

Released: August 10, 2023

PHASE #5:
***GRADING AND DRAINAGE
IMPROVEMENTS SOUTHERN
STOCKPILES AREA***

FOR

SIERRA INSTITUTE FOR COMMUNITY AND ENVIRONMENT

*15690 HIGHWAY 89
CRESCENT MILLS, CA*

P R E P A R E D B Y

Kyle Leach, Project Geologist; Greg Hinds, Project Engineer

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**Contract Forms.....Available upon request*

ADVERTISEMENT TO BID

NOTICE TO CONTRACTORS

SEALED PROPOSALS
SIERRA INSTITUTE
PHASE #5 GRADING / DRAINAGE IMPROVEMENTS
SOUTHERN STOCKPILES AREA
15690 HIGHWAY 89, CRESCENT MILLS, CA

Will be received at Sierra Institute for Community and Environment (“Owner”), 4438 Main Street, Taylorsville, California 95983, until 2:00 p.m. on August 24, 2023, at which time they will be publicly opened and read at the office at the above address.

General Work Description:

Complete Grading / Drainage Improvements as noted on plans dated August 8, 2023, by Hinds Engineering, Inc. titled “Phase #5 Southern Stockpiles Grading and Drainage Plan for Sierra Institute.”

Walk-through is optional for all prospective bidders. Prebid Conference will be held at 1:00 p.m., August 17, 2023, at the Crescent Mills site (15690 Highway 89).

The successful bidder must possess the following proper classification of Contractor’s license: General Engineering license.

This contract is subject to the provisions of Section 22300 of the California Public Contract Code, which provides for the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. The bidder’s attention is directed to said Section 22300 of the Public Contract Code for the specific requirements and provisions for such substitutions of securities if requested by the Contractor. All employees working on the site shall have OSHA Hazwoper Certification.

This contract is subject to State contract nondiscrimination and compliance requirements pursuant to Government Code, Section 12990.

Plans and specifications may be obtained at the Office of Sierra Institute for Community and the Environment (Sierra Institute or SI) at 4438 Main St, Taylorsville, CA 95983.

The Contractor shall also furnish Certificates of Insurance, with Sierra Institute named as an additional insured, in amounts and coverage as specified in the Specifications.

Sierra Institute hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color or national origin in consideration for an award.

Pursuant to Section 1770 and 1771, of the Labor Code, all Contractors and Subcontractors shall pay the General Prevailing Wage Rates on Public Works Contracts.

Pursuant to Section 1773 and 1773.1 of the Labor Code the general prevailing wage rates in the County in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wage rates are on file with the Sierra Institute and may be reviewed during normal working hours.

Sierra Institute reserves the right to reject any or all bids.

SCOPE OF WORK

Refer to plans dated August 8, 2023 by Hinds Engineering, Inc. titled "Southern Stockpiles Grading Plan", consisting of 2 sheets.

SPECIFIC WORK ITEMS REQUESTED FOR THIS BID

- PHASE 5-1 Repair any erosion control measures in Storm Water Pollution Prevention Plan (SWPPP) that have been damaged since placement last year (2022) (Southern Stockpiles area only). Please refer to SWPPP prepared by SWPP Solutions dated April 26, 2019, for specifications on the erosion control plan. Provide continuous dust suppression to prevent visible dust. If visible dust occurs, a temporary stoppage of work will be required due to Project EPA air quality monitoring requirements. Water for dust control operations is available from the existing 14-inch diameter onsite well with an estimated well yield of 100 gallons per minute.
- PHASE 5-2 Provide clearing and grubbing for all work areas of the site. Includes removal of vegetation from the existing stockpile slopes, perimeter drainage ditch surrounding the southern property area and stockpiled vegetation debris located along the western property edge to the northwest of the southern stockpiles. Vegetation may be removed from the site or chipped with chips remaining on-site in a location directed by Owner.
- PHASE 5-3 Remove sediment from perimeter ditch ($\pm 1,750$ linear feet [lf]), regrade ditch to slope in the counterclockwise direction, and expand ditch where space availability allows (6-foot [ft] min bottom width around southwest corner, 3:1 [horizontal : vertical] max side slopes) and repair surrounding containment berm where needed (build-up/reinforce southwest corner; minimum berm height elevation to be approximately 3509 ft to match adjacent berm heights as shown on plans).
- PHASE 5-4 Grade perimeter access road ($\pm 1,500$ ft length, 10ft minimum width) to provide equipment access around stockpile and northwest upper stockpile area access road (± 100 ft length, 24-ft width) to provide additional access to upper stockpile area (alignments may be modified and access roads to be regraded & surfaced subsequently under Phase 5-8).
- PHASE 5-5 Excavate and temporarily stockpile wood waste/soil stockpile material from southwest portion of the stockpile to expose inorganic structural fill soil in borrow area shown on plans (excavation to approximately 3509 ft elevation; $\pm 1,000$ cubic yards [cy]). Temporarily stockpile wood waste soil on top of the existing stockpile. As directed onsite by Project Geologist, segregate "High Grade" soil with larger grain size and or lower organic content for use as borrow area backfill (see Phase 5-5).

- PHASE 5-6 Excavate inorganic structural fill soil from exposed borrow pit(s) ($\pm 8,000$ cy) and temporarily stockpile fill material on level ground to north of stockpile (see plans). Borrow pit(s) shall not exceed 6 feet below original ground surface grade (below stockpile base elevation; approximately 3503 ft elevation) & shall not exceed the depth to first evidence of shallow groundwater per Project Geologist field direction. Additional borrow pits shown on plans may be needed based on subsurface conditions per Project Geologist field direction.
- PHASE 5-7 Backfill borrow pit(s) ($\pm 8,000$ cy) and regrade primary wood waste/soil stockpile cutting from the top of the stockpile and filling to backfill borrow pit(s) and expand the stockpile top surface area (primarily along the southern portion of the site) in accordance with California Building Code (CBC) Appendix J to the proposed contours shown on plans (minimum top surface elevation of 3515 feet, 3:1 maximum fill slope; $\pm 19,500$ cy estimated cut from top of stockpile to be used in addition to stockpiled organic fill as fill for borrow pit[s] and for stockpile top surface area expansion). Regrade remaining stockpile fill slopes as needed to smooth and eliminate existing rills/concentrated runoff flow paths to 3:1 maximum slope. All regraded material shall be compacted per specifications in Section 2A of bid documents. Segregated High Grade material shall be used to backfill borrow pit(s).
- PHASE 5-8 Place and compact minimum 12" clean structural fill soil (stockpiled per Phase 5-4) over top surface of regraded stockpile to minimum elevation of 3516 ft at top edges of stockpile ($\pm 7,000$ cy), with compaction testing to be performed per field direction at the owner's expense with target compaction to be 95% relative compaction by Modified Proctor test. Crown with minimum 1% slopes from stockpile center for positive drainage.
- PHASE 5-9 Cover fill slopes and all other exposed organic fill with clean suitable fill per CBC Appendix J/Project Geologist field direction.
- PHASE 5-10 Grade areas north of stockpiles to provide positive drainage into perimeter ditch to southwest. Provide final grading and compaction of perimeter access road & install permanent BMPs including drainage swale (± 270 linear ft), v-ditches ($\pm 1,450$ lf unlined, ± 350 lf rock-lined), culverts (4 @ 18-inch diameter) and erosion control wattles ($\pm 3,000$ lf) as shown on plans.
- PHASE 5-11 Resurface access roads from northern property, perimeter access road and upper stockpile are access roads with minimum 4 to 6-inches compacted Class 2 Aggregate Base per plans (± 450 cy total)

Also provide Unit cost for additional imported Class 2 Aggregate to be placed on existing access roadways as needed and directed by Project Geologist/Engineer.

Time of Completion and Liquidated Damages

The Contractor shall begin work within ten (10) calendar days after the date specified on the "Notice to Proceed", and shall diligently prosecute the same to completion before the expiration of 60 calendar days before or the date that the "Notice to Proceed" is received by the Contractor.

In the event Contractor does not complete the work within the 60 calendar days as herein provided, for reasons or causes other than those provided for in the contract documents hereof, the Owner will be damaged. After considering such a breach and all aspects of the work including, but not limited to, the type of installation, the current and future uses of facilities and premises, the disarrangement of the premises and facilities thereof during the work, and additional cost and difficulty of using the disarranged facilities during the work, the parties agree that a reasonable daily damage for such a short breach, if any, will be two hundred dollars (\$200.00) per calendar day and the payment of the same, if any, is payment of liquidating damages and not a penalty. It is understood that this agreement for liquidated damages is entered into because the amount is manifestly reasonable under the circumstances existing at the time of this agreement, and it would be extremely difficult or impossible to determine with any degree of accuracy the actual damages in case of any such breach. In case of such breach, it is agreed that the Owner may deduct the amount of thereof from any money due or to become due said Contractor under this contract.

BID

ADDRESS TO: Sierra Institute for Community and Environment
Crescent Mills Grading and Drainage Improvements
4438 Main Street, P.O.
Box 11 Taylorsville,
California 95983

The undersigned declares that they have carefully examined the location of the proposed work; that they have examined the Contract Documents entitled: Phase #5 Grading and Drainage Improvements, Southern Stockpiles Area, Sierra Institute 15690 Highway 89 Crescent Mills, CA;

and that they have read all the accompanying Scope of Work "Instructions to Bidders";

and that they hereby propose to begin work and complete the project as follows:

Work must be completed in 60 calendar days from the date the Contractor receives Notice to Proceed and approved contract;

and that they hereby propose to furnish all labor, materials tools, and equipment, and to perform all the work required, complete in place, in accordance with the Contract Documents, and that they will take in full payment therefore the following prices, to wit:

The undersigned hereby acknowledges the receipt of addenda nos.

By: _____ Signed _____

Date: _____ Title _____

Contractor's License No. _____

Bid Item	Description of Items	Price
5-1	Repair erosion control BMPs damaged since placement in 2022 per SWPPP (Southern Stockpiles area only). Provide continuous dust suppression to prevent visible dust. Water for dust control is available from the existing onsite well with an estimated yield of 100 gpm.	\$ _____
5-2	Provide clearing and grubbing for all work areas of the site. Including drainage ditch surrounding the southern property area, stockpile slopes, and remove or chip stockpiled vegetation debris located northwest of the southern stockpiles.	\$ _____
5-3	Improvements to perimeter ditch (1,750 lf) and perimeter berm (southwest corner).	\$ _____
5-4	Grade perimeter access road (10-foot minimum width, ±1,500 ft length) & northwest upper stockpile area access road (±100 ft length, 24 ft width) to provide addt'l access to work areas.	\$ _____
5-5	Excavate and temporarily stockpile organic fill material from the southwest portion of the stockpile (±1,000 cy) to expose borrow area(s) shown on plans. Temporarily stockpile organic fill on top of the existing stockpile segregating high-grade fill per field direction for later use as backfill per Phase 5-7.	\$ _____

Bid Item	Description of Items	Price
5-6	Excavate inorganic structural fill soil from exposed borrow pit(s) ($\pm 8,000$ cy) and temporarily stockpile to north of stockpile, with maximum specified depth per Scope of Work and plans.	\$ _____
5-7	Backfill borrow pit(s) ($\pm 8,000$ cy) with suitable organic fill per field direction (from stockpiled materials from Phase 5-5 & cut material from primary stockpile) and regrade primary stockpile to contours shown on plans (minimum top surface elevation of 3515 ft; $\pm 19,500$ cy total cut). Regrade and compact remaining stockpile fill slopes to 3:1 maximum slope. Compaction shall be per specifications in Part 2 of this bid package.	\$ _____
5-8	Place and compact minimum 12" clean structural fill (stockpiled per Phase 5-6) over top surface of regraded primary stockpile to minimum elevation of 3516 ft ($\pm 7,000$ cy), with target 95% relative compaction (compaction testing to be performed per field direction at the owner's expense). Crown with minimum 1% slopes from stockpile center for positive drainage.	\$ _____
5-9	Cover fill slopes and all other exposed organic fill with 12-inch minimum clean suitable fill (stockpiled per Phase 5-6; $\pm 1,000$ cy) per CBC Appendix J/Project Geologist field direction.	\$ _____

Bid Item	Description of Items	Price
5-10	Grade areas north of stockpiles to provide positive drainage to perimeter ditch to the southwest. Provide final grading and compaction of perimeter access road & install permanent BMPs including drainage swale (±270 linear ft), V-ditches (±1,450 lf unlined, ±350 lf rock-lined), culverts (4 @ 18-inch diameter) and erosion control wattles (±3,000 lf) as shown on plans.	\$ _____
5-11	Resurface access roads from northern property, perimeter access road and upper stockpile area access roads with minimum 4 to 6-inches compacted Class 2 Aggregate Base per plans (±450 cy total).	\$ _____
	Provide Unit cost for additional imported Class 2 Aggregate including placement on existing access roadways as needed and directed by Project Geologist/Engineer.	\$ _____ /cubic yard
TOTAL BID		\$ _____

Sierra Institute reserves the right to select which items of the project stated above will be selected and awarded in the contract, while the remaining items will be deleted from the Scope of Work.

Federal Funding Guidelines

Contractor shall pay each laborer, workman or mechanic in accordance with Federal Prevailing Wage Rates and the California Labor Code (excerpts included herein). These wage rates will be made a part of this contract:

State General Prevailing Wage Determinations in effect on date advertised

General prevailing wage determination

Journeyman and Apprentice Prevailing Wage Rates can be accessed at the following websites:

<http://www.dir.ca.gov/dlsr/DPreWageDetermination.html> and
<http://www.dir.ca.gov/das/publicworks.html>

Reference: Labor Code 1773.2

Federal Prevailing Wage Determinations in effect on bid date

General Decision # CA170009 01/27/2017 CA9

General Decision County Index for CA:

<http://www.wdol.gov/wdol/scafiles/davisbacon/ca.html>

Select the county where the work will be performed. Reference: Davis Bacon Act

The Contractor shall at all times be responsible for the adequacy and efficiency of his employees and any subcontractor and the latter's employees. All employees working on site shall have OSHA Hazwoper Certification. All workers shall have adequate skill and experience to perform properly the work assigned to them.

The bidder shall comply with the DBE "good faith effort" requirement for this project by following these basic affirmative steps:

- (1) Place qualified small and minority businesses and women's business enterprises on solicitation lists;
- (2) Assure that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (3) Divide total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by small and minority business and women's business enterprises;

(4) Establish delivery schedules when the requirements of the work permit, which will encourage participation by small and minority-owned businesses and women-owned business enterprises;

(5) Use the services and assistance of the Small Business Administration and the Minority Business Development Agency Department of Commerce.

Electronic Certified Payroll Records

All contractors must furnish electronic certified payroll records to the Labor Commissioner using the online eCPR data system

No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.1(a)].

No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

The contractor shall post job site notices prescribed by regulation. (See 8 Calif. Code Reg. §16451(d))

TECHNICAL SPECIFICATIONS
FOR
SIERRA INSTITUTE PHASE #5 GRADING /
DRAINAGE IMPROVEMENTS
SOUTHERN STOCKPILES AREA
15690 HIGHWAY 89, CRESCENT MILLS, CA

DIVISION 1 GENERAL REQUIREMENTS

SECTION 1A SPECIAL CONDITIONS

The Sierra Institute General Conditions and the Special Conditions apply to all work and to each Section of these specifications as if repeated in each Section and for each trade or subcontractor.

The Contractor shall comply with all applicable Sections of the following documents:

- California Building Code Appendix J, Grading.
- State of California, Department of Transportation, Standard Specifications, Latest edition, hereinafter known as "Standard Specifications".
- American Society for Testing and Materials (ASTM).
- Any state or local laws or regulations.

The Contractor shall comply with the obvious intent and meaning of these plans and specifications, which shall be construed to include all material, measures, and modes of work necessary to complete the work herein specified in a workmanlike manner, in strict accordance with these plans and specifications, and to the satisfaction of the Owner. For any problem questioning ability to warranty - notify Project Geologist. The Contractor shall be held responsible for and must make good any defect, through faulty, improper, or inferior workmanship or materials, arising or discovered in any part of his work within one (1) year after the completion and acceptance of same. The Owner reserves the right to reject any or all bids without explanation of any kind.

SECTION 1B ORDINANCES AND SUBCONTRACTORS, INSPECTION, PERMITS

It shall be the Contractor's responsibility to see that all subcontracted work includes everything called for in the plans and specifications. Each subcontractor will be responsible for conformance of his work with all rules, regulations, ordinances, and codes or regulatory agencies, affecting his work whether or not so shown in the plans and specifications.

SECTION 1C EXAMINATION OF THE SITE

Contractor shall visit the building site and become familiar with existing conditions before submitting proposals. Failure to do so shall not constitute a clause for future complaint or claims for extra fee.

SECTION 1D DRAWINGS AND SPECIFICATIONS

The project plans, which are included as an attachment to these specifications, show the general construction of the project. The drawings and specifications are to be considered as cooperative, and any work or materials shown or mentioned in either one shall be executed as if they were shown or mentioned in both.

Figures shall have precedence over scaled measurements, and details over general drawings.

SECTION 1E INTERPRETATION OF PLANS

Neither the Contractor nor his workers, nor any subcontractors or supplier shall make any assumptions as to the intent or meaning of these plans and specifications. The Project Geologist will make all decisions regarding the intent and meaning of all details of this contract, and the decision will be final. Any information required to fully clarify the intent and meaning of all details shall be requested from the Project Geologist prior to bidding. After a contract is signed, the Contractor will not be allowed extra costs for any items of work shown on the drawings, and not included in this bid. If clarification by the Project Geologist of any item of work results in added cost after the award of the contract, the Contractor will not be allowed an extra fee.

It will be the responsibility of the Contractor to record and attach to his bid and the contract his understanding of any and all clarifications received.

SECTION 1F CHANGE ORDERS

Amounts of extras or credits for changed items shall be agreed upon by the Owner and the Contractor and written authorization shall be issued to the Contractor before proceeding with the work. Charges for work done without this authorization will not be accepted.

SECTION 1G CLEANING

The Contractor shall remove all debris from the site and in general keep the work as clear of rubbish as possible.

SECTION 1H JOBSITE SAFETY

The Contractor shall be responsible for jobsite safety within the project area at all time throughout the duration of the project.

SECTION 1I RECORD DRAWINGS

The Contractor's responsibility for record drawings shall be as set forth hereinafter:

A. The Contractor shall, during the progress of the work, keep a master set of prints on the job site on which he shall keep a careful and neat record of all deviations from the contract drawings which are made during the course of the work. The record drawings shall indicate, in addition to all changes and corrections, the actual location of all subsurface utility lines. Any shop drawings which constitute part of the design shall be included with the record drawings.

B. Upon completion of the project and before final payment is made, these notated prints shall be certified as to their correctness by the signature of the Contractor and turned over to the Owner.

SECTION 1J SHOP DRAWINGS SUBMITTALS AND TESTING

The Contractor shall submit to the Project Geologist for approval, 3 copies of all shop drawings as called for under the various headings of these specifications. The drawings shall be complete and detailed; partial submission will not be accepted. One (1) set of all shop drawings will be retained by the Project Geologist and two sets will be returned to the Contractor. The approval of the drawings by the Project Geologist shall not be construed as complete check, but will indicate only that the general method of construction and detailing is satisfactory.

QUALITY CONTROL

The respective Sections of these Specifications contain detailed requirements for materials testing and inspections to be performed by an approved testing laboratory. The only testing foreseen for the project is compaction testing of placed fill as directed by the Project Geologist at the owner's expense.

SECTION 1K MATERIAL ALTERNATIVES OR SUBSTITUTIONS

A. Approval by Project Geologist of a substitute proposed by Contractor for a specified method or material shall not relieve Contractor of the responsibility for full compliance with plans and specifications, and for adequacy of the substituted method or material. Contractor shall also be responsible for resultant changes which the substitution requires in his work, the work of his subcontractors and of other contractors and shall effect such changes without cost to Owner.

B. The words "or equal" are to be interpreted as meaning "or equal in like quality and performance of stated product". When a proprietary item is specified, it is to be used as a quality reference only. Contractor can submit other products of comparable quality to Project Geologist for his/her approval.

SECTION 1L INSPECTION

The Contractor shall permit and facilitate inspection of the work by the Owner and his agents and public authorities at all times. Contractor shall provide continuous supervision of the work.

SUBMITTALS

Submit copies of all materials within 30 days after award of Contract. Submit all items at one time in a neat and orderly manner. Partial lists will not be acceptable.

Submittals shall include the manufacturer's specifications (i.e., for culverts, wattles, etc.), and physical dimensions. Where submittal sheet describes items in addition to that item being submitted, the submitted item shall be clearly marked on the sheet and superfluous information shall be crossed out.

SECTION 1M TIME EXTENSIONS

Notwithstanding any other provisions of this contract it is mutually understood that the time extensions for changes in the work will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of construction. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements so delayed and that the remaining contract completion dates for all other portions of the work will not be altered and may further provide for an equitable readjustment of liquidated damages pursuant to the new completion schedule. Time extensions will be considered only for climatic conditions that are more severe than the average seasonal conditions recorded by local U. S. National Weather Service.

SECTION 1N CONSTRUCTION SCHEDULE AND COST BREAKDOWN

Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the Project Geologist a Construction Progress Schedule in a form satisfactory to the Project Geologist, showing the proposed dates of commencement and completion of each of the various subdivisions of the work required under the Contract Documents.

The Contractor shall submit a schedule of the anticipated monthly payments that will become due in accordance with the Progress Schedule.

Submit an itemized breakdown of the costs of the various subdivisions of the work for the purpose of evaluating the Work completed for each monthly payment. Each monthly Payment Request shall be submitted in the same form with all data required by the form completed.

The figures used in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the Contract Price.

DIVISION 2 SITE WORK

SECTION 2A EXCAVATION, GRADING AND SURFACING

SCOPE OF WORK

Do necessary site clearing work and remove debris from site and perform all depicted excavation and grading activities. Refer to the plans.

SITE CLEARING

Remove any existing landscaping required for construction as shown on plans. All materials removed during site clearing shall become the Contractor's property and shall be removed from the premises or chipped and stockpiled onsite as directed by Project Geologist. Work shall be limited to within the property boundaries.

GRADING

Work shall comply with project plan, CBC Appendix J, and Section 19 of the "Standard Specifications" (latest edition) as applicable. adjacent public and private property from damage.

Where unsuitable material is encountered at the bottom of excavations which will not stabilize, under compaction, to a firm, unyielding state, the Contractor shall notify the Project Geologist who shall assess the situation and make recommendations.

In the event subsurface obstructions not normally expected are encountered, and not shown on the plans, such as foundations, piling, electrical ducts, or piping, the Owner's representative shall be notified at once for instructions before proceeding.

Grading cut/fill quantities provided are estimates and proposed contours shown are approximate. Actual quantities and finish-grade contours may change to balance onsite cut and fill.

EXCAVATION COMPACTION

Where unsuitable material is encountered at the bottom of excavations which will not stabilize, under compaction, to a firm, unyielding state, the Contractor shall notify the Project Geologist who shall assess the situation and make recommendations (i.e, over excavation and placement/compaction of suitable fill).

FILL COMPACTION

Fill shall be placed and compacted in accordance with CBC Appendix J and as depicted on the plans. All stockpile cover fill shall be compacted with compaction at owner's expense per Project Geologist field direction with target compaction of 95% relative compaction per Modified Proctor test unless otherwise approved by Project Geologist. Other placed fill shall be placed with performance compaction to the satisfaction of Project Geologist utilizing suitable equipment.

ROAD MATERIALS

Aggregate Base: Class II, 3/4" maximum aggregate, Section 26, "Standard Specifications", 95% target relative compaction per ASTM D1557-70 Moisture Density Standards.

SECTION 2B SITE IMPROVEMENTS

SCOPE OF WORK

Provide and install all site improvements shown on the project. Refer to the plans and Part 1 of this bid package.

SITE UTILITIES

General

Prior to any digging, contact "Underground Alert" at 1-800-227-2600.

CULVERTS

Culverts shall be ADS, CMP, or equal subject to approval of the Project Geologist. Contractor shall consult with Project Geologist regarding Owner's anticipated vehicular/equipment loads atop proposed culverts subsequent to project completion, shall provide sufficient temporary cover over culverts using suitable approved backfill material to ensure culverts can support construction loads during project construction, and shall provide sufficient final cover over culverts using suitable approved backfill material to ensure culverts can project post-construction loads applying culvert manufacturer load limit/cover requirement tables/specification and with culverts to be installed per culvert manufacturer specifications/installation guidelines, with such documentation to be included as required submittals per Section 1L of these specifications.

Culvert invert elevations shall be approximately equal to the flow line elevation of the drainage feature flowing into the culverts and shall extend sufficient beyond the edges of backfill to prevent clogage of culverts via sloughing of fill (20-ft culvert length is expected to be suitable for all four proposed installations). Culverts shall slope 1% minimum in the direction of flow. Contractor shall place suitable material (i.e., riprap, ditch rock) at culvert outlets and/or on fill slopes adjacent to culvert inlets as needed/per field direction to prevent erosion/scour pool formation.