

SUMMARY OF WORK

PART 1 - GENERAL

The Center for Nanophase Materials Sciences (CNMS) building is a facility providing the office, laboratory, and cleanroom spaces necessary to operate the ORNL facility. The 80,000 gross square foot building is comprised of a four-story, curved office and laboratory structure connected to a one-story cleanroom. Three enclosed walkway bridges connect the building to the four story Central Laboratory and Office (CLO).

The purpose of this solicitation is to:

Construct the Center for Nanophase Materials Sciences Building. This solicitation defines the effort required for the construction of the CNMS building. The work involves complete installation, testing and start up of building electrical, mechanical, and cleanroom systems. Detailed coordination is required across all Construction Specification Institute (CSI) Divisions of Work.

1.1 WORK TO BE PERFORMED

- A. The Work to be performed under this subcontract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and furnishing all supervision, administration, labor, transportation and services, including fuel, essential communications, and performing all work, or other operations required for construction and interior build out of the CNMS building in accordance with the drawings and specifications. The work shall be complete; and all work, materials, and services not expressly indicated or called for in the subcontract documents, which may be necessary for the complete and proper construction of the work in good faith, shall be provided by the subcontractor as though originally so indicated, at no increase in cost.
- B. Wherever the terms "Contract Documents" and "Subcontract Documents" are used herein, they shall be the same.

1.2 WORK COVERED BY SUBCONTRACT DOCUMENTS: The scope of work includes but is not limited to:

- A. Installation and maintenance of erosion control measures related to site work limits and work required to complete this subcontract.
- B. Maintain and remove perimeter fall protection as required. (System will be installed during steel erection)
- C. Perform all cleanroom construction, cleaning, testing, and acceptance per the guidance, instructions, and protocol included in **Division 1**.
- D. Perform site work as detailed on Civil Drawings to include all excavating, backfilling and compaction associated with the installation of all utility systems, piers, pits, footing, slabs and retaining walls. Perform work as required outside limits of construction shown on drawings to complete work. **Division 2**

- E. Provide and install foundation drains, catch basins, and junction boxes as shown on drawings. **Division 2**
- F. Provide and install all landscaping and landscaping features as shown on drawing. **Division 2**
- G. Provide and install concrete for perimeter wall footings, perimeter walls, site retaining walls, interior spread footings, stepped footings, elevator pits, slabs on grade, elevated slabs, stairs, building plaza, steps, sidewalks, curbs, and equipment pads where indicated by the contract documents. **Division 3**
- H. Provide and install miscellaneous embedded steel support angles and plates. **Division 3**
- I. Install anchor bolts (anchor bolts provided by others, see 1.4, paragraph B.2 below) and grout all base plates. **Division 3**
- J. Provide and install masonry assemblies shown on drawings. **Division 4**
- K. Provide and install miscellaneous metals, metal stairs and handrails per **Division 5**.
- L. Provide and install architectural joint systems. **Division 5**
- M. Provide and install architectural woodwork to include cabinets, countertops paneling, interior woodwork and trim. **Division 6**
- N. Provide and install as required all wood furring, nailers and blocking. **Division 6**
- O. Provide and install built-up asphalt roofing, prefabricated roof panels, manufactured roof specialties, roof expansion assemblies, roof accessories and sheet metal flashing and trim. **Division 7**
- P. Provide and install building insulation. **Division 7**
- Q. Provide and install sheet waterproofing, bituminous damproofing and water repellents per drawings and specifications. **Division 7**
- R. Provide and install sprayed fire resistive materials. **Division 7**
- S. Provide and install fire stop systems, perimeter fire containment systems, fire resistive joint systems and joint sealants. **Division 7**
- T. Provide and install building exterior wall system to including related components, i.e. metal framed skylights, aluminum windows, aluminum curtain walls, louvers, louver sunscreens, aluminum entrances and storefronts, manufactured wall panels, glass fiber reinforced concrete and glazing. **Division 8**
- U. Provide and install frames, doors, hardware and glazing per door schedules shown on drawings. **Division 8**
- V. Provide and install access doors, automatic cleanroom doors and manual cleanroom doors. **Division 8**
- W. Provide and install building finishes per finish schedules shown on drawings. **Division 9**.
- X. Provide and install all building specialties. **Division 10**

- Y. Provide and install of building equipment to include roof tiebacks, projection screens, loading dock equipment and residential appliances. **Division 11**
- Z. Install laboratory fume hoods. The client purchases all fume hoods. **Division 11**
- AA. Provide and install building furnishing to include metal laboratory casework, floor mats and frames, horizontal louver blinds and roller shades (alternate). **Division 12 (See 1.4.A 6.)**.
- BB. Provide and install all Cleanroom ceiling grid supports, ceiling system, wall system and pass-throughs. **Division 13**
- CC. Provide and install building conveying systems to include hydraulic elevators. **Division 14**
- DD. Provide and install embeds, block outs and sleeves as shown on drawings. **Division 15**
- EE. Provide and install all required hangers and supports for all systems. **Division 15**
- FF. Provide and install underground piping and utility systems to include piping sleeves, sewer and storm water. **Division 15**
- GG. Provide and install building plumbing and vent system and associated equipment (pumps and hot water heaters) per schedule shown on drawings. **Division 15**
- HH. Provide and install diffusers, registers, grill and all duct accessories. **Division 15**
- II. Install, test, checkout and startup building mechanical systems and all associated equipment per HVAC Equipment Schedules shown on drawings. **Division 15**
- JJ. Provide and install Laboratory Airflow Control System (LACS) per drawings and specification including all associated equipment and accessories. **Division 15**
- KK. Provide and install Direct Digital Control (DDC) system per drawings and specification including all associated equipment and accessories. **Division 15**
- LL. Provide design, installation, testing, manuals and training as required for fire suppression systems. **Division 15**
- MM. Site utilities systems extend five-feet from the building line (base bid) or extend as shown on DCN-T1-SU1-08 (Attachment No.3). **Division 15 & 16**
- NN. Installation of duct bank (conduits) for 15Kv feeders from CNMS to electrical manhole M-39 as shown in **Division 16**.
- OO. Provide and install embeds, block outs and sleeves as shown on drawings. **Division 16**
- PP. Provide and install all hangers and supports for all systems. **Division 16**
- QQ. Provide, install, test, checkout and startup building electrical systems and all associated equipment. Electrical systems included but are not limited to the followings. **Division 16**
 - 1) Grounding and lightning protection.
 - 2) Conduit, cable tray, ductbank and raceway systems.

- 3) Power distribution system per riser and single line diagrams including bus duct, motor control centers, variable frequency drives, feeders and branch circuits.
- 4) Emergency generator and transfer switch system.
- 5) Provide, install, test and terminate 15kV feeder cables from CNMS building to Target Substation TA-SS3. (See Reference Drawings UEL1.61.01R1, UEL2.61.J4R0, UEL2.61.J5R0 & UEL6.61.04R1, UEL7.61.01R1, & UEL9.61.01R1).
- 6) Lighting systems including perimeter landscape lighting.
- 7) Communication systems to include Public Address, phone and data per riser diagrams. Contractor shall provide raceway rough-in for PA system. Contractor will receive and install CM furnished material. Contractor will provide labor to support adjustment of speaker level. Contractor to continuity check speaker conductors after installation. Contractor will provide 1-20amp, 120v circuit from nearest normal power panelboard and 1-20amp 120v circuit from emergency power panelboard to PA Amplifier Cabinet. Contractor will supply telephone cable from telephone punch down block to PA amplifier cabinet.

Contractor to supply all labor, material and equipment for installation of telephone and data installation. Contractors scope will include installation from jacks to (and include) punch down blocks and patch panels in individual communication rooms. Furnish testing per specifications.

1.3 WORK PERFORMED BY OTHERS

- A. Final grading, seeding, landscaping and asphalt paving outside of the building limits.
- B. Installation of fire alarm system per Specification 16730.

1.4 EQUIPMENT AND MATERIALS FURNISHED BY OTHERS "DIRECTED PROCUREMENTS (DP) AND CONSTRUCTION MANAGER FURNISHED EQUIPMENT (CM-FE)"

- A. **Directed Procurements (DP):** To facilitate the construction process, various equipment and supplies have been identified for standardization through purchase agreements with single manufacturers or suppliers for each type of equipment or supplies. The subcontractor and all its lower tier subcontractors will be responsible for ordering, receipt, acceptance, payment, storage, in-storage maintenance (as required), installation, field testing (when applicable) of these items as part of the subcontract requirements. The subcontractor and all its lower tier subcontractors are strongly encouraged to utilize the DP suppliers and manufacturers as described herein. Use of other suppliers or manufacturers for the DP items described herein will require prior written approval of the CM Procurement Office. Submittals for shop drawings and vendor data for DP equipment or supplies are not required under this subcontract.

The subcontractor is hereby directed to **Section C**; Pricing Schedules for pricing information related to the DP items in this subcontract.

- 1) Supply and Delivery of **Concrete** to the project site (Reference CM-FE & DP matrix, Attachment No.1).
A concrete supply and delivery purchase agreement (F5-2681-00-S00-1005) has been issued as a Unit Price Purchase Agreement by Knight/Jacobs to APAC-Tennessee, Inc., 226 Gill Street, Alcoa, TN, 37701 (phone 865-983-3100, POC is Dale Buchanan). See Section C for concrete pricing schedule. The subcontractor shall use this vendor (subcontractor) and shall consider the following:

- a. The subcontractor is to base its proposal on the prices dictated by their schedule and as outlined in the pricing schedule. The subcontractor is responsible for all aspects of the supply, delivery and installation of concrete material for foundations included in this subcontract
 - b. No water will be added to trucks after leaving the batch plant unless approved by the CM. Installation subcontractor shall sign and date ticket and, if approved by CM, indicate the amount of water added on site.
 - c. Subcontractor should note that overtime for concrete supplier is defined to be all 24 hours of Saturday, Sunday and all legal holidays and after 4:30 p.m. EST, and before 7:30 a.m. EST, Monday through Friday.
 - d. All concrete truck drivers must adhere to the site safety and security policy for visitors and vendors.
 - e. A one-hour free unloading time is included in all deliveries. Delays longer than this one-hour period shall be the responsibility of the subcontractor and compensated at the suppliers' unit rate.
- 2) Supply and Delivery of **Mechanical Commodities** (Reference CM-FE & DP matrix, Attachment No.1)
A supply and delivery purchase agreement for mechanical commodities (e.g., piping) as called for in Division 15 and per drawings and specification has been awarded (Subcontract No.: F5-2681-01-S01-1056) to Piping Supply Company, Inc., 3008 N. Hickory Street, Chattanooga TN 37406, Point of Contact: Chris Warren, Phone No. 423/698-8996. **The subcontractor shall be responsible for the installation and testing of all piping commodities in accordance with the technical specifications and drawings.** See Section C for mechanical commodities pricing schedule.
- 3) Supply and Delivery of **Electrical Commodities** (Reference CM-FE & DP matrix, Attachment No.1)
Three (3) supply and delivery purchase agreements for electrical commodities as called for in Division 16 and per the drawings and specification have been awarded. The CNMS building subcontractor shall be responsible for installation and testing in accordance with the plans and specification sections Division 16. See Section C for electrical commodities pricing schedule.
- 4) Supply and Delivery of **Generators and Automatic Transfer Switches** (Reference CM-FE & DP matrix, Attachment No.1).
A supply and delivery purchase agreement for generators and automatic transfer switches per drawings and specification sections 16231 and 16415 have been awarded. The CNMS building subcontractor shall be responsible for the installation of generators and automatic transfer switches. **The subcontractor (Stowers Engine & Power Products) shall be responsible for commissioning and testing** in accordance with specification section 16261 and 16415. See Section C for generators and automatic transfer switches pricing schedule.
- 5) Supply and Deliver of **Variable Frequency Drives** (Reference CM-FE & DP matrix, Attachment No.1)
A supply and delivery purchase agreement for variable frequency drives per drawings and specification section 16484 has been awarded. The CNMS building subcontractor shall be responsible for the installation of the variable frequency drives. **The subcontractor (Cornerstone Automation LLC) shall be responsible for commissioning and testing** in accordance with specification section 16484. See Section C for variable frequency drives pricing schedule.

- 6) Supply and Delivery of any or all **Material (12347)**(Reference CM-FE and DP matrix, Attachment No. 1)

UNICOR C/O GMG is established as a Federal Supplier under federal agreement to provide all or some of the material required in **specification 12347**. The CNMS build subcontractor is responsible for installation. The subcontractor shall obtain pricing for material that can be provided by UNICOR by coordinating applicable specifications and drawings for to Joe McCormick, UNICOR c/o GMG, 3303 Airline Blvd, Suite 3 C , Porthsmith, VA 23701. Telephone Number 803.802.0189, Fax 803.802.0190. e-mail: joe.mccormick@gmg-grp.com

- 7) All construction Manager Furnished Equipment and Directed Procurements equipment training will be included in the CM-FE and DP purchase agreements between the CM and the vendor.

B. Construction Manager Furnished Equipment (CM-FE) and Materials: To facilitate the construction process, various equipment and supplies have been identified for purchase by the CM. The equipment or supplies when received on the project-site, will be assigned to the subcontractor who will be responsible for the unloading, storage, in-storage maintenance, installation and testing (when specified). Items designated, as CM-FE shall be paid for by the CM through their contract with the supplier or manufacturer. The CNMS building subcontractor should not include in their bid material cost for any CM-FE items. The CNMS building subcontractor should include in their bid all costs associated with the unloading, storage, in-storage maintenance, installation and testing (when specified) of CM-FE items.

- 1) **Reinforcing steel** per specification 03300 (Reference CM-FE & DP matrix, Attachment No.1) shall be provided by the CM through a contract with Callaway Building Products. The CNMS building subcontractor shall consider the following:
- a. The CNMS building subcontractor shall provide requirements for reinforcement delivery dates that support its overall construction schedule to the CM within seven calendar days of award.
 - b. The CNMS building subcontractor shall coordinate reinforcement steel delivery dates directly with the reinforcing steel supplier (Callaway Building Products) and furnish a copy to the CM of all schedule requirements.
 - c. The CM will provide the CNMS building subcontractor with approved reinforcing steel shop drawings.
 - d. The CNMS building subcontractor shall be responsible for receiving, quantity verification, unloading, storage, and quantity take-offs from design drawings and installation of reinforcement steel. The subcontractor shall provide the CM with copies of the delivery tickets/bills of lading signed by a representative of the CNMS building subcontractor the same day as deliveries.
- 2) A **Structural Steel Fabrication and Erection** subcontract has been issued to Qualico Steel Company, Inc., for the fabrication and erection of structural steel and miscellaneous steel per Specifications 05120, 05310, 05511, 05521, and 05530 (Reference CM-FE & DP matrix, Attachment No.1). The CNMS building subcontractor shall consider the following:
- a. Qualico Steel Company will furnish anchor bolts; the CNMS building subcontractor shall provide requirements for anchor bolt delivery dates that support its overall construction schedule to the CM within seven calendar days of award.
 - b. The CNMS building subcontractor shall coordinate anchor bolt delivery dates directly with the Qualico.

- c. The CM will provide the CNMS building subcontractor with approved anchor bolt and structural steel shop drawings for its information and coordination.
- d. The CNMS building subcontractor shall be responsible for receiving, quantity verification, unloading, storage, and installation of anchor bolts. The CNMS building subcontractor shall provide the CM with copies of the delivery tickets/bills of lading signed by a representative of the CNMS building subcontractor the same day as deliveries.
- e. The CM will coordinate preparation and approval of all shop drawings, delivery of steel to the project site, and perform quality assurance oversight on the erection activities.
- f. The subcontractor shall plan execution of the scope of work of this subcontract to incorporate the structural steel erection sequence schedule provided in Section E, Attachment No. 2. All site preparation, grading, underground utilities installations, foundations, footers, basement walls and basement slabs required for beginning structural steel erection, must be complete and the area designated for safe erection of a sequence turned over to the steel erection contractor. The subcontractor shall identify milestone(s) and date(s), based on the Notice to Proceed date, when the foundation preparations will be sufficiently complete to allow the steel erector to begin each specified erection sequence.

The steel erection schedule provided in Section E, Attachment No. 2 identifies durations to be allowed before reentry into the designated steel sequence areas. The subcontractor must incorporate these durations into their base bid proposed project schedule and clearly identify these reentry release dates as milestones in the schedule logic.

The subcontractor must incorporate the steel erection sequence schedule, as provided, into the base bid.

- 3) **Unit Substations** per specification 16370EQ (Reference CM-FE & DP matrix, Attachment No.1) shall be provided by the CM through a contract with Roden Electric, Knoxville, TN. The CNMS building subcontractor shall consider the following:
 - a. The CNMS building subcontractor shall provide requirements for unit substations delivery dates that support its overall construction schedule to the CM within thirty calendar days of award.
 - b. The CNMS building subcontractor shall coordinate delivery dates directly with the unit substation supplier and furnish a copy to the CM with all schedule requirements.
 - c. The CM will provide the CNMS building subcontractor with approved unit substation shop drawings and the supplier/manufacture's in-storage maintenance requirements and installation instructions. The CNMS building subcontractor shall install housekeeping pads, all secondary conduit and wiring and the primary conduit to five feet outside the building. Installation, testing and termination of the 13.8 kV cables into the unit substations from switch house will be the responsibility of the CNMS building subcontractor.
 - d. The CNMS building subcontractor shall be responsible for receiving, quantity verification, unloading, storage, in-storage maintenance, installation, testing, and commissioning as required per specification 16361, Secondary Unit Substation Installation. The CNMS building subcontractor shall provide the CM with copies of the delivery tickets/bills of lading signed by a representative of the CNMS building subcontractor the same day as deliveries.
- 4) **Motor Control Centers (MCC)**, per specification section 16481 (Reference CM-FE & DP matrix, Attachment No.1) shall be provided by the CM through a contract with Customer Service Electric. The CNMS building subcontractor shall consider the following:

- a. The CNMS building subcontractor shall provide requirements for MCCs delivery dates that support its overall construction schedule to the CM within thirty calendar days of award.
 - b. The CNMS building subcontractor shall coordinate delivery dates directly with the MCC supplier and copy furnish the CM with all schedule requirements.
 - c. The CM will provide the CNMS building subcontractor with approved MCC shop drawings and the supplier/manufacturer's in-storage maintenance requirements and installation instructions.
 - d. The CNMS building subcontractor is responsible for receiving, quantity verification, unloading, storage, in-storage maintenance and installation of motor control centers. The CNMS building subcontractor shall provide the CM with copies of the delivery tickets/bills of lading signed by a representative of the subcontractor the same day as deliveries.
 - e. The CNMS building subcontractor shall be responsible for installation and testing as required per specification in accordance with specification section 16481.
- 5) **Demineralized Water Skids** per specification section 15104 (Reference CM-FE & DP matrix, Attachment No.1) shall be provided by the CM through a contract with Industrial Piping Inc. The CNMS building subcontractor shall consider the following:
- a. The CNMS building subcontractor shall provide Demineralized Water Skids delivery dates that support its overall construction schedule to the CM within thirty calendar days of award.
 - b. The CNMS building subcontractor shall coordinate delivery dates directly with the Demineralized Water Skids supplier and furnish a copy to the CM with all schedule requirements.
 - c. The CM will provide the CNMS building subcontractor with approved Demineralized Water Skids shop drawings and the supplier/manufacturer's in-storage maintenance requirements and installation instructions.
 - d. The CNMS building subcontractor shall be responsible for receiving, quantity verification, unloading, storage, in-storage maintenance and installation of Demineralized Water Skids. The CNMS building subcontractor shall provide the CM with copies of the delivery tickets/bills of lading signed by a representative of the CNMS building subcontractor the same day as deliveries.
 - e. The CNMS building subcontractor is required to set, shim, level, grout, install piping (tower water and DI cooling water loops) and connect electrical power to the skids as required per specification 15104.
 - f. Controls will be supplied and installed by others.
- 6) **Public Address (PA) System Supplies** per specification section 16726 (Reference CM-FE & DP matrix, Attachment No.1) shall be provided by the CM through a supply and delivery purchase agreement for PA systems per SOW, drawings and specification section 16726. The CNMS building subcontractor shall be responsible for installation and testing in accordance with the SOW, drawings and specification section 16726. Supply all labor equipment and material necessary to install CM furnished PA equipment. Equipment furnished will include speakers, backboxes, ceiling grid support, PA amplifier in cabinet and speaker cable. Contractor shall provide two 20amp 120v circuits to PA amplifier cabinet, one from nearest normal power panelboard and one from nearest emergency power panelboard. Contractor will receive and store all CM furnished material and equipment. Contractor to provide detailed take-off list of speakers and conductors to CM.
- 7) **Laboratory Fume Hoods** per specification section 11610, and all accessories mentioned therein, shall be furnished and delivered by ORNL. This subcontract shall coordinate the

hook-ups, using client provided shop drawings, and install, start-up and test the fume hoods. Any fume hood identified, as "future" will not be included in this project.

1.5 CONTRACT METHOD

The Work hereunder will be constructed under a Firm Fixed Price Subcontract.

1.6 COORDINATION WITH WORK BY OTHERS

- A. Interference With Work On Utilities: The CNMS building subcontractor shall cooperate fully with all utility forces or forces of other public or private agencies engaged in the installation, altering, or otherwise rearranging of any facilities which interfere with the progress of the work, and shall schedule the work so as to minimize interference with said installation, altering, or other rearranging of facilities
- B. Partnering: It is the CM's desire that a partnering philosophy be embraced in executing and administering all subcontracts. Either the CM or the subcontractor may request a formal partnering session be held if either the CM or subcontractor believes that a partnering session is necessary to improve communications or to facilitate resolution of a difficult problem. It is expected that representation from all levels of the CM and subcontractor management would be involved (including offsite senior management when necessary) and would participate in the session. Participation will be totally voluntary, and any costs will be shared equally with no change in subcontract price.
- C. Concurrent Work by Others: The subcontractor's attention is directed to the fact that work will be conducted at or adjacent to the site by other subcontractors and by the Owner and CM's separate contractors during the performance of the work of this subcontract.
- D. The subcontractor shall conduct its operations so as to cause a minimum of interference with the work of others. Work by others includes, but is not limited to, the following:
 - 1) Site utilities including water, power, and natural gas.
 - 2) Erection of structural steel.
 - 3) Target general construction.
 - 4) Central Lab and Office Building general construction.
 - 5) Other general construction activities throughout the site.

1.7 SPECIFIC COORDINATION

- A. The CNMS building subcontractor shall coordinate the work of this subcontract with the work of other subcontractors on the project site. Coordination activities include, but are not limited to, the scheduling of work at interface locations to permit adjacent or connecting work by other subcontractors, providing necessary shop drawing information to other contractors, and working with other contractors to conduct functional testing of systems and start-up of the facility. Specific coordination requirements with other contractors include, but are not limited to, the following:
 - 1) Ordering, delivery and purchase of concrete material from the DP supplier.
 - 2) Yard piping and underground utility subcontractor.

- 3) Requisitioning of reinforcing steel from rebar supplier for deliveries to support concrete placement.
 - 4) CNMS building subcontractor shall coordinate with the structural steel erector for concurrent work and follow-on work in each area and/or building. This coordination is to ensure timeliness in delivery, erection and subsequent work by this structural steel subcontractor.
- B. The CNMS building subcontractor shall designate a superintendent for the duration of the project.

1.8 CONTRACT PERIOD OF PERFORMANCE REQUIREMENTS

- A. The CNMS building subcontractor shall complete all work with **563 calendar days** after Notice to Proceed to include optional CLINs if incorporated. BOD for the clean rooms shall be November 30, 2004. BOD for all other sections all the building shall be January 31, 2005.

1.9 SUBCONTRACTOR'S USE OF THE PROJECT SITE

- A. The subcontractor shall confine all operations (including on-site storage of materials) at the project site to areas authorized or approved by CM.
- B. Temporary buildings (e.g., storage sheds, shops, offices) and utilities may be erected by the subcontractor only with the CM's approval and shall be built with labor and materials furnished by the CNMS building subcontractor/sub-tier subcontractors without expense to CM. The temporary buildings and utilities shall remain the property of the subcontractor and shall be removed by the subcontractor at its expense upon completion of the work. With the written consent of the CM the buildings and utilities may be abandoned and need not be removed.
- C. The CNMS building subcontractor shall, under regulations prescribed by the CM, use only established roadways, or use temporary roadways constructed by the CNMS building subcontractor when and as authorized by the CM. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicles or prescribed by a federal, state, or local law or regulation. When it is necessary to cross curbs or sidewalks, the CNMS building subcontractor shall protect them from damage. The CNMS building subcontractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads. The CNMS building subcontractor is responsible for cleaning its debris or soil from the roadway.

1.10 OWNER'S USE OF THE PROJECT SITE

- A. The owner may utilize all or part of the existing site during the entire period of construction. The CNMS building subcontractor shall cooperate and coordinate with the owner and the CM to facilitate the owner's operations and to minimize interference with the CNMS building subcontractor's operations at the same time. In any event, the owner shall be allowed access to the project site during the period of construction.

1.11 OTHER MATTERS

- A. With regard to the CNMS building Subcontractor Quality Control, the CNMS building subcontractor shall retain the services of an independent testing laboratory for all normal and

usual tests for compaction, materials, concrete, welding inspection and testing, etc. The owner and the CM do not intend to provide such services for this work.

- B. With regard to the CNMS building subcontractor/sub-tier subcontractors lay-down and staging areas, areas within the CNMS building footprint and immediately adjacent to the CNMS building are designated for the CNMS subcontractors use. Lay-down area at the work site is limited; subcontractors should consider just-in-time delivery for supplies and materials. The CM shall approve all lay-down areas prior to utilization.
- C. Washout of concrete trucks will be performed on-site at predetermined locations approved by CM. Excess concrete will not be discharged on-site, but shall remain in the trucks and returned to concrete batch plant.
- D. Access to the site of the work shall be via Bethel Valley Access Road.
- E. Stockpile location for spoil will be in the immediate area of the work. Any material to be wasted will be disposed of within the current cleared boundaries of the project site as approved by the CM.
- F. The CM has developed and included in this solicitation/subcontract a Construction Site Storm Water Control and Pollution Control Plan. While this plan does not specifically refer to this subcontract, the CNMS subcontractor shall implement the requirements of this plan as if the subcontract was specifically referred to by the plan. This plan describes and ensures implementation of practices which will be used to reduce pollutants in storm water discharges associated with construction activity for the SNS Project. The CNMS building subcontractor shall develop and submit for the CM's review with its Safety and Health Program a subcontract specific Site Storm Water Control and Pollution Prevention Plan. The CNMS building subcontractors plan shall consist of a written plan and drawings that describes specifically:
 - 1) The CNMS building subcontractors understanding of and commitment to the CM's Construction Site Storm Water Control and Pollution Control Plan.
 - 2) How the CNMS building subcontractor intends to implement, provide, and inspect erosion control measures that will insure that storm water discharges from its construction area will be controlled and contained within its construction area or discharged to areas designated by the CM.
 - 3) Drawings that detail what erosion control measures the CNMS building subcontractor intends to install and maintain for the subcontract period of performance.
 - 4) The CNMS building subcontractors Site Storm Water Control and Pollution Plan and supporting drawings shall be prepared and sealed by a Professional Engineer registered in the State of Tennessee.
 - 5) Construction details of the CNMS building subcontractor's erosion control measures shall be based on details included on the drawings accompanying the CM's Construction Site Storm Water Control and Pollution Control Plan.
 - 6) The erosion control measures indicated on the drawings accompanying the CM's Construction Site Storm Water Control and Pollution Control Plan have been installed "By Others." The CNMS building subcontractor is responsible for repair and maintenance of these existing erosion control measures if they are impacted by storm water discharges from the CNMS building subcontractor's construction area.

PART 2 - PRODUCTS

PART 3 - EXECUTION (NOT ISSUED AT THIS TIME)

Attachments: Attachment No. 1, CM-FE & Direct Procurement Matrix
Attachment No. 2, Structural Steel Schedule
Attachment No. 3, DCN T1-SU1-08, R00