Addendum
No. FOUR  Date:4.26.2019

Project:

A NEW CAFETERIA ADDITION TO THE
UNION HILL SCHOOL FOR THE
MORGAN COUNTY BOARD OF EDUCATION
SOMERVILLE, ALABAMA

MCKEE PROJECT NO. 18-237
ALABAMA BUILDING COMMISSION NO. 2019075

The following changes and/or substitutions to the plans and specifications are hereby made a part of
same and are incorporated in full force as part of the contract.

Bidders shall acknowledge receipt of this Addendum in writing on his Proposal Form.

A4.1 GENERAL MODIFICATIONS:
A. Refer to the attached Proposal Form, Proposal “A” (Revised 4.26.19), herein.
B. Refer to the attached Proposal Form, Proposal “B” (Revised 4.26.19), herein.
C. Refer to the attached Proposal Form, Proposal “C” (Revised 4.26.19), herein.

A4.2 SPECIFICATION MODIFICATIONS:
A. Refer to Section 02200 Earth Moving (Revised 4.25.19), herein.

A4.3 DRAWING MODIFICATIONS:
A. None

B4.1 CLARIFICATIONS & RESPONSES:
A. None

END OF ADDENDUM FOUR
PROPOSAL FORM
(Revised 4.26.19)

To: ________________________________________________________ Date: ____________________

(Awarding Authority)

In compliance with your Advertisement for Bids and subject to all the conditions thereof, the undersigned

__________________________________________________________

(Legal Name of Bidder)

hereby proposes to furnish all labor and materials and perform all work required for the construction of

WORK  Proposal “A”- McKee Project No. 18-227 New AG Shop / Home Economics Building &
Alterations to Existing Band Building for Falkville High School for the Morgan County B.O.E.

in accordance with Drawings and Specifications, dated ____________________________, prepared by

__________________________________________________________, Architect/Engineer.

The Bidder, which is organized and existing under the laws of the State of _______________________,
having its principal offices in the City of ________________________________, is: ☐ a Corporation ☐ a Partnership ☐ n individual ☐ (other) ________________________.

LISTING OF PARTNERS OR OFFICERS: If Bidder is a Partnership, list all partners and their
addresses; if Bidder is a Corporation, list the names, titles, and business addresses of its officers:

__________________________________________________________

__________________________________________________________

BIDDER’S REPRESENTATION: The Bidder declares that it has examined the site of the Work, having
become fully informed regarding all pertinent conditions, and that it has examined the Drawings and
Specifications (including all Addenda received) for the Work and the other Bid and Contract Documents
relative thereto, and that it has satisfied itself relative to the Work to be performed.

ADDENDA: The Bidder acknowledges receipt of Addenda Nos. ______ through_______ inclusively.

BASE BID: For construction complete as shown and specified (Including Unit Prices below), the sum of:

__________________________________________________________ Dollars ($____________________)

ALTERNATES: If alternates as set forth in the Bid Documents are accepted, the following adjustments
are to be made to the Base Bid:

For Alternate No. 1 ( . .Greenhouse. ................. ) (add) $ __________________________

(Insert key word for Alternate)

For Alternate No. 2 ( . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ _________________

For Alternate No. 3 ( . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ _________________

For Alternate No. 4 ( . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ _________________

For Alternate No. 5 ( . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ _________________

For Alternate No. 6 ( . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ _________________

Page 1 of 3
(Revised 4.26.19)
UNIT PRICES- (See Attachment)

BID SECURITY: The undersigned agrees to enter into a Construction Contract and furnish the prescribed Performance and Payment Bonds and evidence of insurance within fifteen calendar days, or such other period stated in the Bid Documents, after the contract forms have been presented for signature, provided such presentation is made within 30 calendar days after the opening of bids, or such other period stated in the Bid Documents. As security for this condition, the undersigned further agrees that the funds represented by the Bid Bond (or cashier’s check) attached hereto may be called and paid into the account of the Awarding Authority as liquidated damages for failure to so comply.

Attached hereto is a: *(Mark the appropriate box and provide the applicable information.)*

- ☐ Bid Bond, executed by_____________________________ as Surety,
- ☐ a cashier’s check on the_________________________ Bank of______________________________

for the sum of _______________________________ Dollars ($________________________) made payable to the Awarding Authority.

BIDDER’S ALABAMA LICENSE:
State License for General Contracting:

<table>
<thead>
<tr>
<th>License Number</th>
<th>Bid Limit</th>
<th>Type(s) of Work</th>
</tr>
</thead>
</table>

CERTIFICATIONS: The undersigned certifies that he or she is authorized to execute contracts on behalf of the Bidder as legally named, that this proposal is submitted in good faith without fraud or collusion with any other bidder, that the information indicated in this document is true and complete, and that the bid is made in full accord with State law. Notice of acceptance may be sent to the undersigned at the address set forth below.

The Bidder also declares that a list of all proposed major subcontractors and suppliers will be submitted at a time subsequent to the receipt of bids as established by the Architect in the Bid Documents but in no event shall this time exceed twenty-four (24) hours after receipt of bids.

Legal Name of Bidder ________________________________
Mailing Address ___________________________________
* By (Legal Signature) ______________________________
* Name (type or print) _______________________________ (Seal)
* Title ____________________________________________
Telephone Number ________________________________

* If other than the individual proprietor, or an above named member of the Partnership, or the above named president, vice-president, or secretary of the Corporation, attach written authority to bind the Bidder. Any modification to a bid shall be over the initials of the person signing the bid, or of an authorized representative.
UNIT PRICES

Unit Prices: The Unit Prices below establishes Unit Prices so that the Owner can delete/add quantities from the Contract(s) required.

Proposal “A” Unit Pricing (Falkville):

UNIT PRICE #1: The Contractor shall include in his Base Bid proposal the stripping of TOP SOIL TO SUBGRADE. 6 inches of existing surficial material. The Contractor shall also include in his Base Bid proposal the undercutting of 800 Cubic Yards Measured in Place (24 inch undercut) of the existing soft soil material below the 6 inch surficial material, disposal offsite of excavated material and the replacement with suitable compacted and tested engineered fill composed of material with a maximum dry density of 95 pounds per cubic foot (pcf) or greater, as determined by a Standard Proctor test. The structural fill soils should have a maximum liquid limit (LL) and plasticity index (PI) of 50 and 30, respectively. The structural fill should contain less than 3 percent of organics and other deleterious materials. The lifts should not exceed 6 8 to 10 inches thick (loose lift thickness), depending on the compaction equipment used. Density and moisture tests should be performed on each lift, prior to placement of subsequent lifts. A commonly used testing criterion is one (1) density/moisture test per 2,500 square feet per lift in building areas and one (1) test per 5,000 square feet per lift in paved areas. A minimum compaction of 98 percent of the Standard Proctor ASTM D 698 maximum dry density, with a moisture content of ±2 percent of optimum, should be achieved prior to placement of subsequent soil fill material lifts. *The undercutting and fill of all material shall include 5'-0” beyond building pad area. 

800 CYMIP @ ______ per CYMIP = $____________ Included in Base Bid
To: ________________________________________________________ Date: ____________________

(Awarding Authority)

In compliance with your Advertisement for Bids and subject to all the conditions thereof, the undersigned

(Legal Name of Bidder)

hereby proposes to furnish all labor and materials and perform all work required for the construction of

WORK Proposal “B”- McKee Project No. 18-237 New Cafeteria Addition to the Union Hill School

for the Morgan County B.O.E.

in accordance with Drawings and Specifications, dated __________________________, prepared by

________________________, Architect/Engineer.

The Bidder, which is organized and existing under the laws of the State of ______________________,

having its principal offices in the City of ________________________________,

is: □ a Corporation □ a Partnership □ an individual □ (other) __________________________.

LISTING OF PARTNERS OR OFFICERS: If Bidder is a Partnership, list all partners and their addresses; if Bidder is a Corporation, list the names, titles, and business addresses of its officers:

____________________________________________________________________

____________________________________________________________________

BIDDER’S REPRESENTATION: The Bidder declares that it has examined the site of the Work, having

become fully informed regarding all pertinent conditions, and that it has examined the Drawings and

Specifications (including all Addenda received) for the Work and the other Bid and Contract Documents

relative thereto, and that it has satisfied itself relative to the Work to be performed.

ADDENDA: The Bidder acknowledges receipt of Addenda Nos. ______ through_______ inclusively.

BASE BID: For construction complete as shown and specified (Including Unit Prices below), the sum of:

_____________________________________________________ Dollars ($____________________)

ALTERNATES: If alternates as set forth in the Bid Documents are accepted, the following adjustments

are to be made to the Base Bid:

For Alternate No. 1 (__________________________) (add)(deduct) $ ______________________

(Insert key word for Alternate)

For Alternate No. 2 (__________________________) (add)(deduct) $ ______________________

For Alternate No. 3 (__________________________) (add)(deduct) $ ______________________

For Alternate No. 4 (__________________________) (add)(deduct) $ ______________________

For Alternate No. 5 (__________________________) (add)(deduct) $ ______________________

For Alternate No. 6 (__________________________) (add)(deduct) $ ______________________
UNIT PRICES- (See Attachment)

BID SECURITY: The undersigned agrees to enter into a Construction Contract and furnish the prescribed Performance and Payment Bonds and evidence of insurance within fifteen calendar days, or such other period stated in the Bid Documents, after the contract forms have been presented for signature, provided such presentation is made within 30 calendar days after the opening of bids, or such other period stated in the Bid Documents. As security for this condition, the undersigned further agrees that the funds represented by the Bid Bond (or cashier’s check) attached hereto may be called and paid into the account of the Awarding Authority as liquidated damages for failure to so comply.

Attached hereto is a: (Mark the appropriate box and provide the applicable information.)

☐ Bid Bond, executed by___________________________________________________________ as Surety,
☐ a cashier’s check on the_________________________ Bank of_____________________________,
for the sum of _____________________________________________________ Dollars
($__________________________) made payable to the Awarding Authority.

BIDDER’S ALABAMA LICENSE:
State License for General Contracting:

<table>
<thead>
<tr>
<th>License Number</th>
<th>Bid Limit</th>
<th>Type(s) of Work</th>
</tr>
</thead>
</table>

CERTIFICATIONS: The undersigned certifies that he or she is authorized to execute contracts on behalf of the Bidder as legally named, that this proposal is submitted in good faith without fraud or collusion with any other bidder, that the information indicated in this document is true and complete, and that the bid is made in full accord with State law. Notice of acceptance may be sent to the undersigned at the address set forth below.

The Bidder also declares that a list of all proposed major subcontractors and suppliers will be submitted at a time subsequent to the receipt of bids as established by the Architect in the Bid Documents but in no event shall this time exceed twenty-four (24) hours after receipt of bids.

Legal Name of Bidder ____________________________________________________________
Mailing Address ________________________________________________________________

* By (Legal Signature) __________________________________________________________

* Name (type or print) ________________________________ (Seal)

* Title ________________________________________________________________

Telephone Number ______________________________________________________________

* If other than the individual proprietor, or an above named member of the Partnership, or the above named president, vice-president, or secretary of the Corporation, attach written authority to bind the Bidder. Any modification to a bid shall be over the initials of the person signing the bid, or of an authorized representative.
UNIT PRICES

Unit Prices: The Unit Prices below establishes Unit Prices so that the Owner can delete/add quantities from the Contract(s) required.

Proposal “B” Unit Pricing (Union Hill Cafeteria):

UNIT PRICE #1: The Contractor shall include in his Base Bid proposal the stripping of TOP SOIL TO SUBGRADE 6 inches of existing surficial material. The Contractor shall also include in his Base Bid proposal the undercutting of 2,000 Cubic Yards Measured in Place (24 inch undercut) of the existing soft soil material below the 6 inch surficial material, disposal offsite of excavated material and the replacement with suitable compacted and tested engineered fill composed of material with a maximum dry density of 95 pounds per cubic foot (pcf) or greater, as determined by a Standard Proctor test. The structural fill soils should have a maximum liquid limit (LL) and plasticity index (PI) of 50 and 30, respectively. The structural fill should contain less than 3 percent of organics and other deleterious materials. The lifts should not exceed 8 to 10 inches thick (loose lift thickness), depending on the compaction equipment used. Density and moisture tests should be performed on each lift, prior to placement of subsequent lifts. A commonly used testing criterion is one (1) density/moisture test per 2,500 square feet per lift in building areas and one (1) test per 5,000 square feet per lift in paved areas. A minimum compaction of 98 percent of the Standard Proctor ASTM D 698 maximum dry density, with a moisture content of ±2 percent of optimum, should be achieved prior to placement of subsequent soil fill material lifts. *The undercutting and fill of all material shall include 5'-0" beyond building pad area.

2,000 CYMIP @ ______ per CYMIP = $_____________ Included in Base Bid
To: ______________________________ Date: ______________________

(Awarding Authority)

In compliance with your Advertisement for Bids and subject to all the conditions thereof, the undersigned

(Legal Name of Bidder)

hereby proposes to furnish all labor and materials and perform all work required for the construction of

WORK  Proposal “C” - Combination Bid of Mckee Project #18-227 Falkville High School AND

Mckee Project #18-237 Union Hill Cafeteria

in accordance with Drawings and Specifications, dated __________________________, prepared by __________________________, Architect/Engineer.

The Bidder, which is organized and existing under the laws of the State of __________________________, having its principal offices in the City of __________________________, is:  □ a Corporation  □ a Partnership  □ an individual  □ (other) __________________________.

LISTING OF PARTNERS OR OFFICERS: If Bidder is a Partnership, list all partners and their addresses; if Bidder is a Corporation, list the names, titles, and business addresses of its officers:

________________________________________________________________________________________

BIDDER’S REPRESENTATION: The Bidder declares that it has examined the site of the Work, having become fully informed regarding all pertinent conditions, and that it has examined the Drawings and Specifications (including all Addenda received) for the Work and the other Bid and Contract Documents relative thereto, and that it has satisfied itself relative to the Work to be performed.

ADDENDA: The Bidder acknowledges receipt of Addenda Nos. ______ through ______ inclusively.

BASE BID: For construction complete as shown and specified (Including Unit Prices below), the sum of:

______________________________________________________________ Dollars ($ ____________________)

ALTERNATES: If alternates as set forth in the Bid Documents are accepted, the following adjustments are to be made to the Base Bid:

For Alternate No. 1 ( . Greenhouse . . . . . . . . . . . . . . . . . . . . ) (add) $ ____________________

(Insert key word for Alternate)

For Alternate No. 2 ( . . . . . . . . . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ ____________________

For Alternate No. 3 ( . . . . . . . . . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ ____________________

For Alternate No. 4 ( . . . . . . . . . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ ____________________

For Alternate No. 5 ( . . . . . . . . . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ ____________________

For Alternate No. 6 ( . . . . . . . . . . . . . . . . . . . . . . . . . . ) (add)(deduct) $ ____________________
UNIT PRICES- (See Attachment)

BID SECURITY: The undersigned agrees to enter into a Construction Contract and furnish the prescribed Performance and Payment Bonds and evidence of insurance within fifteen calendar days, or such other period stated in the Bid Documents, after the contract forms have been presented for signature, provided such presentation is made within 30 calendar days after the opening of bids, or such other period stated in the Bid Documents. As security for this condition, the undersigned further agrees that the funds represented by the Bid Bond (or cashier’s check) attached hereto may be called and paid into the account of the Awarding Authority as liquidated damages for failure to so comply.

Attached hereto is a: (Mark the appropriate box and provide the applicable information.)

☐ Bid Bond, executed by________________________________________________________ as Surety,
☐ a cashier’s check on the________________________ Bank of_________________________,
for the sum of ____________________________ Dollars ($_________________________) made payable to the Awarding Authority.

BIDDER’S ALABAMA LICENSE:
State License for General Contracting: ____________________________________________

CERTIFICATIONS: The undersigned certifies that he or she is authorized to execute contracts on behalf of the Bidder as legally named, that this proposal is submitted in good faith without fraud or collusion with any other bidder, that the information indicated in this document is true and complete, and that the bid is made in full accord with State law. Notice of acceptance may be sent to the undersigned at the address set forth below.

The Bidder also declares that a list of all proposed major subcontractors and suppliers will be submitted at a time subsequent to the receipt of bids as established by the Architect in the Bid Documents but in no event shall this time exceed twenty-four (24) hours after receipt of bids.

Legal Name of Bidder ____________________________________________________________

Mailing Address ________________________________________________________________

* By (Legal Signature) __________________________________________________________
* Name (type or print) ___________________________________________________________ (Seal)
* Title _______________________________________________________________________

Telephone Number __________________________________________________________________

* If other than the individual proprietor, or an above named member of the Partnership, or the above named president, vice-president, or secretary of the Corporation, attach written authority to bind the Bidder. Any modification to a bid shall be over the initials of the person signing the bid, or of an authorized representative.
UNIT PRICES

Unit Prices: The Unit Prices below establishes Unit Prices so that the Owner can delete/add quantities from the Contract(s) required.

Proposal “C” Unit Pricing

#18-227 - Falkville High School:

UNIT PRICE #1: The Contractor shall include in his Base Bid proposal the stripping of **TOP SOIL TO SUBGRADE, 6 inches of existing surficial material.** The Contractor shall also include in his Base Bid proposal the undercutting of **800 Cubic Yards Measured in Place** (24 inch undercut) of the existing soft soil material below the 6 inch surficial material, disposal offsite of excavated material and the replacement with suitable compacted and tested engineered fill composed of material with a maximum dry density of 95 pounds per cubic foot (pcf) or greater, as determined by a Standard Proctor test. The structural fill soils should have a maximum liquid limit (LL) and plasticity index (PI) of 50 and 30, respectively. The structural fill should contain less than 3 percent of organics and other deleterious materials. The lifts should not exceed **6 8 to 10 inches thick** (loose lift thickness), depending on the compaction equipment used. Density and moisture tests should be performed on each lift, prior to placement of subsequent lifts. A commonly used testing criterion is one (1) density/moisture test per 2,500 square feet per lift in building areas and one (1) test per 5,000 square feet per lift in paved areas. A minimum compaction of 98 percent of the Standard Proctor ASTM D 698 maximum dry density, with a moisture content of ±2 percent of optimum, should be achieved prior to placement of subsequent soil fill material lifts. *The undercutting and fill of all material shall include 5'-0" beyond building pad area.

800 CYMIP @ _____ per CYMIP = $____________ Included in Base Bid

#18-237 - Union Hill Cafeteria:

UNIT PRICE #1: The Contractor shall include in his Base Bid proposal the stripping of **TOP SOIL TO SUBGRADE, 6 inches of existing surficial material.** The Contractor shall also include in his Base Bid proposal the undercutting of **2,000 Cubic Yards Measured in Place** (24 inch undercut) of the existing soft soil material below the 6 inch surficial material, disposal offsite of excavated material and the replacement with suitable compacted and tested engineered fill composed of material with a maximum dry density of 95 pounds per cubic foot (pcf) or greater, as determined by a Standard Proctor test. The structural fill soils should have a maximum liquid limit (LL) and plasticity index (PI) of 50 and 30, respectively. The structural fill should contain less than 3 percent of organics and other deleterious materials. The lifts should not exceed **8 to 10 inches thick** (loose lift thickness), depending on the compaction equipment used. Density and moisture tests should be performed on each lift, prior to placement of subsequent lifts. A commonly used testing criterion is one (1) density/moisture test per 2,500 square feet per lift in building areas and one (1) test per 5,000 square feet per lift in paved areas. A minimum compaction of 98 percent of the Standard Proctor ASTM D 698 maximum dry density, with a moisture content of ±2 percent of optimum, should be achieved prior to placement of subsequent soil fill material lifts. *The undercutting and fill of all material shall include 5'-0" beyond building pad area.

2,000 CYMIP @ _____ per CYMIP = $____________ Included in Base Bid
SECTION 02200 – EARTH MOVING (Revised 4.25.19)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division - I Specifications sections, apply to this section.

1.02 DESCRIPTION OF WORK

A. The work under this Section includes furnishing all labor, materials, equipment and services required to complete all earthwork required by plans and as specified herein.

B. Include clearing and grubbing, stripping, grade staking, excavation, fill and compaction, backfilling, final grading of subgrade, placing topsoil and portion of Dense Graded Base base under paved areas.

C. Work under this section shall be coordinated with and in conjunction with the requirements shown on the Drawings.

1.03 UNIT PRICES

A. Refer to Schedule of Unit Prices and the Proposal Forms for a detailed description of the Unit Prices which may affect the work under this Section.

1.04 GEOTECHNICAL ENGINEERING

A. The Owner's Geotechnical Engineering Company shall perform field density tests, manual probing, and/or penetrometer tests in the foundation excavations, footing trenches and on slab subgrades after final grading operations are completed. These tests will be paid for by the Owner for the initial test and up to one retest for up to 50% of the test locations. Costs for additional retests shall be the responsibility of the contractor.

1. Site Preparation: Owner’s geotechnical engineer, in conjunction with the Construction Manager, shall determine whether or not a subgrade is suitable for fill placement and make remedial recommendations, if required, to prepare a subgrade for fill placement.

2. Fill Placement and Compaction: Owner’s soils engineering technician shall periodically witness the filling operations and take sufficient in-place density tests to verify that the specified fill compaction is achieved. The technician, in conjunction with Terracon’s geotechnical engineer, shall observe borrow materials used and determine if their existing moisture contents are suitable.

B.

1.05 GENERAL REQUIREMENTS

A. Earthwork Contractor shall be responsible for protection of existing overhead and underground utilities and structures on or adjacent to the site and shall make good any damages thereto at his own expense.
B. During any off-site waste or borrow operations, Contractor shall be responsible for objectionable soiling of street pavements caused by his equipment and shall clean the streets when directed by the Engineer or QCP.

C. Site Contractor shall be responsible for layout of work this section for line and grade and for accuracy of finished work. If a professional surveyor is employed, he shall be paid by this Contractor.

D. The term, or notation, “Finish Grade” means the finish grade elevations shown or noted on the drawings by finish contours and/or “Spot” elevations. Therefore, Finish Grade indicates the following: Top of concrete walks with subgrade 4” (.33-feet) below unless otherwise shown; Top of Finish Asphalt Paving with subgrade as indicated by Typical Section(s); or Top of 6” topsoil with subgrade 6” (.5-feet) below.

E. Site Contractor shall be responsible for completion of work required under this Section and maintenance of finished condition until acceptance by Owner.

F. Dust control by watering or other method approved by the Owner's Representative will be maintained by the Contractor throughout the duration of the contract. This is not a separate pay item, but shall be included in the Base Bid for other components and items of work.

1.06 QUALITY CONTROL - TESTING

A. A qualified and licensed independent testing laboratory, approved by the Architect, shall perform the following required tests on materials and work execution:

1. Controlled earth fill material for all drives, parking, building and foundation areas shall be tested and approved soil consisting of lean clays (CL) or clayey sands (SC), free of topsoil, debris or organic material and rock or hard, non-compressible lumps larger than 3 inches in diameter. Material shall be in accordance with the recommendations of the Geotechnical Report.

2. After stripping the site in all areas indicated, the existing soil shall be tested by proofrolling under the inspection of a qualified lab technician. Proofrolling shall be by repeated passes of heavy rubber-tired vehicle. Any soft areas to be filled to finish grade shall be undercut, filled and compacted. Any areas requiring excavation shall be cut to subgrade, tested and, if necessary, undercut and filled.

1.07 DENSITY TEST FOR EARTHWORK & BASE MATERIALS PER LAYER OR LIFT OF FILL:

1. Under Buildings: One test per 2500 square yards of surface area per 6” lift.

2. Parking Areas: One test per 800 square yards of surface area per 6” lift.

3. Drives: One Test per 300 linear feet of surface area per 6” lift.

4. Lawns: One test per 15000 square feet per 6” lift.

5. Trench Backfill: One test per 500 linear feet.
PART 2 - PRODUCTS

2.01 FILL SOIL
A. As specified in 1.07.A.1., above.

2.02 DENSE GRADED AGGREGATE BASE
A. Aggregate Base conforming to Alabama Department of Transportation (ALDOT) 301A, Type B, Plant Mixed.

2.03 ACCESSORIES
A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility; colored as follows:
   2. Yellow: Gas.
   3. Orange: Telephone and other communications.
   4. Blue: Water systems.
   5. Green: Sewer systems.

PART 3 - EXECUTION

3.01 SITE PREPARATION
A. The site is adjacent to existing school facilities with ground surface in the planned construction area consisting of trees, grass and other vegetation, asphalt, concrete, etc. Clearing & grubbing shall include the removal of existing trees and brush, signs, buried piping, cables, slabs, pavement, debris and all other items to be removed. Unsuitable material must be removed during the clearing operations along with any topsoil, organic materials, saturated or contaminates materials, construction debris, buried objects, and utilities which may be encountered.

B. Existing topsoil shall be stripped and stockpiled on site as directed by the Construction Manager for future use. Stockpile shall be protected by necessary erosion control features and shall be seeded in accordance with the NPDES permit requirements.

3.02 GROUNDWATER
A. As an aid to developing finished subgrade areas, the contractor shall maintain the site in a positively drained condition throughout all phases of construction activity. Localized areas of trapped perched water may exist during the wetter months or periods of inclement weather. Therefore, site grading and temporary ditches should be utilized to manage any perched groundwater encountered.

B. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding areas. Do not allow water to accumulate in excavations. Provide and maintain pumps, well points, sumps, suction and discharge
lines, and other dewatering system components necessary to convey water away from excavations. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

### 3.03 FILL PLACEMENT AND COMPACTION

A. Saturated or organic materials must be removed from the surface of areas receiving fill in building pad areas and areas to be paved. The surface receiving fill shall be scarified to a depth of 6 inches before the fill is started. Sloped surfaces steeper than 4 horizontal to 1 vertical must be plowed, stepped, benched, or broken up so that the fill material will bond with the existing stratum. Satisfactory fill material must be placed in horizontal layers not exceeding 6 inches in loose depth and compacted to the density specified. No material should be placed on surfaces that are muddy, frozen or that contain frost.

B. Subgrade in fill areas shall be scarified to 6" depth before the fill is started. Subgrade of all areas requiring fill, and after stripping, shall be proof rolled and any soft spots corrected before fill placement. Compaction shall be accomplished by sheepsfoot rollers, pneumatic-tired rollers, steel-wheeled rollers or other approved equipment well suited-to the soil being compacted. Materials should be moistened or aerated, as necessary, to provide a moisture content that will facilitate obtaining the specified compaction with the equipment used. Water content shall be maintained within a range as specified in the Geotechnical Report. Each layer of subgrade fill and backfill under structures and pavements shall be compacted to not less that the 100% of maximum density based on the Standard Proctor Density.

C. The fill shall be placed in successive level uniform layers not exceeding nine (9) inches loose thickness, at or slightly above optimum moisture content using rubber-tired equipment or towed sheepsfoot roller.

1. Compaction of each 6" layer shall be tested by proofrolling.

2. Under buildings, drives and parking areas, compaction of layers shall be a minimum of 100% density.

3. Areas beyond ten (10) feet outside buildings, drives, and parking areas shall be compacted to a minimum of 95% of Proctor density.

4. Any area tested and not meeting compaction requirements shall be scarified and compacted to specifications.

5. Surface grades shall be maintained to drain so as not to pond. When soil is so wet as to cause movement under hauling and compaction equipment, operations shall be suspended until dry enough to compact properly.

6. Completed areas of fill shall be fine graded to final subgrade elevations as indicated on plans.

D. The Contractor shall not leave open excavations and shall backfill all open excavations before the end of each day, unless otherwise approved by the Owner's Representative. No separate payment will be made for this requirement, but shall be included in the Base Bid items of work.
3.04 LAYOUT

A. From plans, layout and stake earthwork requirements for line and grade and maintain this control until completion; includes buildings, walks, drives, parking areas, and athletic field areas.

3.05 EXCAVATION - GENERAL

A. General Site Excavation: In areas of site requiring "cut" for planned subgrades, excavate to indicated levels.

B. Should rock be encountered in excavating, Engineer shall be notified for measurement of volume before removing. Removal will be at unit bid price.

1. Rock is defined as limestone, sandstone, granite or similar rocks in solid beds or masses in original or stratified position which can be removed only by continuous drilling, blasting or the use of pneumatic tools, and all boulders of 2 cubic yards in volume or larger. Material that can be excavated and placed in a truck by track-mounted excavator shall not be considered as rock.

2. The ability to rip or excavate rock is determined by the type of excavator capable of removing it without blasting (i.e. hydraulic excavator; equipped with a short-tip-radius rock bucket; rated at not less than 120-flywheel hp with bucket curling force of not less than 25,000 lbf and stick-crowd force of not less than 18,700 lbf; measured according to International Organization for Standardization (ISO) 6165). The specification shall include a description of a mechanical method of removal which will serve this determination.

3. Material which can be loosened with a pick, frozen materials, soft laminated shale and hardpan, which for convenience or economy is loosened by drilling, blasting, wedging or the use of pneumatic tools, removal of concrete pavement and retaining walls shall not be classified as rock excavation.

4. Any excavated material not defined as rock shall be considered unclassified excavation.

3.06 BACKFILLING

A. Place and compact backfill in excavations promptly, but not before completing the following:

1. Surveying locations of underground utilities for Record Documents.

2. Testing and inspecting underground utilities.

3. Removing concrete formwork.

4. Removing trash and debris.

5. Removing temporary shoring and bracing.

B. Place backfill on subgrades free of mud, frost, snow, or ice.
C. Storm sewer trenches, utility trenches and other excavations in construction areas shall be backfilled and compacted.

D. Backfilling of all utility ditches shall meet the minimum compaction requirements as specified in the grading section of this specification.

E. Suitable specified soil or aggregate shall be used for backfill. It shall be placed in 6" loose layers and compacted with hand-guided tamping equipment. No backfill shall be placed against concrete or masonry for ten (10) days after footing or walls are built. Backfill of utility trenches may be immediately after inspection and approval of the in-place utility.

F. All trenches under gravel areas, shoulders and driveways shall be filled to subgrade with graded aggregate and compacted using vibratory compactor. Flowable backfill may be used as an alternate. No separate payment shall be made for flowable or aggregate backfill.

G. Install warning tape directly above utilities, 6 inches below subgrade.

3.07 FINAL GRADING

A. When all excavated and filled areas of site are completed, the site within construction limits shall be fine graded to finish grade elevations, as indicated on drawings. Excavating, filling and fine grading shall take into account building slabs and porous base thickness.

B. Fine grade tolerances:
   1. Building Pad Subgrade: +1 inch / -1/2 inch.
   2. Paved Areas: +0.1 feet
   3. Lawn Areas: +2 inches / -1 inch

C. Fine grading shall prevent or eliminate all depressions and irregular areas which hold water to any degree.

D. The site shall be shaped in accord with the design grade contours and graded to drain.

3.08 TOPSOIL

A. Using topsoil, originally stripped from site, place a 6" thick layer of topsoil on areas of the site as indicated on the drawings.

B. Place and spread evenly. Rake smooth to be ready for Seeding.

3.09 PROTECTION

A. In addition to protection specified in Paragraph 1.06 GENERAL REQUIREMENTS, this Contractor shall provide barricades, lights and the like to protect and warn workmen on the site and adjacent motorists and pedestrians against any job hazards such as open trenches and pits, trucks entering streets and the like.

3.010 SITE CLEAN-UP
A. Upon completion of all work of this Section, any surplus materials, scrap, debris and foreign materials not previously spread or stockpiled under the direction of the Architect shall be removed and disposed of off-site at the expense of the Contractor.

END OF SECTION