

SECTION 00810 - SPECIAL CONDITIONS

1. ALLOCATION OF WORK:

A. Material Specification: Where certain materials are specified to be installed under various headings, it shall be the responsibility of the General Contractor to re-allocate such work under the proper subcontractor, if the specification is in conflict with Local Jurisdiction.

B. Division of Specifications: Division of specifications into sections is done for the convenience of reference and is not intended to control contractors into dividing work among subcontractors or to limit scope of work performed by any trade under any given section.

2. AS BUILT DRAWINGS:

A. Field Drawings: General Contractor shall be supplied with one set of prints of the Contract Documents to be kept and maintained in good condition at the jobsite. A qualified representative of the Contractor shall enter upon the prints, on a daily basis, the actual record of any underground utilities installed differently from the drawings, or any utilities required to be removed or relocated which are not shown on the Contract Drawings.

B. All other changes in the construction of the building from any aspect which deviates from the Drawings and Specifications, shall be recorded on the As Built Drawings. These prints shall accurately record the exact dimensioned locations of all outside underground utilities encountered and/or all new utilities relocated from the original locations as shown on the Drawings. Locations of the underground utilities shall be marked for permanent references and accurately identified.

C. The As Built prints shall be delivered to the Architect upon completion of the project. Approval of Final Payment shall be contingent upon compliance with these provisions.

3. CONTRACTORS BUILDING WARRANTY:

A. Whether the Final Certificate for Payment or any provision in the Contract Documents, or partial payment, or entire use of occupancy of the premises by the Owner shall constitute acceptance or work not done in accordance with the Contract Documents or relieve the Contractor of liability with respect to any expressed warranties or responsibility for faulty materials or workmanship.

B. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of ONE (1) YEAR from the date of Substantial Completion, or in some cases Final Acceptance from the Owner unless a longer period is specified for certain building components. The Owner and Architect will give notice of observed defects with reasonable promptness.

4. CONTRACTORS COORDINATION:

A. Conflicts and Clearances: Each subcontractor shall leave the required space and clearance for the work of others, field check all dimensions and file a written report to the Architect where discrepancies occur between the work to be performed and the drawings, specifications and/or project site conditions. If no report is filed prior to approvals of shop drawings and samples be submitted, it will be assumed that no conflict occurs. Resolution of conflicts after shop drawings and samples are approved

shall be corrected at no expense or increased cost to the Owner.

B. Coordination: The General Contractor shall be responsible for the overall coordination of the Work. Each subcontractor shall carefully check the drawings, specifications and the project site in order to advise and coordinate their phase of the Work.

5. BUILDING CODES AND ORDINANCES:

A. Jurisdiction: All branches of the work shown on the plans and specifications shall be executed in strict compliance with all Local and State Regulations and Codes, as well as being in strict compliance with all National Codes, when same have jurisdiction.

A. All bidders must be qualified and meet all requirements provided or required under any Local and/or State statute, code, ordinance or rule, governing performance of the type of work for which he submits the bid and be able to submit proof thereof upon request.

C. Specific Codes having jurisdiction, but not limited to, are as follows:

- (1) Kentucky Building Code, Latest Edition.
- (2) Kentucky Plumbing Code, Latest Edition.
- (3) National Electrical Code, Latest Edition.
- (4) BOCA National Mechanical Code, Latest Edition.
- (5) Occupational Safety and Health Act with current Standards.

D. The US Department of Labor and the Kentucky Department of Labor, Division of Occupational Safety and Health, shall enforce the occupational safety and health standards as authorized under Federal and State Occupational Safety and Health Law.

6. CLEANING OF BUILDING AND SITE:

A. It shall be the General Contractors responsibility to keep the building and site clean at all times. Each subcontractor shall remove his own debris and excess material from the building on a daily basis. Material shall be placed in a dumpster or as appropriate.

7. CUTTING AND PATCHING:

A. Cutting: Cutting of materials furnished and installed by the general contractor shall be accomplished by the general contractor. Cutting of materials furnished and installed by subcontractors such as mechanical, plumbing, sprinkler or electrical shall be done by the respective subcontractor involved.

B. Structural Members: General contractor or subcontractors or other trades shall not cut, drill or notch structural load-bearing components without coordination and approval of the Architect. Written permission must be obtained prior to any work involving structural components.

C. Contractor, subcontractors or other trades shall make all required cutting of existing or new structure in a neat and workmanshiplike manner. In the case of masonry, all work shall be cut so that the patch can be toothed back into the masonry. Other surfaces shall be left in a neat and undamaged condition.

D. Patching: All patching shall be coordinated with the general contractor and done in a neat and workmanshiplike manner, matching the adjacent surfaces.

8. PROTECTION OF EXISTING FACILITIES:

A. The contractor shall take over and assume full responsibility for the premises until the work is completed and accepted. He shall provide and properly maintain protection as required by governing laws, rules, regulations and ordinances, together with such additional protection as may be required for the safety of the workmen and the public.

B. Damaged Facilities: The contractor shall use all means as required to protect any existing facilities which shall remain active during this project. If any facilities to remain including walks, curbs, roads, streets, utilities, structures, trees or lawns are damaged by work performed under this Contract or incidental thereto, whether by contractors forces or by his subcontractors or material suppliers, the contractor shall be responsible for repairs and/or replacement at no expense to the Owner.

9. EXAMINATION OF SITE:

A. Before submitting proposal, bidders shall visit and examine the site to satisfy themselves as to the nature and scope of the construction and any difficulties attempting the execution of work. The submission of a proposal will be construed as evidence that a job visit and examination have been made. Later claims for labor, equipment or materials required, or difficulties encountered which could have been foreseen had such an examination been made, will not be considered extra work.

B. Should any error and/or disagreement between the drawings, existing structures, footing elevations or drops in grade exist or appear to exist, the Contractor must notify the Architect of the condition prior to proceeding with the work. Unless this process is followed, work thereafter must be changed at the expense of the Contractor.

C. Inspection: Contractors and/or subcontractors doing work requiring inspection prior to being covered by finished construction, shall notify the Architect and/or other inspection authorities in sufficient time to obtain these inspections in order that job progress can be maintained.

10. PROJECT SITE FENCING:

A. Project fencing shall be furnished as called for on the Site Plan of the Contract Documents, or at least around the building site and stored materials.

B. Project fencing shall be either 48" high painted plywood with 2x4 vertical bracing at 48" oc, 48" high chain link with posts at 48" oc or 48" high orange PVC fencing fabric with posts at 48" oc.

11. FIELD MEASUREMENTS:

A. The contractor and each subcontractor shall be responsible for verification of all measurements at the building site before ordering any materials or doing any work. No extra charge or compensation shall be allowed due to a difference between actual dimensions and dimensions which may be found before the contractor proceeds with the work in the affected area.

12. LICENSES, PERMITS AND REGULATIONS:

A. Any article pertaining to licenses, permits and regulations in the General Conditions shall be supplemented as follows:

(1) Permits and licenses of any nature required for demolition and construction purposes shall be obtained and paid for by the contractor or subcontractor. The general contractor is responsible for obtaining and paying for all required building permits, etc., as well as all other permits required for the construction of this project.

13. ORDERING OF MATERIALS:

A. Immediately following the award of Contract for this Work, the contractor and all subcontractors shall determine the source of supply for all materials and length of time required for their delivery, including materials of subcontractors, and orders shall be placed promptly for all materials. It shall be the contractors responsibility to see that all his subcontractore comply with this requirement.

B. If for any reason, any item specified will not be available when needed and the contractor can show that he has made a reasonable, persistant effort to obtain the item in question, the Architect is to be notified in writing within thirty (30) days after Contract is signed, and he will either determine source of supply, or arrange with the Owner for an appropriate substitute, or extension of time. Otherwise contractor will not be excused for delays in securing materials specified and will be held accountable if completion of building is thereby delayed.

14. PARKING AND MATERIAL STORAGE:

A. Parking: The contractor will be assigned parking spaces that will be usable by him. All other parking spaces or parking areas shall be "off limits" to the contractor.

B. Material Storage: The contractor will be assigned material storage areas that may be used during the construction of the project. All other areas shall be "off limits" to the contractor. Storage of materials and equipment shall be the responsibility of the contractor, and shall be executed so as not to block entrance to, or create a hazard for access to existing facilities.

15. OPERATIONAL FACILITIES:

A. Renovation Work: Should the project involve renovation of an operational facility, the contractor shall not interfere with any part of the area not assigned to him. The contractor shall only work in the specific areas of renovation or addition. He shall make all reasonable efforts not to impose any undue dirt, dust, complications or inconvenience to the Owner.

B. Sanitary Facilities: The contractor shall furnish, install and maintain amply sanitary facilities for the workmen. Newly installed permanent toilets or existing toilets shall not be used during construction of this project.

C. Drinking Water: Drinking water shall be provided from an approved safe source or transported to the job site in single source coolers. Existing drinking fountains shall not be used during construction of this project.

16. SPECIAL RESTRICTIONS:

A. Blasting: No blasting of any kind will be allowed or permitted to accomplish any kind of footing or building demolition.

B. Hazards: Contractor shall insure that no hazardous situations are left during non-working hours to allow the Owner, Agency or employees to harm themselves. All ladders shall be lowered to the ground daily at the close of business. all equipment shall be left in the down-position and on the ground.

C. Existing Facilities: Under no case shall the contractor or his subcontractors be allowed to enter any portion of an existing facility, or portions of the existing building not being renovated.

D. No Drinking Law: The contractor shall post the necessary signs and enforce the NO DRINKING LAW as outlined by the Kentucky Revised Statues. It is understood that the consumption of alcohol or drugs on the job by any worker is strictly prohibited. Any personnel apprehended under the influence of alcohol or drugs on the premises at any time, or anyone entering prohibited areas without permission will be subject to immediate and automatic dismissal by the Contractor.

17. TEMPORARY ENCLOSURES:

A. Temporary enclosures shall be provided at door, window and other openings in floors, walls and as necessitated by weather conditions and for safety and security.

B. Enclosures shall be erected in a safe, suitable manner of appropriate materials, maintained in good repair and removed when no longer needed. Protect adjacent work from damage as necessary.

C. When construction has progressed to the point that traffic can be controlled, provide temporary doors with hinges, hasp and padlock.

18. COMPLETION TIME AND LIQUIDATED DAMAGES:

A. The Contractor shall be Substantially Complete within 150 calendar days. At that point a Substantial Completion Inspection shall be conducted by the Owner and Architect on that date. Should the Contractor fail to be Substantially Complete within the _____ calendar days, the Contractor will be assessed Liquidated Damages at the rate of \$500.00 per calendar day immediately following the day of Substantial Completion.

B. Final Completion shall occur no later than 15 calendar days after Substantial Completion. The Contractor shall notify the Architect 48 hours prior to completion in order to schedule a Final Inspection. Should the Contractor fail to correct and/or complete the work within 15 calendar days after Substantial Completion, the Contractor will be assessed Liquidated Damages at the rate of \$250.00 per calendar day starting immediately upon the end of the 15th day.

C. Completion is a Contract requirement and any extension of construction time will not be permitted without reasonable cause and adjustment by Change Order. The calendar day schedule shall begin upon award of the Contract to the successful bidder.

19. ADDENDA:

A. The attention of all Bidders is specifically called to the Instructions to Bidders on Articles concerning addenda and interpretations of the Contract Documents. Bidders shall take prompt action and allow sufficient time for making interpretations. Prompt action and allowing sufficient time shall be interpreted as meaning that Bidders shall make a request for explanation or interpretations by such method of communications as will place the request in the hands of the Architect no less than 15 calendar days prior to Bid Date.

B. No addenda shall be issued later than 7 calendar days prior to the date set for the opening of Bids, such period being adjudged necessary for distribution of addenda to all Bidders. The failure of Bidders to request explanations and interpretations as set forth above, shall be construed as evidence that no explanation or interpretation was required. Claims made, subsequent to submission of a Bid, for labor, material, tools, equipment, transportation, etc. required due to discrepancies or omissions, which were not questioned as set forth above, or for difficulties encountered thereby will not be eligible for consideration.

C. All addendum shall be prepared and issued through the office of the Architect.

20. PAYMENT TO GENERAL CONTRACTOR:

A. Providing the Contractors estimate for a monthly pay period is approved by the Architect and received by the Owner on or before the 25th of the month, the Owner can make partial payment based on this estimate, on or before the 10th of the following month. Except as outlined below, the Owner will retain 10% of the amount of each monthly estimate until Final Completion and acceptance of all work covered by this Contract.

(1) The Owner may, at his option, reduce the 10% retainage to 5% under the following conditions:

- a. The overall project must be on schedule.
- b. The project must be at least 50% complete, and an inspection will be conducted on site by all parties concerned, if requested by Owner.
- c. The Contractor must request the reduction of retainage in writing to the Architect.
- d. The Contractor must provide AIA Document G707A Consent of Surety to Reduction in or Partial Release of Retainage.

SUMMARY OF ALLOWANCES & ALTERNATE BIDS
01030-1

SECTION 01030 – SUMMARY OF ALLOWANCES & ALTERNATE BIDS:

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One Specification section, apply to work of this Section.

2. SUMMARY OF CASH ALLOWANCES:

A. Cabinet Allowance: General Contractor shall provide in their Bid the amount of \$15,000.00 for the purchase and installation of the millwork/tops in the Warming Kitchen and Concession Area. The sink tops in the Mens and Womens restrooms shall be not be included in the allowance, but shall be included in the Base Bid.

3. SUMMARY OF BASE & ALTERNATE BID:

A. Base Bid: The Base Bid includes, but is not limited to, all work shown on the drawings and specifications. There are NO alternate bids currently.

SECTION 01050 - FIELD ENGINEERING

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One Specifications, apply to work of this section.

B. Work Included: Contractor to provide such field engineering services by a licensed Land Surveyor as required for proper completion of the work including, but not limited to:

- (1) Building layout and other site improvements as shown.
- (2) Layout of working points for building.
- (3) Establishing and maintaining lines, levels and grades.
- (4) Verification of as-built elevations and conditions.

C. Project Layout: Submit to the Architect for approval prior to beginning layout work proposed control points, coordinate listing and radial stake-out listing.

D. Land Surveyor Qualifications: Submit qualifications of Land Surveyor, if requested by Architect.

- (1) Data Demonstrating qualifications of persons proposed to be engaged for field engineering services.
- (2) Documentation of experience in field engineering work.

2. RELATED WORK:

A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division One of these Specifications.

B. Additional requirements for field engineering also may be described in other Sections of these Specifications.

C. The Owner will furnish survey describing the physical characteristics, legal limitations, utility locations, and legal description of the site.

3. QUALITY ASSURANCE:

A. Licensed Land Surveyor engaged by the Contractor must have Total Station Equipment, Coordinate Geometry Computer Program Equipment, and demonstration of knowledge and experience in Coordinate Geometry Survey.

4. LAND SURVEYOR'S RESPONSIBILITIES:

A. In addition to procedures directed by the Contractor for proper performance of the Surveyor's responsibilities shall be:

- (1) Locate and protect control points before starting work on the site.
- (2) Preserve permanent reference points during progress of the work.

- (3) Verify, prior to layout, all coordinate geometry listed on the site plans for correctness and notify Architect of any discrepancies.
- (4) Do not change or relocate reference points or items of the work without specific approval from the Architect.
- (5) Promptly advise the Contractor when a reference point is lost, destroyed, or required relocation because of other changes in the work.
 - (a) Upon direction of the Contractor, require the Surveyor to replace reference stakes or markers.
 - (b) Locate such replacements according to the original survey control point.

5. PROJECT COMPLETION:

A. At the completion of the Project and during the course of construction as directed by the Architect, submit to the Architect a Surveyor's Certification Letter certifying that elevations and locations of improvements are in conformance or nonconformance with the requirements of the Contract Documents.

SECTION 01068 - DEFINITIONS AND STANDARDS

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One Specification Sections, apply to work of this section.

2. DEFINITIONS:

A. Except as specifically defined otherwise, the following definitions supplement definitions of the Contract. General Conditions, Supplementary Conditions and other general contract documents, shall apply generally to the work.

(1) Indicated, As Indicated: Shown on the drawings by notes, graphics or schedules, or written into other portions of the contract documents. The terms such as "shown", "noted", "scheduled" and "specified" have the same meaning as "indicated or as indicated", and are used to assist the reader in locating particular information.

(2) Specification Text Format: Underscoring facilitates scan reading, no other meaning. Imperative language is directed at Contractor, unless other wise noted.

(3) Provide: Furnish and install, complete and ready for intended use.

(4) Furnish: Supply and deliver to the project site, ready for unloading, unpacking, assembly, installation, and similar subsequent requirements.

(5) Installer: Entity (firm or person) engaged to install work, by Contractor, subcontractor or sub-subcontractor. Installers are required to be skilled in work they are engaged to install.

(6) Directed, Requested, Approved, Accepted, Etc: These terms imply "by the Architect/Engineer", unless otherwise indicated.

(7) Install: Operations at project site, including unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar requirements.

(8) Approved by Architect/Engineer: In no case releases the Contractor from responsibility to fulfill requirements of contract documents.

(9) Overlapping/Conflicting Requirements: Most stringent or most costly shall apply and will be enforced, unless more detailed language written directly into contract documents clearly indicated that a less stringent requirements is acceptable. Refer uncertainties to Architect/Engineer for decision before proceeding.

(10) Optional: Where optional requirements are specified, option is intended to be Contractor's unless otherwise indicated.

(11) Minimum Requirements: Indicated requirements are for a specific minimum acceptable level of quality/quantity, as recognized in the industry. Actual work must comply (within specified tolerances), or may exceed minimums within reasonable limits. Refer uncertainties to Architect/Engineer before proceeding.

(12) Abbreviations, Plural Words: Abbreviations, where not defined in contract documents, will be interpreted to mean the normal construction industry terminology, determined by recognized grammatical rules, by the Architect or Engineer. Plural works will be interpreted as plural where applicable for context of contract documents.

(13) Testing Laboratory: An independent entity engaged for the project to provide inspections, tests, interpretations, reports and similar services.

3. STANDARDS AND REGULATIONS:

(1) Reasonably Inferred: As Contract Documents are intended to be all inclusive of the required scope of work, there are cases where the work required is not described in lateral terms by is Reasonably Inferred. Work necessary by inference, a logical conclusion from facts, is to be considered as part of the Contract and costs for the same are to be included in Base Bid.

(2) Abbreviations: Where abbreviations or acronyms are used in contract documents, they mean the well recognized name of entity in building construction industry; refer uncertainties to Architect/Engineer before proceeding.

(3) Industry Standards: Applicable standards of construction industry have same force and effect on performance of the work as if copied directly into contract documents or bound and published therewith. Standards referenced in contract documents or in governing regulations have precedence over on referenced standards, insofar as different standards may contain overlapping or conflicting requirements. Comply with standards in effect as of date of contract documents, unless otherwise indicated.

SECTION 01200 - PROJECT MEETINGS

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One specification sections, apply to work of this Section.

B. Work Included: To enable orderly review during progress of the work, and to provide systematic discussion of problems, the Architect will conduct project meetings throughout the construction period.

C. Related Work: Documents affecting work of this Section include, but not limited to, General Conditions, Supplementary Conditions and Sections of Division One.

(1) The Contractors relationship with his subcontractors and materials suppliers and discussions relative thereto, are the Subcontractors responsibility and normally are not part of project meetings.

D. Agenda Items Scheduling: The Contractor shall be advised at least 24 hours in advance of project meetings regarding items to be added to the agenda.

(1) For those persons designated by the Contractor to attend and participate in project meetings, provide authority to commit the Subcontractor to solutions agreed upon in the project meetings.

E. Minutes: The Architect will compile minutes of each project meeting and will furnish one copy to the Owner, Agency, Engineer and General Contractor.

(1) Recipients may make copies and distribute such copies as desired.

2. PRE-CONSTRUCTION MEETING REQUIREMENTS:

A. Pre-Construction meeting will be scheduled to be held within 10 working days after the Owner has authorized the Contractor to proceed with the Work.

- (1) Provide attendance by authorized representatives of the Subcontractors.
- (2) General Contractor will advise other interested parties.

B. Minimum Agenda: Data will be distributed and discussed on at least the following items.

- (1) Organizational arrangement of Contractor/Subcontractors forces and personnel.
- (2) Channels and procedures for communication and paperwork.
- (3) Construction schedule.
- (4) Distribution of contract documents.
- (5) Processing of shop drawings and other data.
- (6) Processing of revisions, field changes and change orders.
- (7) Rules and regulations governing performance of the work.
- (8) Procedures for safety, first aid, security, quality control, housekeeping.

3. PROJECT MEETING REQUIREMENTS:

A. Except as noted above for Pre-Construction Meeting, project meetings will be held on a monthly basis.

(1) The Architect/Owner will establish meeting dates/times and locations. Meetings will be held onsite except under required or special circumstances.

B. Project Meeting Attendance:

- (1) To the maximum extend practicable, assign the same person to represent the Contractor/Subcontractor at project meetings throughout the project.
- (2) Subcontractor, material suppliers and others will be invited to attend those project meetings in which their aspect of work is involved.
- (3) The Owner and Architect will be represented at each meeting.

C. Project Meeting Minimum Agenda:

- (1) Review, revise if necessary and approve previous minutes.
- (2) Review progress of work and submittals.
- (3) Identify problems which impede planned progress.
- (4) Develop corrective measures to regain planned schedule.
- (5) Complete other current business.
- (6) Review and approve, or amend Application for Payment.
- (7) Establish date for next construction meeting.

D. Revisions to Minutes:

- (1) Unless published minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activity and decisions of the meeting.
- (2) Persons challenging published minutes shall reproduce and distribute copies of the challenge to all indicated recipients of the particular set of minutes.
- (3) Challenge to minutes shall be settled as priority portion of "old business" at the next regularly scheduled meeting.

4. SCHEDULE OF FIELD DOCUMENTS:

- A. Contractor shall keep on file in the jobsite office a complete set of Contract Documents, shop drawings, Architect field reports, change orders, minutes of meetings and Applications for Payment.

SECTION 01340 - SUBMITTALS AND SUBSTITUTIONS

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One Specification sections, apply to work of this section.

B. Work Included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

C. Related Work: Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division One of these Specifications.

(1) Individual requirements for submittals also may be described in pertinent Sections of these Specifications.

D. Work Not Included:

(1) Unrequired submittals will not be reviewed by the Architect.

(2) The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work.

E. Coordination of Submittals:

(1) Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.

(2) Verify that each item and the submittal for it conform in all aspects with the specified requirements.

F. Provisions of Submittals and Substitutions:

(1) Make submittals of Shop Drawings, Samples, Substitution Request, and other items in accordance with the provisions of this Section.

(2) Approval of submittals does not constitute a Change Order.

(3) Starting work without approved submittals is totally the Contractor's risk and does not create a basis for accepting work that does not comply with either the Contract Documents or Approved Submittals.

G. Substitutions:

(1) The Contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when approved by addendum no less than 7 days prior to bid date.

(2) Do not substitute materials, equipment, or methods unless such substitution has been specifically approved in writing for this Work by the Contractor and Architect.

H. Or Equal:

(1) Where the phrase "or equal" or "or equal as approved by the Contractor and Architect", occurs in the Contract Documents, do not assume that the materials,

equipment, or methods will be approved as equal unless the item has been specifically approved for this Work by the Architect, by addendum no less than 7 days prior to bid date.

(2) The decision of the Architect and Owner shall be final.

2. SCHEDULE OF VALUES:

A. The Contractor shall submit 4 copies of the Schedule of Values or Cost Breakdown with each section, division and subsection of work to the Architect for approval prior to submitting any Applications for Payment. This form shall be submitted within 30 days after the Notice to Proceed.

B. The Schedule of Values shall show a breakdown of both labor and materials with the total of each on forms provided by the Owner. If approved by the Architect and Owner, Standard AIA forms may be used.

3. CONSTRUCTION SCHEDULE:

A. The Contractor shall submit 4 copies of the Construction Schedule for all divisions of the Work to the Owner, through the Architect for approval within 30 days after the Notice to Proceed.

B. Submittals shall be on forms provided by the Owner, except as provided by the Architect or Contractor. Such Construction Schedules shall be submitted and approved prior to any Applications for Payment will be approved.

4. PROGRESS REPORT:

A. The Contractor shall submit monthly, 4 copies of the Progress Report to the Owner, through the Architect for approval within 30 days after the Notice to Proceed.

B. Progress reports shall show "actual progress" as compared to "scheduled progress" in the form of a line graph.

5. APPLICATIONS FOR PAYMENT:

A. The Contractor shall submit 4 copies of the Application for Payment to the Owner, through the Architect, each month during the contract time. Submittals shall be either on or before the date of the scheduled monthly construction meeting.

B. Late or inaccurate Applications for Payment will delay processing, approval and payment of the Application for Payment. Submittals shall be on forms provided by the Owner. If approved by the Architect and Owner, Standard AIA forms may be used.

6. SHOP DRAWING SUBMITTALS:

A. The Contractor shall submit 8 copies of shop drawings or quantity determined in the Pre-Construction meeting to the Architect for approval. Where colors are to be selected, include 3 color cards with submittal. Four copies of the shop drawings will be retained for use by the Architect and Owner. If more than 4 copies are required by the Contractor, additional copies shall be submitted by the Contractor.

B. Scale and Measurements: Make Shop Drawings to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.

C. Types of Shop Drawings:

- (1) Submit 8-1/2" x 11" or 8-1/2" x 14" sheets where possible.
- (2) If larger sheets are required, submit blueprints on 24" x 36" sheets. Use one sepia transparency if possible.
- (3) Reproduction of Architect/Engineer Construction Documents for use as submittals is not acceptable, such submittals will be returned for resubmission.
- (4) When Shop Drawings are taken from manufacturers literature, clearly mark the exact equipment or items to be furnished.

D. Review by Contractor: Submittals shall be thoroughly reviewed, approved and signed by the Contractor prior to submission to the Architect. Additions, deletions or corrections shall be indicated on all copies with any medium of marking, except the color RED which shall be reserved for comments by the Architect.

E. Field Verification and Quantity: Where verification of field conditions or measurements is required, it shall be the Contractor's responsibility to furnish this information. Quantities shall not be checked or verified by the Architect, as this is the Contractor's responsibility.

F. Time of Submission: All Shop Drawings shall be submitted to the Architect or Engineer within 30 calendar days after the Notice to Proceed.

G. Shop Drawings Responsibility: Checking of Shop Drawings by the Architect is for conformance with the design concept of the work and with information given in the Contract Documents. This step is for the Contractor's benefit, and to provide one more means in an attempt to prevent costly errors in meeting the requirements of the Contract Documents. The Architect assumes no responsibility for Shop Drawings, and his approval of them in no way relieves the Contractor from meeting the requirements of the Contract Documents.

- (1) Any extra cost incurred due to Shop Drawings not being complete or being in error shall not be the responsibility of the Architect or Owner, even though they bear the approval of the Architect/Engineer.

7. SAMPLES:

A. Provide Sample or Samples identical to the precise article proposed to be provided.

B. Number of Samples required:

- (1) Unless otherwise specified, submit Samples in the quantity which is required to be returned, plus 2 which will be retained by the Architect.
- (2) By prearrangement in specific cases, a single Sample may be submitted for review and, when approved, be installed in the Work at a location agreed upon by the Contractor and Architect.

C. Color and Pattern: Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit accurate color and pattern charts to the Contractor and Architect for selection.

8. SUBMITTALS:

A. Consecutively number all submittals.

(1) When material is re-submitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.

(2) On re-submittals, cite the original submittal number for reference.

B. Accompany each Submittal with a letter of transmittal showing all information required for identification and checking. On at least the first page of each Submittal, and elsewhere as required for positive identification, show the Submittal number in which the item was included.

C. Make Submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.

(1) In scheduling, allow at least 10 working days for review by the Contractor and ARchitect following his receipt of the Submittal.

D. Unless otherwise specified, make Submittals in groups containing all associated items to assure that information is available for checking each item when it is received.

(1) Partial Submittals may be rejected as not complying with the provisions of the Contract.

(2) The appropriate contractor may be held liable for delays so occasioned.

E. Submittal Responsibility: Review by the Architect does not relieve the Contractor from responsibility for errors which may exist in the submitted data, or is the Contractor released from the responsibility of complying with the Contract Documents.

F. Revisions to Submittals:

(1) Make revisions required by the Contractor and Architect.

(2) If any Contractor considers any required revision to be a change, he shall so notify the Contractor and Architect as provided for in the General Conditions.

(3) Make only those revisions directed or approved by the Architect.

SECTION 01500 - TEMPORARY FACILITIES

1. SCOPE:

A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division One Specification Sections, apply to work of this Section. Additionally, this Section specifies certain minimum temporary facilities are to be provided, regardless of methods and means selected for performance of the Work.

B. Use of alternate temporary facilities shall be Contractor's option, subject to Architect's acceptance.

C. Temporary Facilities shall be defined to exclude tools, construction machines, testing, demolition, alterations, soil borings, mock-ups and similar items.

D. All Temporary Facilities are to be provided by the General Contractor. The General Contractor, at his option, subcontract portions of temporary facility requirements.

2. COST OF TEMPORARY FACILITIES:

A. Except as otherwise indicated, all costs associated with Temporary Facilities will be borne by the Contractor, including power/fuel/water usage until the date of Substantial Completion for each major area of project, or as a whole. Temporary Facilities shall remain the property of the Contractor.

B. The cost of any temporary electrical service, water or sewer tap fees, or other fees associated with water/sewer hookups, as well as any deposits required shall be paid for by the Contractor.

3. TEMPORARY UTILITY SERVICES:

A. Sources: Utilities shall be connected to local/municipal services or regional utility companies when possible. Otherwise connect with the available sources.

B. Water: All water used shall be potable.

(1) New Construction: Contractor shall tap present water line and bring water through meter onto site for construction purposes. All costs including the water usage shall be paid for by the Contractor.

(2) Existing Construction, Additions: Contractor may tap closest existing water line with meter for construction purposes. All costs including the water usage shall be paid for by the Contractor.

C. Sewers: At time of Substantial Completion, clean sewers which have been affected by discharge of waste water or runoff from project during construction. Comply with governing regulations and requests by authorities.

D. Electricity: Provide temporary power distribution system on site for construction purposes capable of handling the project needs. All costs including electrical usage shall be paid for by the Contractor.

E. Telephone: Provide a minimum of one job telephone located in the job trailer. If no job trailer is called for or if other facilities are to be used, Contractor shall provide at least one portable job telephone. All costs including telephone usage shall be paid for by the Contractor.

(1) Under no circumstances shall the Contractor shall the Contractor be allowed to use the Owner's or Agencies telephone which may be located within an existing facility.

4. TEMPORARY CONSTRUCTION FACILITIES:

A. Dewatering: Maintain site and construction work free of water accumulation. Do not endanger the work or adjacent properties. Maintain protection against flooding of site.

B. Job Site Office: A temporary job site office is not a requirement of this project. Although, the Contractor may provide such a temporary field office at his option. In this case, all utilities for the office shall be paid by the Contractor. The location of this office shall be coordinated with the Architect prior to setting in place.

(1) The temporary job site office, if maintained, shall have space for conducting the monthly construction meetings until the project can accommodate the meetings. The project telephone shall be maintained within this office.

C. Temporary Heating: Any temporary heating required to meet the other sections of the specifications shall be required to maintain temperatures required. Provide gas/oil fired space heaters which are UL Labeled and approved for construction space by appropriate agency. Provide adequate ventilation and thermostatic control.

(1) Use of the permanent mechanical systems within this facility shall be prohibited unless approved by the Architect/Engineer. When approved for use as heating, all filters shall be changed and left clean upon Substantial Completion.

(2) All costs associated with temporary heat shall be paid for by the Contractor.

D. Temporary Lighting: Provide temporary lighting of intensity and quality sufficient for proper and safe performance of the work, and for access thereto and security thereof.

E. Temporary Roads: Where feasible, use subbase and base construction of permanent roads and paving as temporary roadways and paved construction areas. Delay installation of finish paving courses until possibility of damage from construction operations has passed.

F. Miscellaneous Facilities: The Contractor shall provide miscellaneous facilities as needed, including temporary stairs, temporary treads on permanent stairs, ramps, ladders, runways, staging, shoring, scaffolding, bridges, railings, bracing, barriers, closures, platforms, temporary partitions, waste chutes and similar items.

(1) Provide cranes, hoist and similar high-rise temporary construction facilities as needed to adequately perform work.

5. SANITARY SUPPORT FACILITIES:

A. Provide facilities and services which may be needed to properly support primary construction process and meet all governing regulations.

B. Drinking Water: Provide either pipe-connected potable water fountains or cooled water dispensers.

C. Toilets: Where permitted by governing regulations, provide a single-occupant, self-contained fiberglass unit which is properly equipped.

(1) Under no circumstances shall the Contractor be allowed the use of existing toilets of an operational facility. Although, at the Owner's or Agency's option, the Contractor may be allowed use of existing toilets under certain conditions. This shall be coordinated with the Architect, and if abused shall be terminated.

(2) Contractor shall provide a temporary toilet facility in his Bid.

(3) Water-piped and sewer-connected temporary toilets may be provided in lieu of self-contained units, at Contractor's option.

6. PROJECT IDENTIFICATION SIGN:

A. Furnish and install a project sign as drawn and identified on the Contract Documents. If not shown on the drawings, project identification sign is not required. If required, engage professional sign painter to apply graphics and lettering as indicated or prescribed on the drawings.

B. Other project signs or advertisements of other subcontractors, contractors or material suppliers will not be allowed.

7. SECURITY AND PROTECTION:

A. General: Provide facilities and services as necessary to effectively protect project from losses and persons from injury during the course of construction.

B. Barricades: Provide barricades at hazardous locations, complete with signs, general lighting, warning lights and similar devices where appropriate or required by regulations.

C. Lockup and Security: As construction of building structure or shell progresses and it becomes feasible to secure project against intrusion, provide temporary security enclosure, doors and locks as necessary to prevent unauthorized entrance.

D. Project Fencing: The project shall be fenced using either 4'-0" high plywood with studs at 24" o.c. and painted or 4'-0" high chain link fence with posts at 10'-0" o.c. At Architect's option, Contractor may use 4'-0" high red plastic mesh roll fencing with posts at 10'-0". Fencing shall be installed along the contract limits as noted on the drawings. The Contractor shall provide as many gates as practical. Project fencing shall be along property lines where practical. When appropriate, remove fencing and repair site as construction nears end, but only with approval of the Architect and Owner.

SECTION 01705 - PROJECT CLOSEOUT

1. SCOPE:

A. This Section includes all the required closeout documents and items required for the Contractor to furnish to the Architect prior to Final Closeout.

2. PROJECT CLOSEOUT DOCUMENTATION:

A. Closeout Procedure: The General Contractor shall submit and have approved by the Owner and Architect, the following items prior to Final Application for Payment. The required documentation shall be submitted from the Subcontractors to the General Contractor. He shall then submit this documentation to the Architect. The Architect shall compile all documentation and when complete, submit the total package to the Owner.

B. Closeout Documentation: The following closeout documentation shall be submitted to the Architect:

- (1) Waivers of Lien from all Subcontractors and major Suppliers.
- (2) Warranties and Guarantees as called for in the specifications.
- (3) As-Built Drawings and Specifications.
- (4) Letter from Contractor's Surety or Bonding Company permitting Release for Final Payment.
- (5) Contractor's Affidavit.
- (6) Final Application for Payment.
- (7) All inspection certificates as specified.
- (8) Other Statements, Certifications or Documents as specified herein and/or required by the Owner.

C. Closeout Documentation Submission: All closeout documentation shall be submitted to the Architect within 15 calendar days from the Date of Substantial Completion.

3. FINAL PAYMENT TO GENERAL CONTRACTOR:

A. The Final Payment including Retainage will be withheld until the project is 100% complete including Punchlist items. Prior to Final Payment being released, all Punchlist items must be completed and inspected by the Architect.

B. At this time the Final Application for Payment may be presented to the Architect for submission to the Owner.

SECTION 02060 - BUILDING DEMOLITION1. SCOPE:

A. Complete all demolition work as shown on the drawings and as specified herein.

2. CONDITIONS AT SITE:

A. Contractor shall visit and examine the site and examine all buildings, walls, floors, walks, etc. shown to be demolished. Contractor shall note all conditions as to character and extent of work involved.

3. PERMITS, ORDINANCES, ETC:

A. Contractor shall procure and pay for all necessary permits or certificates required to complete the work specified. The Contractor shall make any and all required notifications and comply with all applicable Federal, State and Local ordinances.

4. PROTECTIONS:

A. Execute all demolition work in an orderly and careful manner with due consideration for any existing structures, including any parts of the surrounding areas which are to remain. Barricade and cover as necessary to protect pedestrians, workmen and adjacent properties. Periodically sprinkle to allay dust. Protect any existing active service lines, indicated or not.

B. Avoid any encroachment on adjacent properties. Repair any damage to adjoining properties or improvements caused by operations, including any damage or loss to adjoining tenants or property owners, whether to buildings, stocks of merchandise, trade fixtures or similar items.

5. DEMOLITION SCHEDULE:

A. Contractor shall submit an itemized demolition schedule to the Architect prior to beginning work.

B. The demolition schedule shall list sequence of demolition, methods of protection for the areas and components not removed and the specific methods of removal.

C. All permits and authorizations required by all agencies shall be included in this schedule.

C. Contractor shall furnish copy of safety regulations to be followed for this project.

6. EXECUTION OF DEMOLITION:

A. Keep all through lanes and drives clean and clear at all times during the demolition procedure.

B. Conduct operations so as not to interfere with adjacent roads, streets, drives, walks, service lines and other operations.

C. Disconnect any electric, telephone, gas, water, steam or other lines servicing the structure, or areas of work, per rules and regulations of authorities having jurisdiction, as specified, or as directed by the Architect.

D. Backfill any trenches caused by demolition work.

E. All demolition shall be accomplished without blasting or fires. Consult Architect for special consideration of blasting under certain special circumstances, or at certain stages of construction. This consideration is mainly related to footing excavation.

7. DISPOSITION OF REMOVED MATERIAL:

A. All material removed under this Contract, which is not to be salvaged or reused, shall become the property of the Contractor and be promptly removed from the site. At all times use movable debris boxes, covered, to convey the material through the building. Do not store or permit debris to accumulate on the site, it shall be removed on a timely basis.

8. SALVAGE MATERIALS:

A. All material salvaged from the site shall become the property of the Contractor, unless specific items are listed, and shall be removed from the site by Contractor at his own expense.

9. CLEAN UP:

A. On completion of all demolition work, leave the property and adjacent areas clean and satisfactory to local authorities and the Architect.

SECTION 02110 - SITE CLEARING

1. SCOPE:

A. This Section includes all labor, materials, equipment and tools necessary to complete the removal of vegetation, topsoil stripping, clearing and grubbing, and removal of above-ground improvements as shown on the drawings and specified herein.

2. PROJECT CONDITIONS:

A. Protection of Existing Improvements: Provide protection necessary to prevent damage to existing improvements indicated to remain in place, as shown on the drawings.

(1) Protect improvements on adjoining or adjacent properties.

(2) Damaged Improvements: Restore damaged improvements to their original condition, as acceptable to property owner and Architect.

B. Traffic: Conduct site clearing operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction.

3. SITE CLEARING:

A. General: Remove shrubs, grass and other vegetation improvements or other obstructions as required to permit installation of new construction. Removal includes digging out and off-site disposal of stumps, trees and roots.

B. Topsoil: Topsoil is defined as friable clay loam surface soil found in a depth of not less than 4 inches. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2 inches in diameter, and without weeds, roots, and other objectional materials.

(1) Stripping Topsoil: Strip topsoil to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectionable material. Remove heavy growths of grass from areas before stripping.

(2) Topsoil Stockpiling: Stockpile topsoil in storage piles in areas as indicated on drawings or as directed. Construct storage piles to provide free drainage of surface water. If required, cover storage piles to prevent wind erosion.

(3) Disposal: Disposal of unsuitable or excess topsoil shall be as specified for disposal of waste material.

C. Clearing and Grubbing: Clear site of shrubs and other vegetation, except for those indicated to be left standing.

(1) Completely remove stumps, roots, and other debris protruding through ground surface.

(2) Fill depressions caused by clearing and grubbing operations with clean soil material, unless further excavation or earthwork is indicated.

(a) Place fill material in horizontal layers not exceeding 6" loose depth, and thoroughly compact to a density equal to adjacent original ground.

D. Removal of Improvements: Remove existing above-grade/below-grade improvements as indicated and as necessary to facilitate new construction.

(1) Abandonment or removal of certain underground pipe or conduits may be indicated on mechanical or electrical drawings, and that work shall be included under work of related Divisions 15 and 16. Although, removal and abandoned underground piping or conduit interfering with new construction shall be included under this Section.

4. DISPOSAL OF WASTE MATERIALS:

A. Burning on Property: Burning shall not be allowed on property unless special permission is granted by Architect and Local Fire Authorities.

B. Removal from Property: Remove all waste materials from property.

C. Topsoil Removal: All unused or unsuitable topsoil shall be distributed over the property as directed by the Architect or as shown on the drawings. Do not remove or sell topsoil from this site.

D. Burying Waste Materials: Burying of waste materials on property shall not be allowed unless special permission is granted by Architect and Owner.

SECTION 02200 - EARTHWORK

1. SCOPE:

A. This Section includes all labor, materials, equipment and tools necessary to complete the earthwork and drainage fill course as shown on the drawings and specified.

2. SUMMARY OF WORK:

A. This Section includes the following:

- (1) Preparing of Subgrade for building slabs, walks, paving and steps.
- (2) Drainage Fill Course for support of building slabs.
- (3) Excavating and Backfilling of Trenches within building lines except as indicated to be by mechanical and electrical contractor.
- (4) Site Rough Grading including excavation and fill.
- (5) Site Finish Grading including placement and preparation of topsoil ready for soil amendments and seeding.

B. Excavating and Backfilling for Mechanical/Electrical Work: Refer to Divisions 15 and 16 for excavation and backfill required in conjunction with underground mechanical and electrical utilities and buried mechanical and electrical appurtenances.

- (1) Mechanical and electrical work shall comply with the requirements of this section as it relates to excavating, backfilling and compaction.

3. DEFINITIONS:

A. Excavation: Consists of removal of material encountered to subgrade elevations indicated and subsequent disposal of material removed.

B. Unauthorized Excavation: Consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Architect. Unauthorized excavation, as well as remedial work directed by Architect, shall be at Contractor's expense.

- (1) Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending indicated bottom elevation of footing or base to excavation bottom, without altering required top elevation. Lean concrete fill may be used to bring elevations to proper position, when acceptable to Architect.

- (2) In locations other than those above, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by Architect.

C. Additional Excavation: When excavation has reached required subgrade elevations, notify Architect, who will make an inspection of conditions. If Architect determines that bearing materials at required subgrade elevations are unsuitable, he may instruct the contractor to continue excavation until suitable bearing materials are encountered. The Contract Sum may be adjusted and paid on basis of Conditions of the Contract relative to changes in work.

D. Subgrade: The undisturbed earth or the compacted soil layer immediately below granular subbase, drainage fill, or topsoil materials.

E. Structure: Buildings, foundations, slabs, curbs or other man-made stationary features occurring above or below ground surface.

4. SUBMITTALS:

A. Test Reports: Submit the following reports to the Contractor and Architect by the testing laboratory.

- (1) Test reports on borrow material.
- (2) Verification of suitability of each footing subgrade material in accordance with specified requirements.
- (3) One optimum moisture-maximum density curve for each type of soil encountered.
- (4) Report of actual unconfined compressive strength and/or results of bearing tests of each strata tested.
- (5) Field reports and in-place soil density tests.

5. QUALITY ASSURANCE:

A. Codes and Standards: Perform excavation work in compliance with applicable requirements of authorities having jurisdiction.

- (1) Slope Protection shall be in compliance with the applicable requirements of the Kentucky "Standard for Road and Bridge Construction", or equivalent.

B. Testing and Inspection Service: Contractor shall employ and pay for a qualified independent geotechnical testing laboratory to perform soil testing and inspection service during earthwork operations.

C. Testing Laboratory Qualifications: To qualify for acceptance, the geotechnical testing laboratory must demonstrate to Architect's satisfaction, based on evaluation of laboratory-submitted criteria conforming to ASTM E699, that it has the experience and capability to conduct required field and laboratory geo-technical testing without delaying the progress of the work.

D. Topsoil (if required): Before delivery of topsoil, furnish Architect with written statement giving location of properties from which topsoil is to be obtained, names and addresses of owners, depth to be stripped and crops grown during past 2 years.

6. PROJECT CONDITIONS:

A. Site Information: Data in subsurface investigation reports was used for the basis of the design and are included in this specification book for Contractor's information only. It is not part of the technical specifications. Conditions are not intended as representations or warranties of accuracy or continuity between soil borings. The Owner will not be responsible for interpretations or conclusions drawn from this data by Contractor.

(1) Additional test borings and other exploratory operations may be performed by Contractor, at the Contractor's option and expense.

B. Existing Utilities: Should uncharted piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

C. Protection of Persons and Property: Barricade open excavations occurring as part of this work and post with warning lights.

(1) Operate warning lights as recommended by authorities having jurisdiction.

(2) Protect structures, utilities, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.

D. Use of Explosives: Use of explosives is not permitted.

7. SOIL MATERIALS:

A. Topsoil: Topsoil is defined as friable clay loam surface soil found in a depth of not less than 4 inches. Satisfactory topsoil is reasonably free of subsoil, clay lumps, stones and other objects over 2 inches in diameter, and without weeds, roots and other objectional material.

(1) Strip topsoil to whatever depths encountered in a manner to prevent intermingling with underlying subsoil or other objectionable material. Remove heavy growths of grass from areas before stripping.

B. New Topsoil: If quantity of stockpiled topsoil is insufficient to meet topsoil requirements indicated, Contractor shall provide additional topsoil as required to complete work at no additional cost to the Owner.

(1) Provide new topsoil, as required, that is fertile, friable, natural loam, surface soil, reasonable free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 2 inches in any dimension, and other extraneous or toxic matter harmful to plant growth.

(2) Obtain topsoil from local sources or from areas having similar soil characteristics to that found at project site. Obtain topsoil from naturally, well-drained sites where topsoil occurs in a depth of not less than 4 inches. Do not obtain from bogs or marshes.

(3) Satisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups CL, GW, GP, GM, SW and SP. Clay is a satisfactory soil material.

(4) Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GC, SC, ML, MH, CH, OL, OH and PT.

C. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag and natural or crushed sand.

D. Drainage Fill: Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, with 100% passing a 1-1/2" sieve and not more than 5% passing a No. 4 sieve.

E. Backfill and Fill Materials: Satisfactory soil materials free of rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation and other deleterious matter.

(1) Cut/excavations may not provide adequate satisfactory fill material to accomplish grades as indicated. If not, the contractor shall be responsible for providing sufficient satisfactory fill material for the work.

8. EXCAVATION CLASSIFICATIONS:

A. Excavation Classifications: The following classifications of excavation will be made when rock is encountered.

(1) Earth Excavation includes excavation of pavements and other obstructions visible on surface; underground structures, utilities, and other items indicated to be demolished and removed; together with earth and other materials encountered that are classified as rock or unauthorized excavation.

(2) Rock Excavation for Trenches and Pits includes removal and disposal of materials and obstructions encountered that cannot be excavated with a track-mounted power excavator, equivalent to Caterpillar Model No. 2150 LC, and rated at not less than 115 HP flywheel power and 32,000-pound drawbar pull and equipped with a short stick and a 42-inch wide, short tip radius rock bucket rated at 0.81 cubic yard capacity. Trenches in excess of 10 feet in width and pits in excess of 30 feet in either length or width are classified as open excavation.

(3) Rock Excavation in Open Excavations includes removal and disposal of materials and obstructions encountered that cannot be dislodged and excavated with modern track-mounted, heavy-duty excavating equipment without drilling, blasting, or ripping. Rock excavation equipment is defined as Caterpillar Model No. 973 or equivalent track-mounted loader, rated at not less than 210 HP flywheel power and developing minimum of 45,000-pound breakout force (measured in accordance with SAE J732).

(a) Typical of materials classified as rock are boulders 1.5 cu. yd. or more in volume, solid rock, rock in ledges and rock-hard cementitious aggregate deposits.

(b) Intermittent drilling or ripping performed to increase production and not necessary to permit excavation of material encountered will be classified as earth excavation.

B. Inspection for Rock: Do not perform rock excavation work until material to be excavated has been cross-sectioned and classified by Architect or Soils Engineer. Such excavation will be paid on basis of Contract Conditions relative to changes in work.

C. Rock Payment Lines: Shall be limited to the following conditions.

(1) Two feet outside of concrete work for which forms are required, except footings.

(2) One foot outside perimeter of footings.

(3) In pipe trenches, 6 inches below invert elevation of pipe and 2 feet wider than inside diameter of pipe, but not less than 3 feet minimum trench width.

(4) Neat outside dimensions of concrete work where no forms are required.

(5) Under slabs on grade, 6 inches below bottom of concrete slab.

9. STABILITY OF EXCAVATIONS:

A. General: Comply with local codes, ordinances, and requirements of agencies having jurisdiction.

B. Slope sides of excavation to comply with local codes, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

C. Shoring and Bracing: Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross braces, in good serviceable condition. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Extend shoring and bracing as excavation progresses.

10. DEWATERING:

A. Prevent surface water or ground water from flowing into excavations and from flooding project site and surrounding area. Standing water shall be drained from the site.

B. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

C. Drainage Ditches: Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.

11. STORAGE OF EXCAVATED MATERIALS:

A. Excavated Materials: Stockpile excavated materials acceptable for backfill and fill where directed and/or as shown on drawings. Place, grade and shape stockpiles for proper drainage.

B. Topsoil Storage: Stockpile topsoil in storage piles in areas indicated or directed. Construct storage piles to provide free drainage of surface water. Cover storage piles, if required, to prevent wind erosion.

C. Location of Materials: Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.

D. Disposal of Excavated Materials: Dispose of, off-site where directed, excess excavated soil material and materials not acceptable for use as backfill or fill.

12. EXCAVATION FOR STRUCTURES AND SITE:

A. Conform to Elevations and Dimensions shown within a tolerance of plus or minus 0.10', and extending a sufficient distance from footings and foundations to permit placing and removal of concrete formwork, installation of services, other construction and for inspection.

B. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.

C. Excavation for Mechanical/Electrical Structures: Conform to elevations and dimensions indicated within a tolerance of plus or minus 0.10'; plus a sufficient distance to permit placing and removal of concrete formwork, installation of services, and other construction and for inspection. Do not disturb bottom of excavations intended for bearing surface.

D. Excavation for Site: Cut surfaces to comply with cross-sections, elevations and grades as indicated. Allow for sod thickness in areas to be sodded.

13. TRENCH EXCAVATION FOR PIPE AND CONDUIT:

A. Excavate trenches to uniform width, sufficiently wide to provide ample working room and a minimum of 6"-9" of clearance on both sides of pipe.

B. Excavate trenches and conduit to depth indicated or required to establish indicated slope and invert elevations and to support bottom of pipe on undisturbed soil. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

C. For pipes less than 6" in nominal size do not excavate beyond indicated depths. Hand-excavate bottom cut to accurate elevations and support pipe on undisturbed soil.

D. For pipes and equipment 6" or larger in nominal size, shape bottom of trench to fit bottom of pipe for 90 degree (bottom 1/4 of the circumference). Fill depressions with tamped sand backfill. At each pipe joint, dig bell holes to relieve pipe bell of loads ensuring continuous bearing of pipe barrel on bearing surface.

14. COLD WEATHER PROTECTION:

A. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.

15. BACKFILL AND FILL:

A. General: Place soil material in layers to required subgrade elevations, for each area classification listed below, using materials specified herein.

B. Under grassed and other open areas, use satisfactory excavation or borrow material.

C. Under walks and steps, use subbase material.

D. In mechanical and electrical within the building, use DGA or as indicated in Divisions 15 and 16.

E. Under pavements, use subbase material, satisfactory excavation or borrow material, or a combination to bring to subgrade. Subgrade is defined as the top of the grade beneath the subbase.

F. Under building slabs, use drainage fill material.

G. Under piping and conduit and equipment, use subbase materials, DGA, or as indicated in Division 15 and 16 where required over rock bearing surface and for correction of unauthorized excavation. Shape excavation bottom to fit bottom 90 degree of cylinder.

H. Backfill trenches with concrete where trench excavations pass within 18" of column or wall footings and that are carried below bottom of such footings or that pass under wall footings. Place concrete to level of bottom of adjacent footing.

(1) Do not backfill trenches until tests and inspections have been made and backfilling is authorized by Architect. Use care in backfilling to avoid damage or displacement of pipe systems.

I. Provide 4" thick concrete base slab support for piping or conduit less than 2'-6" below surface of roadways. After installation and testing of piping or conduit, provide minimum 4" thick encasement (sides and top) of concrete prior to backfilling or placement of roadway subbase.

J. Backfill excavations as promptly as work permits, but not until completion of the following.

(1) ACceptance of construction below finish grade including, where applicable, dampproofing, waterproofing and perimeter insulation.

(2) Inspection, testing, approval, and recording locations of underground utilities have been performed and recorded.

(3) Removal of concrete formwork.

(4) Removal of shoring and bracing, and backfilling of voids with satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.

(5) Permanent or temporary horizontal bracing is in place on horizontally supported walls.

(6) Removal of trash and debris from excavation.

16. PLACEMENT OF FILL AND COMPACTION:

A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fill.

(1) Proof-Roll subgrade prior to filling or backfilling operations and take corrective measures if required.

(2) When existing ground surface has density less than that specified, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.

B. Placement of Soil Layers:

(1) Heavy Compaction Equipment: Not more than 8" layers.

(2) Hand-operated Tampers: Not more than 4" layers.

C. Moisture Content: Before compaction, moisten or aerate each layer as required by ASTM D-698 requirements for optimum moisture content. Do not place backfill or fill material on surfaces that are muddy, frozen or contain frost or ice.

D. Compaction of Backfill and Fill: Compact soil to not less than the following percentages of maximum density, to provide the Standard Procter Compaction specified for each area in accordance with ASTM D-698.

(1) Structures: Compact the top 12" of subgrade and each layer of backfill or fill material to 98%.

(2) Lawn and Unpaved Areas: Compact the top 8" of subgrade and each layer of backfill or fill material to 90%.

(3) Walks: Compact the top 8" of subgrade and each layer of backfill or fill material to 98%.

(4) Pavement Areas: Compact the top 8" of subgrade and each layer of backfill or fill material to 98%.

17. ROUGH GRADING AND FINISH GRADING:

A. General: Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.

B. Grading: Grade areas adjacent to building lines to drain away from structures and to prevent ponding of surface water. Failure to accomplish these conditions shall indicate corrective measure are required.

C. Finish Surfaces: Provide final grades within a tolerance of 1/2" per 10', except lawn areas to receive topsoil to within not more than 0.10' above or below required subgrade elevations.

(1) Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10' above or below required subgrade elevations.

(2) Walks: Shape surface of areas under walks to line, grade, and cross section, with finish surface not more than 0.10' above or below required subgrade elevation.

(3) Pavements: Shape surface of areas under pavement to line, grade, and cross section, with finish surface not more than 1/2" above or below required subgrade elevation.

(4) Grading Surface of Fill under Building Slabs: Grade smooth and even, free of voids, compacted as specified, and to required elevation. Provide final grades within a tolerance of 1/2" when tested with a 10' straight edge.

D. Finish Surface Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum or relative density for each area classification.

E. Finish Surface Preparation: Loosen subgrade of lawn areas to a minimum depth of 4". Remove stones over 1-1/2" in diameter, sticks, roots, rubbish and other extraneous matter.

F. Finish Grading: Finish grading shall consist of spreading a minimum 6" of topsoil and preparing topsoil for application of soil amendments and seeding.

(1) See section 02900 for soil amendments.

(2) Spread topsoil to a minimum of 6" (mixing lower portion of topsoil with upper portion of loosened subgrade) to meet lines, grades and elevations shown, after light rolling and natural settlement.

(3) Use new topsoil if required in and around the building and the existing topsoil in areas away from the building.

18. BUILDING SLAB DRAINAGE COURSE:

A. General: Drainage course consists of placement of drainage fill material, in layers of indicated thickness, over subgrade surface to support concrete building slabs.

B. Placing: Place drainage fill material on prepared subgrade in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content for compacting material during placement operations.

(1) When a compacted drainage course is indicated to be 6" thick or less, place material in a single layer. When indicated to be more than 6" thick, place material in equal layers, except no single layer more than 6" or less than 3" in thickness when compacted.

19. FIELD QUALITY CONTROL:

A. Quality Control Testing: Allow testing service to inspect and approve each subgrade and fill layer before further backfill or construction work is performed.

(1) Field Density Tests: In accordance with ASTM D-1556 (sand cone method), ASTM D-2167 (rubber ballon method), or ASTM D-2922 (nuclear density method), as applicable.

(2) Footing Subgrade: For each strata of soil on which footings will be placed, perform at least one test to verify required design bearing capacities. Subsequent verification and approval of each footing subgrade may be based on a visual comparison of each subgrade with related tested strata when acceptable to Architect.

(3) Paved Areas and Building Slab Subgrade: Perform at least one field density test of subgrade for every 2,000 sq. ft. of paved area or building slab, but in no case fewer than three tests. In each compacted fill layer, perform one field density test for every 2,000 sq. ft. of overlaying building slab or paved area, but in not case fewer than three tests.

(4) Lawn and Unpaved Areas Subgrade: Perform at least one filed density test of subgrade for every 5,000 sq. ft. of lawn or unpaved area, but in no case fewer than three tests. In each compacted full layer, perform one field density test for every 5,000 sq. ft. of lawn or unpaved area, but in not case fewer than three tests.

(5) Foundation Wall Backfill: Perform at least two field density tests at locations and elevations as directed.

B. If in opinion of Architect, based on testing service reports and inspection, subgrade or fills that have been placed are below specified density, perform additional compaction and testing until specified density is obtained.

20. MAINTENANCE:

A. Protection of Graded Areas: Protect mewly graded areas from traffic and erosion. Keep free of trash and debris.

(1) Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances.

B. Reconditioning Compacted Areas: Where compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

C. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn or other finish), add backfill material, compact and replace surface treatment. Restore appearance, quality, and condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

SECTION 02281 - TERMITE CONTROL

1. SCOPE:

A. This Section includes all labor, material, equipment and related items necessary to complete the installation of termite controls chemicals under the floor slab, in walls and at the exterior walls for a complete job as shown on the drawings and specified herein.

2. QUALITY ASSURANCE:

A. Qualifications of Installer: Installed shall comply with manufacturer's instructions and recommendations for the work including the preparation of the substrate and application of the materials specified. Installer shall have a minimum of five (5) years experience in the installation of the products.

B. Licensed Installer: Specified products shall be installed by a Licensed Installer in accordance with regulations of governing authorities for application of soil treatment solution.

C. Registration Requirements: Use only termiticides which bear the Federal Registration Number on the US Environmental Protection Agency.

3. JOB CONDITIONS:

A. Do not apply soil treatment solution until excavating, filling and grading operations are completed.

B. Do not apply soil treatment to frozen or excessively wet soils or during inclement weather. Comply with handling and application instructions of the soil toxicant manufacturer.

4. PRODUCT WARRANTY:

A. Furnish a written warranty certifying that the applied soil termiticide treatment will prevent infestation of subterranean termites, and that if subterranean termites activity is discovered during the warranty period, Contractor will re-treat soil and repair or replace, damage caused by termite infestation.

(1) Provide warranty for a period of Five (5) Years from the date of treatment, signed by Applicator and Contractor.

5. SOIL TREATMENT MATERIAL:

A. Termiticide: Use an emulsible concentrate termiticide for dilution with water, specifically formulated to prevent infestation by termites. Fuel oil will not be permitted as a diluent. Provide a solution consisting of one of the following chemical elements and concentrations.

(1) Chloropyrifos (Dursban TC), 1.0 percent in water emulsion.

(2) Permethrin (Dragnet, Torpedo), 0.5 percent in water emulsion.

6. APPLICATION OF MATERIAL:

A. Surface Preparation: Remove foreign matter which could decrease effectiveness of treatment on areas to be treated. Loosen, rake and level soil to be treated, except previously compacted areas under slabs and foundations. Toxicants may be applied before placement of compacted fill under slabs only, if recommended by the toxicant manufacturer.

B. Application Rates: Apply soil treatment solution as follows:

(1) Under Slab-On-Grade: Treat soil before concrete slabs are placed using the following rates of application.

(a) Apply 4 gallons of chemical solution per 10 LF to soil in critical areas under slab, including the entire inside perimeter of the foundation walls, along both sides of the interior partition walls, around plumbing pipes and electrical conduit penetrating slab and around interior column footings.

(b) Apply 1 gallon of chemical solution per 10 SF as an overall treatment under slab and attached slab areas where fill is soil or unwashed gravel. Apply 1-1/2 gallons of chemical solution to areas where fill is washed gravel or other coarse absorbent material.

(c) Apply 4 gallons of chemical solution per 10 LF of trench for each foot of depth from grade to footing, along outside edge of building. Dig a trench 6"-8" wide along the outside of the foundation to a depth of not less than 12". Punch holes to top of footing at not more than 12" OC and apply chemical solution. Mix chemical solution with the soil as it is being replaced in the trench.

(2) Hollow Masonry Foundations or Grade Beams: Treat voids at the rate of 2 gallons PLF, poured directly into the hollow spaces.

(3) Expansion Joints, Control Joints: Apply at the rate of 4 gallons per 10 LF of penetration.

C. Signs: Post signs in areas of application to warn workers that soil termiticide treatment has been applied. Remove signs when areas are covered by other construction.

D. Disturbed Areas: Re-apply soil treatment solution to areas disturbed by subsequent excavation, landscape grading or other construction activities following application of termiticide solution.

SECTION 02900 - LANDSCAPE WORK AND SEEDING

1. SCOPE:

A. This Section includes all labor, materials, equipment and tools necessary to complete the soil amendments, landscaping and maintenance, erosion control and the seeding as called for on the drawings and specified herein.

2. QUALITY ASSURANCE:

A. General: Ship landscape materials with certificates of inspection required by governing authorities. Comply with regulations applicable to landscape materials.

B. Subcontract landscape work to a single firm specializing in landscape work as described.

C. Substitutions: Do not substitute unless specified landscape material is not obtainable. Submit proof of non-availability to Architect, together with proposal for use of equivalent material.

D. Analysis and Standards: Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

3. SUBMITTALS:

A. Plant and Material Certifications:

(1) Certificates of inspection as required by governmental authorities.

(2) Seed vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentages by weight, and percentages of purity, germination, and weed seed for each grass seed species.

B. Planting Schedule: Proposed planting schedule, indicating dates for landscape work during normal seasons for such work in area of site. Correlate with specified maintenance periods to provide maintenance from date of Substantial Completion. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.

C. Maintenance Instructions: Typewritten instructions recommending procedures for maintenance of landscape work. Submit prior to expiration of required maintenance period.

4. DELIVERY, STORAGE AND HANDLING:

A. Packaged Materials: Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at site.

B. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.

5. JOB CONDITIONS:

A. During the course of excavation for plant materials, conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions are encountered, consult Architect before planting.

6. SEQUENCING AND SCHEDULING:

A. Planting Time: Proceed with, and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.

(1) Plant or install materials during normal planting seasons for each type of plant material required.

(2) Correlate planting with specified maintenance periods to provide maintenance for date of Substantial Completion.

7. SOIL AMENDMENTS:

A. Lime: Natural dolomitic limestone containing not less than 85% of total carbonates with a minimum of 30% magnesium carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.

(1) Provide 250 pounds per 1,000 square feet (5 tons per acre).

B. Commercial Fertilizer: Complete fertilizer of neutral character, with some elements derived from organic sources and containing following percentages of available plant nutrients. For lawns, provide fertilizer with 15% nitrogen, 15% phosphorus and 15% potash. Provide nitrogen in a form that will be available to lawn during initial period of growth.

(1) Provide 14 pounds per 1,000 square feet (600 pounds per acre).

(2) Application Method: Fertilizer is intended to be applied with hydroseeding and as a part of the seeding process.

C. Soil Analysis: Contractor to have a soil sample evaluated by County Extension Agent prior to application of fertilizer to verify percentages of nitrogen, phosphorus acid and potassium required.

8. GRASS MATERIALS:

A. Grass Seed: Provide fresh, clean, new-crop seed complying with tolerance for purity and germination established by Official Seed Analysis of North America. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed, as specified.

B. Schedule of Grass Seed Mixture: Provide 40% Kentucky 31 Fescue, 30% Falcon Fescue, 20% Creeping Red Fescue and 10% Annual Ryegrass.

(1) Provide 10 pounds per 1,000 square feet.

(2) Application Method: Grass Seed is intended to be applied with hydroseeding and as a part of the fertilization process.

C. Sod: Provide strongly rooted sod, not less than 2 years old, free of weeds and undesirable native grasses, and machine cut to pad thickness of 3/4 inch (plus or minus 1/4 inch), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant).

(1) Provide sod of uniform pad sizes with a maximum of 5% deviation in either length or width. Broken pads or pads with uneven ends will not be accepted. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on upper 10% of pad will be rejected.

(2) Provide sod composed principally of the same grasses, of family of grasses, used in the seed mix.

D. Anti-Erosion Mulch: Provide clean, seed-free salt hay or threshed straw of wheat, rye, oats or barley.

(1) Sloping areas or areas prone to water run-off may require a mulching mesh to hold the seed and mulch installed. Use only in areas that are washing and not holding the seed/mulch mixture.

9. PREPARATION OF PLANTING SOIL:

A. Before mixing, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth.

B. Apply soil amendments on surface of topsoil and mix thoroughly before planting.

(1) Mix lime with dry soil prior to mixing of fertilizer.

(2) If not applied with hydroseeding, apply specified commercial fertilizer at rates specified and thoroughly into upper 2" of topsoil. Delay application of fertilizer if lawn planting will not follow within a few days.

(3) See Hydroseeding section for lawn grass installation.

10. PREPARATION FOR PLANTING LAWNS:

A. Preparation of Unchanged Grades: Where lawns are to be planted in areas that have not been altered or disturbed by excavating, grading, or stripping operations, prepare soil for lawn planting as follows.

(1) Till to a depth of not less than 6". Apply soil amendments and initial fertilizers as specified. Remove high areas and fill in depressions. Till soil to a homogeneous mixture of fine texture, free of lumps, clods, stones, roots and other extraneous matter.

(2) Prior to preparation of unchanged areas, remove existing grass, vegetation and turf. Dispose of such material outside of Owner's property. Do not turn existing vegetation over into soil being prepared for lawns.

B. Moisten prepared lawn areas before planting if soil is dry. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

11. HYDROSEEDING NEW LAWN AREAS:

A. Mix specified seed, fertilizer, and pulverized mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.

B. Apply slurry uniformly to all areas to be seeded. Rate of application as required to obtain specified seed sowing rate.

12. SODDING NEW LAWN AREAS:

A. Lay sod within 24 hours from time of stripping. Do not plant dormant sod if ground is frozen.

B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips, do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod and remove excess to avoid smothering of adjacent grass.

(1) Anchor sod on slopes with wood pegs to prevent slippage.

C. Water sod thoroughly with a fine spray immediately after planting.

13. MAINTENANCE OF SEEDED AND SODDED AREAS:

A. Begin maintenance immediately after planting.

B. Maintain lawns for not less than the period stated below, and longer as required to establish an acceptable lawn.

(1) Seeded Lawns: Not less than 60 days after Substantial Completion, but until an acceptable lawn is established.

(a) If seeded in fall and not given full 60 days of maintenance, or if not considered acceptable at that time, continue maintenance the following spring until acceptable lawn is established.

(2) Sodded Lawns: Not less than 30 days after Substantial Completion, but until an acceptable lawn is established.

C. Maintain lawns by top dressing with ammonium nitrate, 75% top end, watering, fertilizing, weeding, mowing, trimming, and other operations such as rolling, regrading and replanting as required to establish a smooth, acceptable lawn, free of eroded or bare areas.

14. CLEAN UP AND PROTECTION:

A. During landscape work, keep pavements clean and work area in an orderly condition.

B. Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

15. INSPECTION AND ACCEPTANCE:

A. Inspection: When landscape work is completed, including maintenance, Architect will make an inspection to determine acceptability.

(1) Landscape work may be inspected for acceptance in portions as agreeable to Architect, provided each portion of work offered for inspection is complete, including maintenance.

B. Corrective Work: When landscape work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by Architect and found to be acceptable. Remove rejected plants and materials promptly from project site.

C. Final Acceptance: Upon completion of the above procedures and requirements, landscaping and seeded areas will be accepted by the Owner and Architect.

SECTION 03010 - CONCRETE WORK

1. SCOPE:

A. This Section includes all labor, materials, equipment and tools necessary to complete the installation of all concrete formwork, accessories, reinforcement and cast-in-place concrete as shown on the drawings and specified herein.

2. QUALITY ASSURANCE:

A. Codes and Standards:

ACI 301 "Specifications for Structural Concrete for Buildings".
ACI 302 "Guide for Concrete Floor and Slab Construction".
ACI 318 "Building Code Requirements for Reinforced Concrete".
ASTM C94-84 "Standard Specification for Ready-Mixed Concrete".
ACI 306R "Cold Weather Concreting".

3. SUBMITTALS:

A. Shop drawings shall comply with Section 01300.

B. Product Data: Submit manufacturer's product data with application installation instructions for proprietary materials and items, including reinforcement, patching compounds, admixtures, curing compounds, and others as requested.

C. Reinforcement Shop Drawings: Submit shop drawings for fabrication, bending and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced concrete Structures" showing bar schedule, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Submit for review one reproducible print along with shop drawings.

D. Laboratory Test Reports: Submit laboratory test reports for concrete materials and mix design test as specified. Material certificates may be submitted in lieu of laboratory test reports. Material certificates shall be signed by manufacturer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

4. FORM MATERIALS:

A. Forms for Unexposed Concrete Surfaces: Formed concrete surfaces which are unexposed shall use formwork of plywood, No.2 or better dimensional lumber, metal or other acceptable materials.

B. Forms for Exposed Concrete Surfaces: Formed concrete surfaces which are exposed shall use formwork of BB Plyform Class 1, 5/8" plywood, No.2 or better dimensional lumber lined with 1/4" thick BB moisture resistant plywood, 1/8" tempered hardboard or smooth steel forms.

C. Form Coatings: Provide commercial formulation form-coating compounds that will not bond with, stain or adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.