SECTION 01210

SPECIAL REQUIREMENTS

PART 1: GENERAL

1.1 LOCATION OF WORK

A. The work shall be performed at the Stanford Linear Accelerator Center (SLAC), Menlo Park, California.

1.2 WORK INCLUDED

A. The work shall include furnishing of labor, materials, supplies, equipment, services, supervision, and transportation as required for construction, procurement of equipment, and field testing of the facility. The complete work shall be performed as shown on the drawings detailed in the statement of work and specified in the Drawings and Specifications.

B. This LCLS project shall include construction at the existing SLAC site. Included shall be the construction of utilities between the LCLS site and the existing SLAC site utility and communication systems; connections and modifications to existing roads and other infrastructure adjacent to the LCLS site boundaries; site renovations, building demolition, and site development for the following main features of the LCLS conventional facilities project: construction of an above grade concrete beam enclosure and its related service buildings and associated utilities; construction of approximately ½ mile of underground tunneling with cover varying from 20 feet to 100 feet; tunneling infrastructure including all related utility service buildings and associated utilities; and construction of an approximately 78,000 s.f. office complex including common space, wet/dry laboratories, conference space and related utility service buildings and associated utilities.

1.3 U.S. GOVERNMENT PROPERTY - MATERIALS TO BE REMOVED

A. No materials shall be removed from the site except CM/GC's construction and demolition materials, approved soil spoils and other materials specifically listed herein.

B. Unless otherwise stated herein, U.S. Government or SLAC property to be removed from the job shall remain within SLAC jurisdiction. Such material shall be disposed of as directed by the Conventional Facilities Manager.

C. Other than the materials described in paragraph 1.3A, only the following material shall be removed from the site and disposed of at the expense of the CM/GC:

1. None listed.

1.4 SPECIAL SAFETY REQUIREMENTS

A. Fire Protection and Prevention:

1. The CM/GC shall develop and maintain an effective fire protection and prevention program at the job site through all phases of demolition, alteration, repair, and construction work.
2. CM/GC shall ensure the availability of fire protection and suppression equipment.
3. Smoking shall be prohibited at or in the vicinity of operations which constitute a fire hazard. Such areas shall be conspicuously posted with "NO SMOKING OR OPEN FLAME" signs.
4. Smoking is not permitted in any SLAC buildings. Smoking is permitted only in designated areas outside SLAC buildings. Burning of debris on SLAC property is not permitted.

B. Open Flame or Spark Permits: All operations with open flames or causing sparks or near gas lines or near combustible storage containers require a daily fire permit issued by SLAC on-site Palo Alto Fire Station #7. Such work shall not commence until the daily permit is issued. This

includes, but is not limited to, electric arc and gas welding and flame cutting, other open flame operations, tar kettles, power activated tools and excavations. The daily permit may be obtained from the SLAC Fire Station #7 and shall be coordinated with Fire Protection Engineer, Robert Reek (650 926-4509).

1. The CM/GC shall provide fire watch personnel in sufficient number to continuously monitor all locations where work requiring a fire permit is being conducted. The fire watch personnel shall remain on the job at least thirty minutes after such operations are completed.
2. Noncombustible shields or covers shall be provided on tables, floors, walls, around the workstation, and over equipment to protect building structures and equipment from sparks and fragments of hot metal. These precautions shall also be taken to protect against sparks and hot metallic oxides generated by grinding, drilling or sawing operations.

C. Flaggers: Unless noted otherwise, flaggers shall be furnished by CM/GC for all work that may affect the use of roads by SLAC.

1. Flaggers shall be posted at the entrance and exit of access roads used for hauling material and at all other areas where normal traffic is subject to disruption.
2. Flaggers shall be equipped and instructed at CM/GC's expense in accordance with current "Flagging Instruction Handbook" Instructions to Flaggers" of the Department of Transportation, State of California (http://www.dot.ca.gov/hq/traffops/signtech/signdel/pdf/Flagging_April99.pdf).

D. Debris: Best management practices shall be employed to protect SLAC's storm water and sanitary sewer system from pollutants, including construction debris and soil. Coordinate through the Conventional Facilities Manager's office with the requirements of SLAC's Environmental Safety & Health (ES&H) which can be located at the following website: http://www-group.slac.stanford.edu/esh/eshmanual/ESHch43.pdf.

E. Noise: Construction noise levels shall not exceed local ordinance limits. See Section 01010, articles 1.7 A and B.

F. Radiation Safety Training and Dosimetry: CM/GC shall ensure that all required personnel are properly trained. As a SLAC policy, "All individuals at SLAC who work in Industrial Areas……must be either properly trained at CM/GC expense or escorted by a properly trained individual". Therefore access of personnel shall be limited to individuals who have received "Safety Orientation for Non-SLAC Employees" (SO), and "Employee Orientation to Environment, Safety, and Health" (EOESH). SO training is required for individuals who work inside an Industrial Area1 less than 60 days. Individuals who work inside an Industrial Area greater than 60 days will require EOESH training. Generally speaking, for SO and EOESH training, no dosimeters will be required.

G. The SO training is approximately 0.5 hour long and is generally administered on site by Computer Based Training (CBT). This training provides a brief introduction to the potential hazards at SLAC. The EOESH training class is 2.5 hours long, and provides a description of the site, hazards to avoid, a brief explanation of radioactivity, and other general information. The training indicated above shall be required for all new employees or those returning to the site after an absence of greater than 30 calendar days at the contractors and subcontractors expense. The CM/GC shall coordinate the training effort through SLAC ES&H department. Time spent at required training will be part of the CM/GC's expense covered in their base proposal or the Sub-Subcontractor's base bid.

H. Cranes: Cranes shall be State of California certified (Plate V with Quadrennial Inspection). A valid copy of such certificate shall be available with each crane or derrick and indicate 1) all required tests and/or examinations have been performed, 2) any defects found by such examination and tests have been corrected and 3) that the equipment is in safe operating condition at the time of examination. Crane must have a load chart applicable to the crane

configuration in the operators cab. Crane capacity exceeds lift to be loaded at the boom configuration, angle, and radius to do the work. Crane must have a working A2B (Anti Two-Block) Device.

I. Crane operators shall be qualified in the safe operation of cranes or hoisting apparatus. All crane operators must hold a valid certification from the National Commission for the Certification of Crane Operators (NCCCO) for each type of crane they will operate on the project. Documentation shall be submitted to the Conventional Facilities Manager verifying qualifications of the operators. All crane operators shall carry a current California Drivers License of class A or B and medical certificate when driving crane. The CM/GC shall ensure that the qualifications meet or exceed NCCCO training with a NCCCO training card. The CM/GC shall ensure that the operators have performed a daily inspection of the crane (with a checklist). Trainees will not be permitted to operate cranes on the SLAC site.

J. The CM/GC shall ensure that all slings and shackles are in good working condition and have legible markings and/or tagging from the manufacturer (not country of origin) such as Safe Working Load (SWL) or Working Load Limit (WLL) on the gear. All lifts will be made with outriggers extended equally and tires off the ground. No "On Rubber" Lifts will be allowed unless crane is in a Pick and Carry Configuration with the house lock engaged. Any Below the Hook Lifting devices such as spreader bars or Baskets shall be Certified and Rated.

K. The CM/GC shall ensure that cranes are not operated within 10 feet of power lines, the working Envelope of the crane swinging radius shall be barricaded from unauthorized personnel entering working area...from the counterweight forward to the load on the hook, any hoisting of personnel and/or platforms shall comply with OSHA 29 CFR 1926.550g and CAL-OSHA Title 8, Article 98, section 5004.

[1] An Industrial Area is defined as an area where some level of hazard (such as moving machinery noise, electricity, and chemicals) may exist. [UNIVERSITY –I-720-0A0Z-002-R001 Site Access and Identification Badges]

L. SLAC is a research facility presenting numerous situations not encountered in the typical industrial setting. SLAC-specific safety training is required for those here under contract to conduct on-site activities that might expose them to unique hazards. The intent of this training is to familiarize the employees of these contracted parties with the unique hazards of this research environment and to instruct them in the use of the related protective controls, such as specialized systems and practices, to be utilized to mitigate or control these hazards. The SLAC Safety Training Course for Contracted Parties requires between 4 and 8 hours of time and must be attended by all contractor and subcontractor employees who will be on-site more than thirty days or whose work will expose them to hazards unique to SLAC. Time spent at required training will be part of the CM/GC's expense covered in their base proposal or the Sub-Subcontractor's base bid.

1.5 SPILLS

A. The CM/GC shall immediately within one hour report to the Conventional Facilities Manager any spill, deposit, leak, drainage, debris, residue, spoil, residual, and/or by-product, whether its presence at the jobsite is occasioned by accident, inadvertence, intent, discarding, or abandonment by the CM/GC. This requirement applies to petroleum products, oil, lubricants, chemical substances, waste materials, and waste substances that are in such quantities as to constitute a hazardous substance or hazardous waste under Title 22 of the California Assessment Manual. All such releases of any quantity involving paints, solvents, thinners, degreasers, PCBs, halogenated hydrocarbons, volatile organic compounds, and/or asbestos shall be deemed a reportable event. These identification and reporting requirements shall be the responsibility of the CM/GC for both its own work forces as well as for any Sub-subcontractor, material-man or supplier performing work on site for the CM/GC. Reporting shall be made to the Environment, Health and Safety Representative, phone (650) 926-2399.

B. In no event shall any spill(s) identified as a hazardous substance or hazardous waste be removed from the SLAC site without prior direction by the Conventional Facilities Manager. All

removal, cleanup, and associated costs which result from CM/GC or Sub-subcontractor, material-man, or supplier presence at the jobsite, shall be at the CM/GC's expense. Removal, cleanup and associated remedial measures shall be effected at the exclusive option of SLAC by either SLAC personnel or the CM/GC under the supervision of authorized SLAC representatives.

C. If a spill event or release of hazardous materials is encountered, or any spill or release that threatens life safety or environmental damage immediately call 9-911. Furthermore, the following serves as a guide for initial response by the CM/GC for all personnel:

1. Leave the area of the spill first and proceed to a safe location nearby. Then assess if you have the proper training and protective gear to stop or clean up the spill.
2. If you cannot stop the spill call 9-911.
3. If you are able to clean up the spill, follow proper cleanup procedures and use proper personal protection. Manage the generated waste as appropriate. Consult Waste management (Ext 2399) if you are not sure what to do with the waste product.
4. Isolate the spill area to keep everyone away.
5. Confine the spill with material such as absorbent pads if possible.

1.6 ALTERATIONS IN EXISTING FACILITIES

A. When altering existing facilities, the CM/GC shall take every precaution to preserve and protect existing facilities, both those to be altered and those to remain unaltered that are within the limits of the work.

B. The CM/GC shall notify the Conventional Facilities Manager at once of structural members, piping, conduit, or equipment not indicated for removal that may cause interference with the work. Work shall not proceed in the affected area until instructions have been issued. Do not drill or penetrate existing structures without prior permission.

C. The removal of existing work shall be by methods that will not jeopardize the integrity of structures or systems that are to remain.

1.7 SHUTDOWN

A. Shutting down of active utilities, building energy distribution and delivery systems, rotating equipment, pneumatic controls, actuators and supply systems, heating ventilation and air conditioning systems and controls, lighting and power distribution systems, natural gas distribution systems and utilization equipment, fire alarm systems, communications and data distribution systems, personal protection systems, Energy Monitoring and Control Systems (EMCS), roads, or portions of other services shall be performed only as scheduled in coordination with and with the expressed permission of SLAC. All disruptions to utilities will be scheduled during SLAC's minimum work shift hours, i.e. 12:01 a.m. on Saturday to 6:00 a.m. on Monday, unless specifically authorized otherwise. The CM/GC shall provide temporary utility services and bypasses for any disruptions not completed within this period.

B. Shutdown schedules and an activity work plan for utilities shall be submitted to SLAC for approval at least two weeks before the date of the desired work.

C. Prior to the shutdown of utilities or building energy system(s), the CM/GC and the Conventional Facilities Manager or designated representative(s) shall visit the site. At that time, the CM/GC shall present its work plan for the shutdown to the Conventional Facilities Manager or designated representative(s). The work plan shall include his analysis of any effect on the utility or building energy system(s) and the estimated duration of the shutdown. If the shutdown involves the interface with, or modification of, existing building energy system(s), the CM/GC shall be required to show the reviewed submittal and shop drawings of the proposed modifications.

D. Shutdown schedules shall be reviewed and approved by SLAC at least 72 hours prior to date of shutdown. Postponement by SLAC of scheduled shutdowns shall not constitute a basis for additional charges to SLAC.

E. Prior to the shutdown of any building energy system(s) the CM/GC shall provide the following:

1. Proof of receipt of all materials required for the shutdown or a written commitment from the responsible suppliers that the required materials will be available at the time of the shutdown.
2. A list of the qualified CM/GC personnel assigned to perform the work.
3. A twenty-four-hour emergency call-back phone number to be used by SLAC in the event of any problems or concerns with the modifications made to the building system(s) after the CM/GC has left the site.

F. The shutdown of existing active electrical and mechanical systems will be performed by SLAC personnel in coordination with CM/GC and restarted by SLAC's Conventional Experimental Facilities (CEF) department upon completion of CM/GC's work.

G. The startup of electrical and mechanical utility systems constructed by CM/GC shall be performed by CM/GC in coordination with SLAC's Conventional Experimental Facilities (CEF) Department.

1.8 DRAWINGS AND SPECIFICATIONS

A. Standard Specifications: Standard Specifications such as ANSI, AASHO, AWWA, AISC, Commercial Standards, Federal Specifications, NEMA, UL, and the like incorporated in the requirements by reference shall be those of the latest edition at time of receiving bids, unless otherwise specified. The manufacturers and producers of required materials, and their agents, shall have such specifications available for reference and be fully familiar with their requirements as pertains to their product or material.

B. Subcontract Drawings and Specifications on the Job: Subcontract drawings shall be kept on the job by the CM/GC and shall include at least one copy of Drawings and Specifications, all approved shop and erection drawings and schedules, lists of materials and equipment, as-built drawings, addenda and bulletins, and documents relevant to the work.

1.9 PROJECT MEETINGS

A. During construction, weekly project meetings will be held with the Conventional Facilities Manager. The minutes of these meetings will be prepared by the Conventional Facilities Manager and one copy issued as expeditiously as possible to the CM/GC. It shall be the responsibility of the CM/GC to submit in writing prior to the next weekly project meeting, any questions and verbally communicated responses by SLAC, so that confirmation can be obtained at each meeting.

1.10 RESERVED

1.11 COORDINATION

A. Responsibility: The CM/GC shall coordinate the work of all building trades (electrical, mechanical, etc.). Any work done without regard for other crafts among subcontractors which results in an incomplete and deficient product shall be removed, replaced, or redone as required at no additional cost to SLAC.

B. Field Checking: Before starting the job, the CM/GC shall check all survey and utility lines, levels, and dimensions shown on the Drawings against field conditions. If discrepancies appear, they shall be reported to the Conventional Facilities Manager at once. In the event of discrepancies, the work shall not proceed until instructions in writing from the Conventional Facilities Manager have been received.

1.12 LAYING OUT AND MEASURING - ACCURACY OF DATA

A. Verification of Site Measurements: In addition to verifying at the site all measurements shown on the Drawings, CM/GC shall consult the Drawings and Specifications of related work or existing construction that may in any manner affect the work of this Project.

B. Reporting: CM/GC shall promptly report to the Conventional Facilities Manager, in writing, any errors, omissions, violations, or inconsistencies that may be discovered as a result of such verifications; otherwise, it shall be understood that CM/GC accepts all such related data and conditions without reservations.

C. Interferences: Layout of existing piping, conduits, and locations of equipment are shown as exactly as could be determined during design of the facilities; but their accuracy, particularly when such layouts and drawings are schematic, cannot be guaranteed. CM/GC shall check all Specifications including the Drawings for possible interference with electrical, mechanical, and structural details, as well as interference with existing building or equipment, and shall notify the Conventional Facilities Manager of the interference for resolution of the interference before commencing work. Any completed work that interferes shall be corrected by CM/GC at CM/GC expense so that the original design can be followed.

1.13 STORAGE

A. The CM/GC may store materials only in areas designated by the Conventional Facilities Manager. The CM/GC is responsible for security of the materials. Construction materials shall be kept in an orderly manner, safely and neatly stacked or piled. Materials shall be stored in a manner so as not to endanger or overload structures. Deliveries of materials shall be scheduled so as to not provide an abundant amount of in-place storage awaiting installation. Generally speaking, materials shall be ready for installation.

1.14 DELIVERY

A. Materials and equipment shall be delivered to the site in adequate time to ensure uninterrupted progress of the work. Packaged materials and equipment shall be delivered to the site in

original, undamaged containers bearing manufacturer's name, with seals unbroken. Materials or equipment that do not conform to the Specifications or are damaged, shall not be incorporated into the workflow and shall be immediately identified (clearly marked) and removed from the site.

1.15 QUALITY CONTROL

A. The CM/GC shall be fully responsible for inspecting the work of its suppliers and Sub-subcontractors to assure that the work complies with the standards for materials and workmanship required by the Subcontract Documents. Inspections, periodic observations and testing performed by SLAC or the Architect-Engineer are for SLAC 's benefit and information only and shall not be construed as partial or incremental acceptance of the work and shall not be deemed to establish any duty to the CM/GC, its Sub-subcontractors or suppliers.

B. The CM/GC shall:

1. Monitor quality control over Sub-subcontractors, suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of the quality specified in the Subcontract Documents.
2. Comply fully with manufacturer's instructions, including each step in sequence.
3. Request clarification from the Conventional Facilities Manager before proceeding with work when manufacturers' instructions or reference standards conflict with Subcontract Documents.
4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or manufactures instructions require more precise workmanship.
5. Ensure that work is performed by persons specializing in the specific trade and class of work required, and qualified to produce workmanship of specified quality.
6. Secure products in place with positive anchorage devices designed and sized to withstand seismic, static and dynamic loading, vibration, physical distortion or disfigurement.

C. If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with relationships between the parties to the Subcontract set forth in the Subcontract Documents, the provisions in the Subcontract Documents shall take precedence.

D. Manufacturers' Field Inspection or Start-up:

1. When required by individual Specification sections, CM/GC shall provide the following services from a manufacturer's representative.

a. Review of Specifications and design and concurrence or suggestions for modification.

b. Site observation of conditions of use and substrate.

c. Observation of the installation work in progress and on completion.

d. Start up, testing, and adjustment of equipment.

e. Instruction to SLAC maintenance personnel for operation and maintenance.

f. Provide written signed report by manufacturer's representative documenting services provided and any comments or recommendations.

1.16 INSPECTIONS

A. The work shall be inspected by SLAC inspectors and/or independent inspection service personnel under coordination of the Conventional Facilities Manager.

B. Inspection or testing performed by SLAC or the Architect-Engineer or any of their employees or consultants shall not (1) relieve the CM/GC from responsibility for performing his own quality control and for complying with the requirements of the Subcontract Documents and (2) shall not create a duty or responsibility of SLAC or Architect/ Engineer to the CM/GC, Sub-subcontractors, material and equipment suppliers, their agents, employees or other persons performing portions of the work.

C. SLAC or the Architect-Engineer will not be responsible for the CM/GC's failure to carry out work in accordance with the Subcontract Documents.

PART 2: PRODUCTS

2.1 SUSPECT/COUNTERFEIT PARTS

A. All fasteners will be new and furnished exactly as specified and shall be manufactured in, and made of material from the United States. No higher grade of fastener shall be substituted for a lower grade. Certification and material test reports shall be furnished for each fastener size and shall include a description, size, specification, head marking, date, manufacturer's lot number, manufacturer's name, steel origin, steel heat number, and plating specification/type. The mechanical properties shall include the wedge tensile strength, the proof stress load, the surface hardness and the core hardness along with the hardness data per the particular bolt specification. The steel chemistry shall also be included in the test report. Fasteners supplied shall not have head markings that are on the U.S. Customs Service List of suspect/counterfeit fasteners. Failure to meet a receipt verification test will be cause for rejection of a shipment and the Office of the Inspector General of the U.S. Department of Energy may be notified for possible investigation of the Seller.

B. The CMGC or sub-subcontractor shall require seller to certify that equipment and supplies furnished under the Subcontract are free from the use of suspect/counterfeit fasteners. The CM/GC shall advise sellers that failure as listed on the attached U.S. Customs Service List of suspect/counterfeit fasteners. Failure to meet this criterion as disclosed by SLAC's receipt verification process will be cause for rejection of a shipment and the Office of the Inspector General of the U.S. Department of Energy may be notified for possible investigation of the Seller.

PART 3: EXECUTION

3.1 SAFEGUARDS - EXISTING EQUIPMENT, UNDERGROUND UTILITIES AND ARTIFACTS

A. Prior to any ground penetration, excavation, trenching, including the use of stakes or poles, the CM/GC shall obtain an approved digging permit, Excavation Clearance Form, and shall adhere to the conditions of the permit during work.

B. Existing utilities (including those listed as abandoned), shall not be moved or otherwise disturbed without written verification by the SLAC's Conventional Experimental Facilities operation's group that the utility is abandoned or if existing can be safely moved or disturbed.

C. Damage caused by the CM/GC to existing utilities, buildings (including roof drainage systems), underground cables, ducts, roadways, manholes and equipment, fire alarm, public address or telecommunications wiring will be repaired at the CM/GC's expense, and SLAC in its sole discretion shall decide whether repairs will be performed by the CM/GC or SLAC. Should SLAC determine that it is in their best interest to perform the repair; the CM/GC shall be responsible for compensating SLAC for the total cost of the repair. Existing utilities, including but are not limited to building fire alarm, public address or telecommunications wiring shall not be moved or otherwise disturbed, nor electrical circuits or switches operated or taken in or out of service, without prior consent of the Conventional Facilities Manager.

D. In compliance with Stanford's Historic Preservation regulations, if bones or artifacts are encountered during digging, Stanford University requires that the CM/GC stop work in the immediate vicinity and continue only with written approval from the Conventional Facilities Manager.

E. Buried non-metallic utilities (electrical, mechanical, and civil) shall receive a tracer wire.

1. The tracer wire shall be installed on top of the buried utility crown.
2. The tracer wire shall be positively attached to the non-metallic buried utilities by plastic wire ties of similar type of attachment every two (2) meters for straight run of utility and at all changes of direction.
3. The ends of the tracer wire shall be exposed above the finished grade.

4. Install precast concrete boxes at all locations where the ends of the tracer wire are exposed above the finished grade. The precast concrete boxes shall not be more than ninety (90) meters apart and shall contain a sixty (60) centimeter coil of wire from each end of the tracer wire.
5. Tracer wire shall be continuous between boxes and shall be tested for continuity in the presence of SLAC's inspector.
6. Tracer wire shall be No. 10 AWG, copper wire with TW insulation.
7. Tracer wire shall be exposed above finished grade in the precast concrete boxes at the transition where the non-metallic buried utility connects to the existing metallic utility.

F. Backfilling:

1. Before backfilling, the Conventional Facilities Manager shall be notified so that the SLAC surveyor can obtain three dimensional coordinates of all buried utilities. Buried utilities shall not be covered with backfill without the prior approval of SLAC inspectors.
2. Identification tape shall be installed thirty (30) centimeters above the buried utility crown. The identification tape shall be continuous for the entire length of utility. Before backfilling for buried utilities over identification tape, the SLAC construction inspector will verify that identification tape has been installed.

3.2 TEMPORARY CONSTRUCTION

A. Temporary construction shall conform to all requirements and laws of state and local authorities which pertain to operation, safety, and fire hazards: specifically to requirements noted in Section 01010, General Requirements, Paragraph 1.4 - Codes. CM/GC shall furnish and install all items necessary for conformance with such requirements, whether called for under separate sections of these Specifications or not. CM/GC shall provide, maintain, and remove upon completion of his work:

1. Temporary crossovers and bypass to utilities, electrical connections, traffic and footbridges, and walkways used to maintain services or communications that cannot be interrupted or curtailed.
2. Temporary rigging, scaffolding, shoring, hoisting equipment, and all other temporary work as required for this project.
3. Temporary barricades around openings and excavations for this project.

B. Project Sign: CM/GC shall furnish and install signs, located as directed by the Conventional Facilities Manager. The signs shall be readily legible to the general public, CM/GCs, material-men, and truck drivers approaching the site and shall include the following information:

1. Project.
2. Subcontract No.
3. CM/GC's Name.

C. Access to Buildings: CM/GC shall keep access to existing buildings clear at all times.

3.3 TEMPORARY FACILITIES

A. Temporary office: CM/GC shall provide, maintain and upon completion of the work, remove a field office. The temporary office shall include a telephone and drawing reference table for use by the CM/GC's staff and have adequate equipment for document files and space for job meetings.

B. Toilet Facilities: CM/GC will be required to furnish toilet facilities. Approved chemical toilets or enclosures may be used, provided they are kept clean at all times. Number of toilets provided must satisfy OSHA requirements for the number of personnel on site.

C. Water and Power: Temporary water service and electrical power will be available at locations as close as possible to the work site. Extensions for the CM/GC's use shall be made by the CM/GC. Available power is either 100 amp at 480 V or 225 amp at 120/208 V. The CM/GC must isolate the power as necessary so as to not cause electrical disturbance on the SLAC

service. CM/GC shall provide a meter for auditing purposes. No charge will be made for water or power provided they are not wasted.

1. All temporary wiring and electrical installations shall be in accordance with provisions of the Electrical Safety Orders of the State of California and applicable codes.
2. Any power outage occasioned by tying into the existing electrical system for temporary or permanent use shall be coordinated with the Conventional Facilities Manager (refer to Paragraph 1.7, SHUTDOWN).
3. SLAC does not guarantee the quantities or quality of power or water available for CM/GC's use, nor will it be responsible in any manner for interruptions in service or for the effects of interruptions.

D. Lighting: Temporary lighting, if necessary during the period of construction, shall be supplied and maintained by the CM/GC at CM/GC expense so that construction work can be safely performed.

E. Telephone Service at SLAC: SBC does not provide telephone service within SLAC. For service to a CM/GC trailer, the CM/GC must do the following:

1. Contact the SLAC Network Operations Office, (650) 926-4357. The SLAC Help Desk will make arrangements within SLAC to extend service from the SBC demarcation to the CM/GC's site.
2. Contact SBC and direct them to provide the desired service to 2575 Sand Hill Road and terminate that service on the SBC demarcation blocks at Building 50. They should inform SBC that SLAC Network Operations Office, (650) 926-4357, is the contact at SLAC.
3. Provide SLAC Network Operations Office, (650) 926-4357 with a written request that provide the following information:
    a. A Sketch that shows the CM/GC's trailer location relative to nearby SLAC buildings and the location of facilities required within the trailer.

b. The name and phone number of a responsible person that SLAC installers or Telephone Services may contact to resolve any installation or operational questions.

c. The Purchase Order Number or Subcontract Number that authorizes work at SLAC.

d. The estimated time that the facilities will be required at this location.

e. The date service is required.

f. The SBC (1) order number, (2) due date, and (3) contact.

4. There will be a SLAC recharge for installation time and material.

3.4 CPM NETWORK DIAGRAM

A. The CM/GC is required to provide a critical path method (CPM) network diagram. The CPM schedule shall conform to Section 01010, General Requirements, Paragraph 1.10 C - Schedule of Operations.

3.5 CLEANING

A. During construction periods:

1. At weekly intervals, or as directed by Conventional Facilities Manager, CM/GC shall clean the project site of all scrap, surplus materials, rubbish, and debris, and remove same from SLAC property.
2. Dust generated during the course of work must be controlled by appropriate means.
3. Spillage over SLAC roads caused by hauling operations shall be removed immediately at CM/GC's expense.

B. Prior to Final Acceptance: Clean-up of the entire construction area and adjacent building(s) and site area(s) affected by the performance of work under this Subcontract. Clean-up work shall be done by personnel skilled in building cleaning and maintenance work, and shall be done according to standards considered normal for commercial janitorial work.

3.6 OPERATION TEST

A. Prior to acceptance, all elements of operating equipment, including those of mechanical nature and those that slide, swing, turn, or are intended to move in any way and those of an electrical nature, shall be given an operating test to assure, to the satisfaction of the Conventional Facilities Manager and the Conventional Experimental Facilities group that such equipment operates as required. CM/GC shall make all adjustments, replacements, and such other modifications as needed. If it is necessary to run equipment in order to complete the work, for periods that exceed the manufacturer's recommended maintenance interval, the CM/GC will provide such required maintenance at no additional cost to the SLAC.

NOTE: IN THE EVENT OF ANY CONFLICT BETWEEN THE ABOVE PROVISIONS ANDTHE SLAC SITE SPECIAL PROVISIONS, THE SLAC SITE SPECIAL PROVISIONS SHALL TAKE PRECEDENCE.

END OF SECTION 01210