presentable on hospital occupied side:
 - a. Class III & IV (where dust control is the only hazard, and an agreement is reached with the Project Engineer and Medical Center) - Airtight plastic barrier that extends from the floor to ceiling. Seams must be sealed with duct tape to prevent dust and debris from escaping
 - b. Class III & IV - Drywall barrier erected with joints covered or sealed to prevent dust and debris from escaping.

- c. Class III & IV - Seal all penetrations in existing barrier airtight
 - d. Class III & IV - Barriers at penetration of ceiling envelopes, chases and ceiling spaces to stop movement air and debris
 - e. Class IV only - Anteroom or double entrance openings that allow workers to remove protective clothing or vacuum off existing clothing
 - f. Class III & IV - At elevators shafts or stairways within the field of construction, overlapping flap minimum of two feet wide of polyethylene enclosures for personnel access.
- D. Products and Materials:
- 1. Sheet Plastic: Fire retardant polystyrene, 6-mil thickness meeting local fire codes
 - 2. Barrier Doors: Self-closing solid core wood in steel frame, painted
 - 3. Dust proof.
 - 4. High Efficiency Particulate Air-Equipped filtration machine rated at 95% capture of 0.3 microns including pollen, mold spores and dust particles. HEPA filters should have ASHRAE 85 or other pre-filter to extend the useful life of the HEPA. Provide both primary and secondary filtrations units. Maintenance of equipment and replacement of the HEPA filters and other filters will be in accordance with manufacturer's instructions.
 - 5. Exhaust Hoses: Heavy duty, flexible steel reinforced ventilation blower hose.
 - 6. Adhesive Walk-off Mats: Provide minimum size mats of 24 inches x 36 inches.
 - 7. Disinfectant: Hospital-approved disinfectant or equivalent product.
 - 8. Portable Ceiling Access Module.
- E. Before any construction on site begins, all contractor personnel involved in the construction or renovation activity shall be educated and trained in infection prevention measures established by the Medical Center.

- F. A dust control program will be establish and maintained as part of the contractor's infection preventive measures in accordance with the FGI Guidelines for Design and Construction of Healthcare Facilities. Prior to start of work, prepare a plan detailing project-specific dust protection measures with associated product data, including periodic status reports, and submit to Project Engineer for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
- G. Medical Center Infection Control personnel will monitor for airborne disease (e.g. aspergillosis) during construction. A baseline of conditions will be established by the Medical Center prior to the start of work and periodically during the construction stage to determine impact of construction activities on indoor air quality with safe thresholds established.
- H. In general, the following preventive measures shall be adopted during construction to keep down dust and prevent mold.
1. Contractor shall verify that construction exhaust to exterior is not reintroduced to the medical center through intake vents, or building openings. HEPA filtration is required where the exhaust dust may reenter the medical center.
 2. Exhaust hoses shall be exhausted so that dust is not reintroduced to the medical center.
 3. Adhesive Walk-off/Carpet Walk-off Mats shall be used at all interior transitions from the construction area to occupied medical center area. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times.
 4. Vacuum and wet mop all transition areas from construction to the occupied medical center at the end of each workday. Vacuum shall utilize HEPA filtration. Maintain surrounding area frequently. Remove debris as it is created. Transport these outside the construction area in containers with tightly fitting lids.
 5. The contractor shall not haul debris through patient-care areas without prior approval of the Project Engineer and the Medical Center. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape. No

- sharp objects should be allowed to cut through the plastic. Wipe down the exterior of the containers with a damp rag to remove dust. All equipment, tools, material, etc. transported through occupied areas shall be made free from dust and moisture by vacuuming and wipe down.
6. There shall be no standing water during construction. This includes water in equipment drip pans and open containers within the construction areas. All accidental spills must be cleaned up and dried immediately. Remove and dispose of porous materials immediately.
 7. At completion, remove construction barriers and ceiling protection carefully, outside of normal work hours. Vacuum and clean all surfaces free of dust after the removal.

I. Final Cleanup:

1. Upon completion of project, or as work progresses, remove all construction debris from above ceiling, vertical shafts and utility chases that have been part of the construction.
2. Perform HEPA vacuum cleaning of all surfaces in the construction area. This includes walls, ceilings, cabinets, furniture (built-in or free standing), partitions, flooring, etc.
3. All new air ducts shall be cleaned prior to final inspection.

J. Exterior Construction

1. Contractor shall verify that dust will not be introduced into the medical center through intake vents, or building openings. HEPA filtration on intake vents is required where dust may be introduced.
2. Dust created from disturbance of soil such as from vehicle movement will be wetted with use of a water truck as necessary.
3. All cutting, drilling, grinding, sanding, or disturbance of materials shall be accomplished with tools equipped with either local exhaust ventilation (i.e. vacuum systems) or wet suppression controls.

1.13 FIRE SAFETY

- A. Fire Safety Plan: Establish and maintain a site-specific fire protection program in accordance with 29 CFR 1926. Prior to start of work, prepare a plan detailing project-specific fire safety measures, including periodic status reports, and submit to Project Engineer for review for compliance with contract requirements in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES. This plan may be an element of the Accident Prevention Plan.
- B. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- C. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by (10 feet).
- D. Temporary Heating and Electrical: Install, use and maintain installations in accordance with 29 CFR 1926, NFPA 241 and NFPA 70.
- E. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with Project Engineer.
- F. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily. Report findings and corrective actions weekly to Project Engineer.
- G. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
- H. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30.
- I. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems, except for portions immediately under construction, and temporarily for connections. Provide fire watch for impairments more than 4 hours in a 24-hour period. Request interruptions in accordance with Article, OPERATIONS AND STORAGE AREAS, and coordinate with Project Engineer. All existing or temporary fire

protection systems (fire alarms, sprinklers) located in construction areas shall be tested as coordinated with the Medical Center.

Parameters for the testing and results of any tests performed shall be recorded and copies provided to the Project Engineer.

- J. Smoke Detectors: Prevent accidental operation. Remove temporary covers at end of work operations each day. Coordinate with Project Engineer.
- K. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Project Engineer.
- L. Fire Hazard Prevention and Safety Inspections: Inspect entire construction areas weekly. Coordinate with, and report findings and corrective actions weekly to Project Engineer.
- M. Smoking: Smoking is prohibited except in designated smoking areas.
- N. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.
- O. If required, submit documentation to the Project Engineer that personnel have been trained in the fire safety aspects of working in areas with impaired structural or compartmentalization features.

1.14 ELECTRICAL

- A. All electrical work shall comply with NFPA 70 (NEC), NFPA 70B, NFPA 70E, 29 CFR Part 1910 Subpart J - General Environmental Controls, 29 CFR Part 1910 Subpart S - Electrical, and 29 CFR 1926 Subpart K in addition to other references required by contract.
- B. All qualified persons performing electrical work under this contract shall be licensed journeyman or master electricians. All apprentice electricians performing under this contract shall be deemed unqualified persons unless they are working under the immediate supervision of a licensed electrician or master electrician.
- C. All electrical work will be accomplished de-energized and in the Electrically Safe Work Condition (refer to NFPA 70E for Work Involving Electrical Hazards, including Exemptions to Work Permit). Any Contractor, subcontractor or temporary worker who fails to fully comply with this requirement is subject to immediate termination in accordance with FAR clause 52.236-5(c).

1. Development of a Hazardous Electrical Energy Control Procedure is required prior to de-energization. A single Simple Lockout/Tagout Procedure for multiple work operations can only be used for work involving qualified person(s) de-energizing one set of conductors or circuit part source. Task specific Complex Lockout/Tagout Procedures are required at all other times.
 2. Verification of the absence of voltage after de-energization and lockout/tagout is considered "energized electrical work" (live work) under NFPA 70E, and shall only be performed by qualified persons wearing appropriate shock protective (voltage rated) gloves and arc rate personal protective clothing and equipment, using Underwriters Laboratories (UL) tested and appropriately rated contact electrical testing instruments or equipment appropriate for the environment in which they will be used.
 3. Personal Protective Equipment (PPE) and electrical testing instruments will be readily available for inspection by the Project Engineer.
- D. Before beginning any electrical work, an Activity Hazard Analysis (AHA) will be conducted to include Shock Hazard and Arc Flash Hazard analyses (NFPA Tables can be used only as a last alternative and it is strongly suggested a full Arc Flash Hazard Analyses be conducted). Work shall not begin until the AHA for the work activity has been accepted by the Project Engineer and discussed with all engaged in the activity, including the Contractor, subcontractor(s), and Government on-site representatives at preparatory and initial control phase meetings.
- E. Ground-fault circuit interrupters. All 120-volt, single-phase 15- and 20-ampere receptacle outlets on construction sites shall have approved ground-fault circuit interrupters for personnel protection. "Assured Equipment Grounding Conductor Program" only is not allowed.

1.15 FALL PROTECTION

- A. The fall protection (FP) threshold height requirement is 6 ft (1.8 m) for ALL WORK, unless specified differently or the OSHA 29 CFR 1926 requirements are more stringent..
1. The use of a Safety Monitoring System (SMS) as a fall protection method is prohibited.

2. The use of Controlled Access Zone (CAZ) as a fall protection method is prohibited.
3. Fall protection while using a ladder will be governed by the OSHA requirements.

1.16 CRANES

- A. All crane work shall comply with 29 CFR 1926 Subpart CC.
- B. Prior to operating a crane, the operator must be licensed, qualified or certified to operate the crane. Thus, all the provisions contained with Subpart CC are effective and there is no "Phase In" date of November 10, 2014.
- C. A detailed lift permit shall be submitted 14 days prior to the scheduled lift complete with route for truck carrying load, crane load analysis, siting of crane and path of swing. The lift will not be allowed without approval of this document.
- D. Crane operators shall not carry loads
 1. over the general public or VAMC personnel
 2. over any occupied building unless
 - a. the top two floors are vacated
 - b. or overhead protection with a design live load of 300 psf is provided

1.17 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

- A. All installation, maintenance, and servicing of equipment or machinery shall comply with 29 CFR 1910.147 except for specifically referenced operations in 29 CFR 1926 such as concrete & masonry equipment [1926.702(j)], heavy machinery & equipment [1926.600(a)(3)(i)], and process safety management of highly hazardous chemicals (1926.64). Control of hazardous electrical energy during the installation, maintenance, or servicing of electrical equipment shall comply with Section 1.15 to include NFPA 70E and other VA specific requirements discussed in the section.

1.18 WELDING AND CUTTING

- A. As specified in section 1.14, Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with

Project Engineer in advance. Designate contractor's responsible project-site fire prevention program manager.

1.19 LADDERS

- A. All ladder use shall comply with 29 CFR 1926 Subpart X.
- B. All portable ladders shall be of sufficient length and shall be placed so that workers will not stretch or assume a hazardous position.
- C. Manufacturer safety labels shall be in place on ladders
- D. Step ladders shall not be used in the closed position
- E. Top steps or cap of step ladders shall not be used as a step.
- F. Portable ladders, used as temporary access, shall extend at least 3 ft (0.9 m) above the upper landing surface.
 - 1. When a 3 ft (0.9-m) extension is not possible, a grasping device (such as a grab rail) shall be provided to assist workers in mounting and dismounting the ladder.
 - 2. In no case shall the length of the ladder be such that ladder deflection under a load would, by itself, cause the ladder to slip from its support.
- G. Ladders shall be inspected for visible defects on a daily basis and after any occurrence that could affect their safe use. Broken or damaged ladders shall be immediately tagged "DO NOT USE," or with similar wording, and withdrawn from service until restored to a condition meeting their original design.

1.20 FLOOR & WALL OPENINGS

- A. All floor and wall openings shall comply with 29 CFR 1926 Subpart M.
- B. Floor and roof holes/openings are any that measure over 2 in (51 mm) in any direction of a walking/working surface which persons may trip or fall into or where objects may fall to the level below. See paragraph 1.20.C for covering and labeling requirements.
- C. All floor, roof openings or hole into which a person can accidentally walk or fall through shall be guarded either by a railing system with toeboards along all exposed sides or a load-bearing cover. When the cover is not in place, the opening or hole shall be protected by a

removable guardrail system or shall be attended when the guarding system has been removed, or other fall protection system.

1. Covers shall be capable of supporting, without failure, at least twice the weight of the worker, equipment and material combined.
2. Covers shall be secured when installed, clearly marked with the word "HOLE", "COVER" or "Danger, Roof Opening-Do Not Remove" or color-coded or equivalent methods (e.g., red or orange "X"). Workers must be made aware of the meaning for color coding and equivalent methods.
3. Roofing material, such as roofing membrane, insulation or felts, covering or partly covering openings or holes, shall be immediately cut out. No hole or opening shall be left unattended unless covered.
4. Non-load-bearing skylights shall be guarded by a load-bearing skylight screen, cover, or railing system along all exposed sides.
5. Workers are prohibited from standing/walking on skylights.

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SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies the requirements for the management of non-hazardous building construction and demolition waste.
- B. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, as much of the waste material as economically feasible shall be salvaged, recycled or reused.
- C. Contractor shall use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:
 - 1. Waste Management Plan development and implementation.
 - 2. Techniques to minimize waste generation.
 - 3. Sorting and separating of waste materials.
 - 4. Salvage of existing materials and items for reuse or resale.
 - 5. Recycling of materials that cannot be reused or sold.
- D. At a minimum the following waste categories shall be diverted from landfills:
 - 1. Inerts (eg, concrete, masonry and asphalt).
 - 2. Clean dimensional wood and palette wood.
 - 3. Engineered wood products (plywood, particle board and I-joists, etc).
 - 4. Metal products (eg, steel, wire, beverage containers, copper, etc).
 - 5. Cardboard, paper and packaging.
 - 6. Bitumen roofing materials.
 - 7. Plastics (eg, ABS, PVC).
 - 8. Insulation.
 - 9. Paint.

1.2 RELATED WORK

- A. Section 02 41 00, DEMOLITION.
- B. Section 01 00 00, GENERAL REQUIREMENTS.

1.3 QUALITY ASSURANCE

- A. Contractor shall practice efficient waste management when sizing, cutting and installing building products. Processes shall be employed to ensure the generation of as little waste as possible. Construction /Demolition waste includes products of the following:

1. Excess or unusable construction materials.
 2. Packaging used for construction products.
 3. Poor planning and/or layout.
 4. Construction error.
 5. Over ordering.
 6. Weather damage.
 7. Contamination.
 8. Mishandling.
 9. Breakage.
- B. Establish and maintain the management of non-hazardous building construction and demolition waste set forth herein. Conduct a site assessment to estimate the types of materials that will be generated by demolition and construction.
- C. Contractor shall develop and implement procedures to recycle construction and demolition waste to a minimum of 25 percent.
- D. Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling. Any revenues or savings obtained from salvage or recycling shall accrue to the contractor.
- E. Contractor shall provide all demolition, removal and legal disposal of materials. Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations. The Whole Building Design Guide website <http://www.wbdg.org/tools/cwm.php> provides a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects.
- F. Contractor shall assign a specific area to facilitate separation of materials for reuse, salvage, recycling, and return. Such areas are to be kept neat and clean and clearly marked in order to avoid contamination or mixing of materials.
- G. Contractor shall provide on-site instructions and supervision of separation, handling, salvaging, recycling, reuse and return methods to be used by all parties during waste generating stages.
- H. Record on daily reports any problems in complying with laws, regulations and ordinances with corrective action taken.

1.4 TERMINOLOGY

- A. Class III Landfill: A landfill that accepts non-hazardous resources such as household, commercial and industrial waste resulting from construction, remodeling, repair and demolition operations.
- B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, mastics and like products.
- C. Construction and Demolition Waste: Includes all non-hazardous resources resulting from construction, remodeling, alterations, repair and demolition operations.
- D. Dismantle: The process of parting out a building in such a way as to preserve the usefulness of its materials and components.
- E. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of land filling (includes Class III landfills and inert fills).
- F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring or other soil engineering operation.
- G. Inert Fill: A facility that can legally accept inert waste, such as asphalt and concrete exclusively for the purpose of disposal.
- H. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board, and does not contain significant quantities of decomposable solid resources.
- I. Mixed Debris: Loads that include commingled recyclable and non-recyclable materials generated at the construction site.
- J. Mixed Debris Recycling Facility: A solid resource processing facility that accepts loads of mixed construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing non-recyclable materials.
- K. Permitted Waste Hauler: A company that holds a valid permit to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal.
- L. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.

1. On-site Recycling - Materials that are sorted and processed on site for use in an altered state in the work, i.e. concrete crushed for use as a sub-base in paving.
 2. Off-site Recycling - Materials hauled to a location and used in an altered form in the manufacture of new products.
- M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of new products. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a solid waste facilities permit or be regulated by the local enforcement agency.
- N. Reuse: Materials that are recovered for use in the same form, on-site or off-site.
- O. Return: To give back reusable items or unused products to vendors for credit.
- P. Salvage: To remove waste materials from the site for resale or re-use by a third party.
- Q. Source-Separated Materials: Materials that are sorted by type at the site for the purpose of reuse and recycling.
- R. Solid Waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.
- S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting them to a landfill for disposal, or recovering some materials for re-use or recycling.

1.5 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES, furnish the following:
- B. Prepare and submit to the Resident Engineer a written demolition debris management plan. The plan shall include, but not be limited to, the following information:
1. Procedures to be used for debris management.
 2. Techniques to be used to minimize waste generation.
 3. Analysis of the estimated job site waste to be generated:
 - a. List of each material and quantity to be salvaged, reused, recycled.
 - b. List of each material and quantity proposed to be taken to a landfill.

4. Detailed description of the Means/Methods to be used for material handling.
 - a. On site: Material separation, storage, protection where applicable.
 - b. Off site: Transportation means and destination. Include list of materials.
 - 1) Description of materials to be site-separated and self-hauled to designated facilities.
 - 2) Description of mixed materials to be collected by designated waste haulers and removed from the site.
 - c. The names and locations of mixed debris reuse and recycling facilities or sites.
 - d. The names and locations of trash disposal landfill facilities or sites.
 - e. Documentation that the facilities or sites are approved to receive the materials.
- C. Designated Manager responsible for instructing personnel, supervising, documenting and administer over meetings relevant to the Waste Management Plan.
- D. Monthly summary of construction and demolition debris diversion and disposal, quantifying all materials generated at the work site and disposed of or diverted from disposal through recycling.

1.6 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced by the basic designation only. In the event that criteria requirements conflict, the most stringent requirements shall be met.
- B. U.S. Green Building Council (USGBC):
LEED Green Building Rating System for New Construction

1.7 RECORDS

- A. Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. Records shall be kept in accordance with the LEED Reference Guide and LEED Template.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. List of each material and quantity to be salvaged, recycled, reused.
- B. List of each material and quantity proposed to be taken to a landfill.

- C. Material tracking data: Receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices, net total costs or savings.

PART 3 - EXECUTION

3.1 COLLECTION

- A. Provide all necessary containers, bins and storage areas to facilitate effective waste management.
- B. Clearly identify containers, bins and storage areas so that recyclable materials are separated from trash and can be transported to respective recycling facility for processing.
- C. Hazardous wastes shall be separated, stored, disposed of according to local, state, federal regulations.

3.2 DISPOSAL

- A. Contractor shall be responsible for transporting and disposing of materials that cannot be delivered to a source-separated or mixed materials recycling facility to a transfer station or disposal facility that can accept the materials in accordance with state and federal regulations.
- B. Construction or demolition materials with no practical reuse or that cannot be salvaged or recycled shall be disposed of at a landfill or incinerator.

3.3 REPORT

- A. With each application for progress payment, submit a summary of construction and demolition debris diversion and disposal including beginning and ending dates of period covered.
- B. Quantify all materials diverted from landfill disposal through salvage or recycling during the period with the receiving parties, dates removed, transportation costs, weight tickets, manifests, invoices. Include the net total costs or savings for each salvaged or recycled material.
- C. Quantify all materials disposed of during the period with the receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices. Include the net total costs for each disposal.

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Construction Waste Management Report Fargo VA Health Care System

Contractor: _____

VA Project Number: _____

VA Project Title: _____

Month: _____

Roll Off

Date	Amount taken to landfill (pounds)

Recycling

Date	Material Recycled	Amount (Pounds)	Cost / Credit (\$)

