

**PROJECT MANUAL**  
CONSTRUCTION DOCUMENTS  
**MAY 21, 2025**



**Bullitt County Public Schools**  
1040 Highway 44 East  
Shepherdsville KY 40165

**Bullitt County Public Schools**  
**Bullitt Central High School**  
**Physical Science Center**  
**Bid Package 1: General Construction**

Bullitt County, KY  
BG# 25-145 | ska# 2023-50.1



**Bid Date:** **12 June 2025**

**Time of Opening:** **1:00 pm EST**

**Location:** **Bullitt County Public Schools Central Office**  
**1040 Highway 44 East, Shepherdsville, KY 40165**

**ARCHITECT**

Studio Kremer Architects Inc  
1231 S Shelby Street  
Louisville, KY 40203

**CIVIL ENGINEER**

Buzick Construction, Inc.  
702 Beechwood Avenue  
Bardstown, KY 40004

**STRUCTURAL ENGINEER**

Brown + Kubican Structural Engineers  
8900 Greenway Commons Pl. #201  
Louisville, KY 40220

**M E P ENGINEER**

CMTA, Inc.  
10411 Meeting Street  
Prospect, KY 40059

**Volume 1**

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Shepherdsville, Kentucky  
SKA# 2023-50 | BG-1# 25-145

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**Invitation to Bid (00 01 00)**

Bullitt County Public Schools will receive sealed bids for the furnishing of all labor, materials and equipment for the performance of all work required for the **Bid Package No.1 Phase III Athletics – Bullitt Central Physical Science Center | GENERAL CONSTRUCTION.**

Sealed bids will be received at the district's central office, Bullitt County Public Schools, 1040 Highway 44 East, Shepherdsville, KY 40165 until **1:00 pm E.S.T., June 12, 2025** and then, at said office, publicly opened and read aloud.

Sealed bids are to be hand delivered and logged in at this location prior to the designated times for receipt of bids. ***NO BIDS RECEIVED AFTER THIS TIME WILL BE CONSIDERED.*** No mailed in or faxed bids will be accepted. Bidder needs to be present at the bid opening or the bid shall be automatically rejected.

A single contract shall be awarded on the basis of the lowest and best lump sum bid.

The Bullitt County Board of Education provides equal opportunities to all of its Bidders with respect to the bidding and award of Construction Contracts.

Bullitt County Public Schools requires that the Bidder submit, with the bid, the following information:

1. **Proposal Form** - properly signed, with completed Unit Prices, listing of all sub-contractors, and listing of suppliers / manufacturers at time of submittal, including Attachments A and B.
2. **Bid Guaranty** - properly signed, witnessed and executed.

Each Bid shall be submitted on the Form of Proposal obtained from the Project Manual.

The Form of Proposal and required information listed above shall be submitted for the following project:

**BID DOCUMENTS**  
**Phase III Athletics – Bullitt Central Physical Science Center**  
**BID PACKAGE #1: GENERAL CONSTRUCTION**  
**Bullitt County, Kentucky**  
**June 12, 2025**

A completed Form of Proposal will be required for each Bidder. The Form of Proposal shall be complete per the instructions on the form, and submitted prior to the deadline for the Bid. Corrections to information on the Bid must be initialed in order to be valid. A Form of Proposal incorrectly or insufficiently completed will not be considered.

A bid may not be modified, withdrawn or cancelled by the Bidder for a period of (60) days after the designated time for receipt of Bids.

The Owner reserves the right to accept any bid, to reject any or all bids, and/or to waive any informalities in bids received where such acceptance, rejection or waiver is considered to be in the best interest of the Owner, and to reject any bid where evidence or information submitted by the Bidder does not satisfy the Owner that the Bidder is qualified to carry out the details of the Contract Documents.

It is the Owners' intent to purchase significant quantities of material items through direct Purchase Orders. The sales and use tax is to be excluded only on those material items purchased by the Owner directly from the material supplier. See Supplementary Instructions to Bidders for additional information.

**BID SECURITY:**

Bids shall be accompanied by a certified check (submit a digital scan with bid submission and a physical check should be submitted by the Contractor's Representative who is present on site on bid day) or bid bond in the amount of Five percent (5%) of the Bid Amount. Absence of this document will be grounds for automatic rejection of bids. The bid security is required as a guarantee that if the Proposal is accepted a Contract will be immediately be entered into and the performance of it properly secured. The Bid Guaranty shall be issued by a Surety Company that has an AM Best Company rating of 'A-' or better. Upon award of the Contract, a Performance and Payment Bond for 100% of the Bid Amount shall be provided to the Owner. In case the Bid is not accepted, the check or the Bid Bond will be returned to the Bidder. Certified or cashier's checks will not be returned until Board approval of the successful Bidder. Refer to the Instructions to Bidders for additional information.

**NON-CONFORMANCE TO THE ABOVE REQUIREMENTS SHALL BE GROUNDS FOR REJECTION OF THE BID.**

A PRE-BID MEETING for this project shall be held at **10:00 am E.S.T., on Wednesday, May 28th, 2025** at the district's Central Office, Bullitt County Public Schools, 1040 Highway 44 East, Shepherdsville, KY 40165. The athletic facilities at each high school site will be open and accessible immediately after the pre-bid meeting for onsite review.

**OBTAINING PLANS AND SPECIFICATIONS:**

Plans and Specifications may be obtained from Lynn Imaging, 11460 Bluegrass Pkwy, Louisville KY 40299, 502.499.8400, [www.lynnimaging.com](http://www.lynnimaging.com), in accordance with the terms set out below:

Each company requesting Construction Documents must identify the position of the company as being either the prime bidder, material supplier, or other and provide the name, address, and telephone number of the person responsible for receiving addenda material and general communication concerning the Bid.

**PRINTED PLANS AND SPECIFICATIONS:**

Printed plans and specifications are available to be purchased from Lynn Imaging. Contact Lynn Imaging for purchase price. Note that this is a non-refundable purchase price.

**DIGITAL DOWNLOAD:**

Plans and specifications may be downloaded from Lynn Imaging ([lynnimaging.com](http://lynnimaging.com)) at no cost to the Bidder.

If the Bidder has downloaded the full set of Construction Documents, they may contact Lynn Imaging to request specific plan sheets / specification sections to be printed at a purchase price determined by Lynn Imaging.

Bid Documents may also be reviewed through Builders Exchange's online Planroom.

**ADDENDA REQUIREMENTS:**

Addenda will be issued via digital download via the Lynn Imaging online Planroom.

Submit written requests to the Architect for clarification of any part of the Contract Documents, for interpretation and correction of any ambiguity, inconsistencies or errors therein. Any interpretations and/or corrections made will be included by Addendum, issued by the Architect.

Bidder's written requests shall be emailed to Cate Noble Ward at [cate@studiokremer.com](mailto:cate@studiokremer.com).

Written requests may be forwarded up to two (2) calendar days before the final Addendum is distributed.

The final Addendum will be distributed six (6) calendar days before the Bid Date.

**Only a written interpretation or correction by Addendum shall be binding. No Bidder shall rely upon interpretations or corrections given by any other method.**

**END OF SECTION 00 01 00**

**SUPPLEMENTAL INSTRUCTIONS TO BIDDERS (00 20 00)**

(AIA A701-1997, KDE Version):

The following supplements modify, change, delete from or add to the "Instructions To Bidders". Where any Article of the Instructions To Bidders is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Instructions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

**ARTICLE 3 BIDDING DOCUMENTS**

*Revise 3.2.2 as follows:*

Bidders and Sub-bidders shall examine Bidding Documents carefully prior to the Bid Date and make written request to the Architect for clarification of any part of the Contract Documents, for interpretation and correction of any ambiguity, inconsistencies, or errors therein. Refer to the Invitation to Bid for contact information. Only a written interpretation or correction by Addendum shall be binding. No Bidder shall rely upon interpretations or corrections given by any other method.

*ADD 3.2.4 as follows:*

WORK REASONABLY INFERRED, BUT NOT PARTICULARLY DELINEATED OR SPECIFIED: Bidders and Sub-bidders shall study all Drawings and Specifications and all conditions related to the completion of the Work, and if any materials or labor evidently necessary for the proper completion of the Work, which is not specifically mentioned and included in the Drawings and Specifications, although reasonably inferred therefrom - unless eliminated by special mention - or if any error or inconsistency appears therein, or in the event of a doubt arising as to the true intent and meaning of the Drawings and Specifications, shall be reported to the Architect at least two (2) days in advance of the final Addendum being issued. The Architect will then issue an Addendum containing the proper information to all Bidders, to assure fair competition.

In cases where the Bidder fails to make such report and the Architect is not otherwise advised of such doubtful matter, the Bidder is hereby responsible for the furnishing of the necessary labor and materials reasonably inferred or evidently necessary for the proper completion of the Work; for any additional work involved in the correction of apparent errors or inconsistencies and in executing the true extent and meaning of the Drawings and Specifications as interpreted by the Architect, and all such labor and materials shall be provided at the Bidder's expense and under no condition will any such labor and material be allowed as an extra.

*ADD 3.2.5 as follows:*

DISCREPANCIES: Anything called for in the Specifications and not shown on the Drawings or shown on the Drawings and not called for in the Specifications shall be included in both. Where the details and general drawings do not agree, the Bidder shall notify the Architect at least (2) days in advance of the final Addendum being issued and the Architect will issue an Addendum to all Bidders as to which of the two methods of construction shall be followed. Failure to make this determination shall make the Bidder subject to furnishing wither method as may be called for by the Architect. In case of discrepancies between the various parts of the Drawings and Specifications, the Bidder shall furnish either method as may be determined by the Architect.

#### **ARTICLE 4 BIDDING PROCEDURE**

*Paragraph 4.1.1, add the following:*

Provide one (1) original and one (1) copy of the Form of Proposal.

*Paragraph 4.1.2, add the following to the end of the paragraph:*

...except in those sections where the words "Not Applicable" have been entered. Failure to provide all required information shall be deemed sufficient reason for rejection of bid.

*Paragraph 4.2.1, change as noted:*

"Certified check" to "Certified/Cashiers check".

*Paragraph 4.2.2, add the following:*

A Surety Company issuing a bid bond shall have an A.M. Best Co. rating of "A-" or better and shall hold a Certificate of Authority issued by the Department of Treasury and shall be listed in the Circular, published annually as of July 1, by the Department of the Treasury, Financial Management Service in the Federal Register.

*Paragraph 4.4.1, add the following:*

The stipulated time period that a bid may not be modified, withdrawn or cancelled by the Bidder is for a period of 60-days following the date for the receipt of bids.

#### **ARTICLE 5 CONSIDERATION OF BIDS**

*ADD 5.3.4 as follows:*

Time Limit for Execution of Contract Documents: In the event that a Bidder's proposal is accepted by the Owner and such Bidder shall fail to execute the Contract and to furnish satisfactory performance bond within ten (10) calendar days from the date of notification of the award of Contract, the Owner may at their option, determine that the awardee has abandoned the Contract. Thereupon the proposal shall become null and void and the guarantee which accompanied it, shall be forfeited to and become the property of the Owner as liquidated damages from such failure. If the Bidder shall execute the Contract and furnish a satisfactory bond, the Bid Guarantee will be returned to the Bidder by the Owner.

#### **ARTICLE 6 POST-BID INFORMATION**

*Paragraph 6.3.1, add to the end of the third sentence:*

... of any reasonable objections in accordance with paragraph 6.3.3.

*Include the following under Paragraph 6.3.1*

.2 The listing of more than one subcontractor in a work category shall invalidate the Bid.



*ADD THE FOLLOWING:*

- 6.6.4** Within four (4) business days from the Bid Date the apparent successful Contactor shall provide:
- .1 A breakdown of major material items (excluding sales tax) the Bidder intends for the Owner to purchase through the issuance of Purchase Orders directly to the Material Suppliers. This breakdown shall be submitted on the KDE Purchase Order Summary Form. The successful bidder will fill out the Purchase Order Summary Form and turn into the Architect for the Owner to process.
  - .2 Purchase order amount shall include all costs of delivery to the job site.
  - .3 Incidental expenses (shop drawing preparation, bond, etc) for which a Material Supplier intends to submit an invoice shall not be included in the lump sum Purchase Order.
- 6.6.5** The General Contractor will be provided prepared Purchase Orders. Upon receipt, the Contractor shall have fourteen (14) business days to have each Purchase Order executed by the respective material suppliers and returned to the Architect. Any Purchase Order not returned within the allotted time shall become null and void and the value of the Purchase Order will be added to the Contract sum with the Contractor assuming responsibility for all taxes. Upon execution of the Purchase Orders by the Owner, the Purchase Orders will be delivered to the Contractor for distribution to the respective suppliers.
- 6.6.5.1** In the event the quantities of materials supplied via Purchase Orders are insufficient to complete the Work, the Contractor shall, at no expense to Owner, provide such materials as necessary to complete the Work.
- 6.6.5.2** In the event at the completion of the Work the Contractor has not Submitted invoices totaling the value of any individual Purchase Order, that Purchase Order shall be considered complete and closed. **NO ADJUSTMENT WILL BE MADE TO THE CONTRACTORS' CONTRACT.**
- 6.6.5.3** General Contractor shall be responsible for verifying that the materials listed on the Bid Breakout Form and included in a KDE Purchase Order Form are in full compliance with the Supplier/Manufacturer List provided. Should an inconsistency become apparent, the Architect shall be able to select the manufacturer at no additional cost to the Owner.
- 6.6.6** The Owner will provide the Contractor Kentucky Sales Tax Exemption Certificates for each Material Supplier.
- 6.6.7** If any Alternate bid results in a change to a listed subcontractor or vendor, then such subcontractor or vendor changes are to be identified in "List of Proposed Subcontractors" and/or "List of Proposed Materials/Manufacturers".
- 6.6.8** The Owner shall not be required to fill out any credit applications.

## ARTICLE 9 PUBLIC WORKS ACT

*Paragraph 9.2, delete paragraph:*

Project is not funded with federal funds.

## ARTICLE 10 TAXES

*ADD THE FOLLOWING:*

- 10.1.1** It is the Owner's intention to purchase major material items by direct Purchase Order. These materials shall be listed by the bidder on the KDE Purchase Order Summary Form. This Breakout shall include a description of the items, name of the manufacturer, name of the supplier, and the amount of the supplier's quote. A material supplier cannot be an installing contractor. It is intended that the bidder's base bid and alternate sums on the Form of Proposal should not include sales tax on these materials. For materials not identified for the Owner's direct purchase by Purchase Order, the bidder will be responsible for all applicable sales tax.
- 10.1.2** As provided by KRS 139.10 and the Kentucky Administrative Regulation 103 KAR 26:070 (Contract Construction), each contractor is responsible for Kentucky Sales and Use Tax on all materials purchased and installed by the Contractor or a third party hired by the Contractor.
- 10.1.3** The sales and use tax is to be excluded on those material items purchased by the Owner directly from the material supplier as indicated on the KDE Purchase Order Summary Form. If a contractor lists his own company as the supplier for items, the Owner will not issue a Purchase Order and exemption certificate. Accordingly, the sales and use tax on the materials used to fulfill the terms of the contract will be the liability of the contractor.
- 10.1.4** The material breakout amount indicated by a prospective bidder is considered final. The KDE Purchase Order Form stipulates the cost of the material and is validated by the signature of the supplier.
- 10.1.5** The value of the direct Purchase Order cannot be less than \$5,000.

## ARTICLE 11 POST BID REVIEW AND MATERIAL SUBMITTAL

*Paragraph 11.1.1, add the following:*

Failure to have a representative at the post bid review could lead to forfeiture of the bidders bid security, if errors or problems arise with the bid.

## ARTICLE 13 CONFLICT OF INTEREST, GRATUITIES AND KICKBACKS, USE OF CONFIDENTIAL INFORMATION

*ADD THE FOLLOWING:*

### **13.1 PROHIBITION AGAINST CONFLICTS OF INTEREST, GRATUITIES, AND KICKBACKS**

No employee or official of the Bullitt County Public Schools Board of Education, elective or appointive, shall take, receive, or offer to take or receive, either directly or indirectly, any

rebate, percentage of contract, money, or other things of value, as an inducement or intended inducement, in the procurement of business or the giving of business, for or to, or from, any person, partnership, firm, or corporation, offering, bidding for, or in open market seeking to make sales to the Bullitt County Public Schools Board of Education.

No person, firm, or corporation shall offer to make, pay, or give, any rebate, percentage of contract, money or any other thing of value, as an inducement or intended inducement, in the procurement of business or the giving of business, to any employee or to any official of the Bullitt County Public Schools Board of Education, elective or appointive, in his/her efforts to bid for, or offer for sale, or to seek in the open market.

#### **ARTICLE 16      REGULATIONS (Additional Article)**

The Kentucky Bid Law KRS 424.260 and 702 KAR 3:135 adopted by The Board of Education shall be deemed incorporated by reference in these specifications as though quoted fully herein. In the event of any conflict between this bid and the Kentucky Bid Law, the Law shall govern.

#### **ARTICLE 17      CHALLENGE OF A BID AWARD (Additional Article)**

A challenge to an award of a bid should be made in writing and received by the Owner within 48-hours of the bid opening. Rejection of a Contractor, Bidder or Offeror is a drastic action which must be based upon adequate evidence rather than mere accusation. In assessing adequate evidence, consideration shall be given to how much credible information is available, its reasonableness in view of surrounding circumstances, corroboration, or lack thereof as to important allegations and inferences which may be drawn from the existence or absence of affirmative facts. The person or persons making the challenge must provide information and specifics, in writing, that will allow the District to properly assess the challenge.

Challenges should be mailed or delivered to:

Danny Clemens, Director of Facilities  
Bullitt County Public Schools  
1040 Highway 44 East  
Shepherdsville, KY 40165

**END OF SECTION 00 20 00**

BG No. 25-145

Date: \_\_\_\_\_ To: (Owner): **Bullitt County Public Schools**

Project Name: **Bullitt County Public Schools – Bullitt CENTRAL Physical Science Center**

Bid Package No.1  
**General Construction**

City, County: **Bullitt County, Kentucky**

Name of Contractor:

Mailing Address:

Business Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Having carefully examined the Instructions to Bidders, Contract Agreement, General Conditions, Supplemental Conditions, Specifications, and Drawings, for the above referenced project, the undersigned bidder proposes to furnish all labor, materials, equipment, tools, supplies, and temporary devices required to complete the work in accordance with the contract documents and any addenda listed below for the price stated herein.

Addendum \_\_\_\_\_ (Insert the addendum numbers received or the word "none" if no addendum received.)

**BASE BID FOR BID PACAKGE NO. 1 :** For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

\_\_\_\_\_  
Use Figures

\_\_\_\_\_  
Dollars & \_\_\_\_\_ Cents

Use Words

Use Words

**IF ALSO BIDDING THE BULLITT E A S T PHYSICAL SCIENCE CENTER – PROVIDE A COMBINED BASE BID COST. LEAVE THIS SECTION BLANK IF YOU ARE NOT SUBMITTING A BID FOR THE BULLITT E A S T PHYSICAL SCIENCE CENTER.**

**BASE BID FOR COMBINED GENERAL CONSTRUCTION COSTS FOR BOTH BULLITT CENTRAL AND BULLITT EAST PHYSICAL SCIENCE CENTERS :** For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

\_\_\_\_\_  
Use Figures

\_\_\_\_\_  
Dollars & \_\_\_\_\_ Cents

Use Words

Use Words

ALTERNATE BIDS: (If applicable and denoted in the Bidding Documents)

For omission from or addition to those items, services, or construction specified in Bidding Documents by alternate number, the following lump sum price will be added or deducted from the base bid.

Alternate Bid No.	Alternate Description	+ (Add to the Base Bid)	- (Deduct from the Base Bid)	No Cost Change from the Base Bid)
<b>No.1</b>	<b>Door Hardware</b>			<input type="checkbox"/>
<b>No.2</b>	<b>Fire Alarm System</b>			<input type="checkbox"/>
<b>No.3</b>	<b>Plumbing Equipment</b>			<input type="checkbox"/>
<b>No.4</b>	<b>Preferred AV Systems</b>			<input type="checkbox"/>
<b>No.5</b>	<b>Preferred Indoor Turf Manufacturer</b>			<input type="checkbox"/>
<b>No.6</b>	<b>Entry Façade RGBW Lighting</b>			<input type="checkbox"/>
<b>No. 7</b>	<b>Road Entrance Modifications in Right of Way</b>			<input type="checkbox"/>

A maximum of 10 Alternate Bids will be acceptable with each Base Bid. Do not add supplemental sheets for Alternate Bids to this document.

**LIST OF PROPOSED SUBCONTRACTORS:**

List on the lines below each major branch of work and the subcontractor involved with that portion of work. If the branch of work is to be done by the Contractor, so indicate.

The listing of more than one subcontractor in a work category shall invalidate the bid.

The listing of the bidder as the subcontractor for a work category certifies that the bidder has in current employment, skilled staff and necessary equipment to complete that category. The architect/engineer will evaluate the ability of all listed subcontractors to complete the work and notify the owner. Listing of the bidder as the subcontractor may invalidate the bid should the architect's review indicate bidder does not have skilled staff and equipment to complete the work category at the time the bid was submitted.

**A maximum of 40 subcontractors will be acceptable with each bid. Do not add supplemental sheets for subcontractors to this document.**

**The bidder shall submit the list of subcontractors with the Bid.**

	<b><u>BRANCH OF WORK</u></b> (to be filled out by the Architect)	<b><u>SUBCONTRACTOR</u></b> (to be filled out by the contractor)
1.	Demolition	
2.	Building Layout (Engineer / Surveyor)	
3.	Excavation and Grading	
4.	Landscape	
5.	Concrete	
6.	Masonry	
7.	Athletic Equipment	
8.	Structural Steel	
9.	Steel Bar Joist / Metal Deck	
10.	Modified Roofing	
11.	Standing Seam Metal Roofing	
12.	Hollow Metal Door and Frames	
13.	Door Hardware	
14.	Aluminum Windows / Curtain Wall	
15.	Wall Framing and GWB Assemblies	
16.	Resilient Base and Accessories	

17.	Resinous Flooring	
18.	Quarry Tile and Base	
19.	Acoustical Ceiling	
20.	Painting	
21.	Mechanical	
22.	Sheet Metal (HVAC)	
23.	Mechanical Insulator	
24.	Test and Balance	
25.	Plumbing	
26.	Fire Protection	
27.	Electrical	
28.	Fire Alarm	
29.	Audio Visual	
30.	Intercom	
31.	Geothermal	
32.	Indoor Synthetic Turf	
33.		
34.		
35.		
36.		
37.		
38.		
39.		
40.		

**LIST OF PROPOSED SUPPLIERS AND MANUFACTURERS:**

List on the lines below each major material category for this project and the suppliers and manufacturers involved with that portion of work. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

The listing of more than one supplier or manufacturer in a material category shall invalidate the bid.

**A maximum of 40 suppliers and manufacturers will be acceptable with each bid. Do not add supplemental sheets for suppliers to this document.**

**The bidder shall submit the list of suppliers and manufacturers 1-hour after the Bid.**

	<b><u>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</u></b> (to be filled out by the Architect or Contractor)	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>MANUFACTURER</u></b> (to be filled out by the Contractor)
1.	Concrete		
2.	Masonry		
3.	Modified Bitumen Roofing		
4.	Pre-Finished Standing Seam Metal Roofing		
5.	Structural Steel / Steel Bar Joist / Metal Floor & Roof Deck		
6.	Hollow Metal Door and Frames & Wood Doors		
7.	Hardware		
8.	Aluminum Windows / Curtainwall		
9.	Acoustical Ceiling / Grid		
10.	Resilient Base and Accessories		
11.	Resinous Flooring		
12.	Paint		
13.	Fire Protection Sprinkler System / Sprinkler Heads		
14.	Plumbing Fixtures		
15.	Geothermal		
16.	Split Systems		



	<b><u>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</u></b> (to be filled out by the Architect or Contractor)	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>MANUFACTURER</u></b> (to be filled out by the Contractor)
17.	Electric Unit Heaters		
18.	Domestic Water Heater		
19.	Hose Kits		
20.	Hydronic Pumps and Specialties		
21.	Variable Frequency Drives		
22.	Heat Pumps / Heat Pump Chiller		
23.	AHU's / OA Units		
24.	Exhaust Fans		
25.	Grilles / Registers / Diffusers		
26.	Light Fixtures		
27.	Electrical Distribution Equipment		
28.	Fire Alarm		
29.	Intercom		
30.	Audio Visual		
31.			
32.			
33.			
34.			
35.			
36.			
37.			
38.			
39.			

**UNIT PRICES:**

Indicate on the lines below those unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all labor and materials, cost of all items, and overhead and profit for the Contractor, as well as any subcontractor involved. These unit prices shall be listed in units of work.

**A maximum of 40 unit prices will be acceptable with each bid. Do not add supplemental sheets for unit pricing to this document.**

**The bidder shall submit the list of unit prices 1-hour after the Bid.**

	<b><u>WORK</u></b> (to be filled out by the Architect)	<b><u>PRICE / UNIT</u></b> (to be filled out by the Contractor)	<b><u>UNIT</u></b>
1.	Soil excavation below building foundations / Trench excavation		C.Y.
2.	Mass Soil excavation below slab on grade		C.Y.
3.	Rock excavation below building foundations / Trench excavation		C.Y.
4.	A. FROM SITE - Engineered soil fill, compacted per specifications. B. IMPORTED - Engineered soil fill, compacted per specifications.		C.Y. C.Y.
5.	Engineered crushed stone fill, consolidated and installed per specifications		C.Y.
6.	Flowable fill concrete fill, with no reinforcing		C.Y.
7.	Reinforced concrete walks and slabs, 4" thick with compacted sub-base		S.Y.
8.	Reinforced concrete walks and slabs, 6" thick with compacted sub-base		S.Y.
9.	8" HDPE Pipe, Installed,		L.F.
10.	Asphalt Paving, per inch of thickness		S.Y.
11.	Additional Excavation – General Site		C.Y.
12.	4" CMU 6" CMU 8" CMU (reinforced) 12" CMU (reinforced)		S.F. S.F. S.F. S.F.
13.	Structural Steel (weight less than 20 lbs/ft) (weight more than or equal to 20 lbs/ft)		LB. LB.
14.	4'-0" High Chain Link Fence 6'-0" High Chain Link Fence		L.F. L.F.
15.	4'-0 Wide Chain Link Gate w/ Hardware 8'-0 Wide Chain Link Gate w/ Hardware 13'-0 Wide Chain Link Gate w/ Hardware		EA. EA. EA.
16.	8'-0" Decorative Steel Fence		L.F.
17.	4'-0 Wide Decorative Steel Gate w/ Hardware 8'-0 Wide Decorative Steel Gate w/ Hardware 13'-0		EA. EA.

	<b><u>WORK</u></b> (to be filled out by the Architect)	<b><u>PRICE / UNIT</u></b> (to be filled out by the Contractor)	<b><u>UNIT</u></b>
18.	3/4" EMT conduit installed (Plain or Factory Colored).		L.F.
19.	Exit light fixture X-1 installed complete with 6'-0" whip and three #12 AWG conductors.		EA.
20.	"B" fixture installed complete with a 6'-0" whip with three #12 AWG conductors		EA.
21.	#12 AWG conductor installed		L.F.
22.	#10 AWG conductor installed		L.F.
23.	Surface Wall Interior Intercom Speaker		EA.
24.	Tamper resistant 20A duplex outlet installed		EA.
25.	Fire Alarm manual pull station installed.		EA.
26.	Recessed 2G backbox and 3/4" or 1" EMT stub-out above 10'-8" accessible ceiling.		EA.
27.	Fire Alarm Smoke Detector		EA.
28.	Fire Alarm Audio Visual Device		EA.
29.	1-inch Installed Interior Geothermal copper runouts with Misc. Fittings		L.F.
30.	1-1/2 inch Installed Interior Geothermal copper runouts with Misc. Fittings		L.F.
31.	2-inch Installed Interior Domestic Water Pipe		L.F.
32.	3-inch Installed DWV Pipe with Misc. Fittings		L.F.
33.	Permanent steel casing for 1 1/4-inch geothermal wellfield piping		L.F.
35.	RCP 12" RCP 36" RCP 42"		L.F. L.F. L.F.
36.	Storm Headwall & Flared End Sections		EA
37.	Inlets 4x4		EA
38.	Stormwater Manhole		EA
39.	Sanitary Manhole		EA
40.	8" PVC – Sanitary		L.F.

**Note:** Backbox and conduit stubouts ARE separate from individual line items and shall not be included in "installed" electrical unit prices.

**DIRECT MATERIAL PURCHASES:**

Indicate on the lines below those materials to be purchased directly by the Owner with a Purchase Order to be issued by the Owner to the individual suppliers. The value of the direct Purchase Order cannot be less than \$5,000. Following the approval of bids, the Contractor shall formalize this list by completing and submitting the electronic Purchase Order Summary Form provided by KDE. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

**A maximum of 50 POs will be acceptable with each bid. Do not add supplemental sheets for additional POs to this document.**

**The bidder shall submit the list of Purchase Orders within four (4) days of the bid.**

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
1.			
2.			
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18.			

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
19.			
20.			
21.			
22.			
23.			
24.			
25.			
26.			
27.			
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39.			
40.			
41.			
42.			
43.			

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
44.			
45.			
46.			
47.			
48.			
49.			
50.			

**TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS:**

In the event that a bidder's proposal is accepted by the Owner and such bidder should fail to execute the contract within ten (10) consecutive days from the date of notification of the awarding of the contract, the Owner, at his option, may determine that the awardee has abandoned the contract. The bidder's proposal shall then become null and void, and the bid bond or certified check which accompanied it shall be forfeited to and become the property of the Owner as liquidated damages for failure to execute the contract.

The bidder hereby agrees that failure to submit herein above all required information and/or prices can cause disqualification of this proposal.

Submitted by:

NAME OF CONTRACTOR / BIDDER: \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S NAME: \_\_\_\_\_  
Signature

AUTHORIZED REPRESENTATIVE'S NAME (printed): \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S TITLE: \_\_\_\_\_

***NOTICE: Bid security must accompany this proposal if the Base Bid price is greater than ~~of \$25,000.~~ \$100,000. (change effective June 3, 2019.)***

**This form shall not be modified.**

## Attachment A

This attachment shall be included as an extension to the Form of Proposal - Kentucky Department of Education, 2013, 702 KAR 4:160

### **BASE BID ACCOUNTING BREAKDOWN:**

*Submit completed Breakdown within 4 Calendar Days of Bid submission.*

<b>WORK</b>	<b>PRICE</b>
<b>1</b> Bullitt Central Field House	
<b>a</b> Civil (sitework) and Landscape	\$ _____
<b>b</b> Architecture and Structure	\$ _____
<b>c</b> Fire Protection	\$ _____
<b>d</b> Plumbing	\$ _____
<b>e</b> Mechanical	\$ _____
<b>f</b> Electrical	\$ _____
<b>g</b> Geothermal	\$ _____
<b>h</b> Back-Up Generator	\$ _____
<b>i</b> Intercom	\$ _____
<b>i</b> Access Road Behind Football Stadium	
a. Site Work	\$ _____
b. Site Lighting and Electrical	\$ _____
	_____
<b>BASE BID GRAND TOTAL:</b>	\$ _____
(must equal Base Bid)	

**CONTRACTOR ACKNOWLEDGEMENT OF COMPLIANCE WITH KRS 45A.343**

By signing below, Contractor or Subcontractor acknowledge that it has read KRS 45A.343. Contractor or Subcontractor fully understands the effect of nondisclosure or noncompliance for failure to reveal violations of certain KRS Chapters as listed in KRS 45A.343.

**2.3.7 Compliance with KRS Chapter 45A**

- (a) All applicable provisions of KRS Chapter 45A regarding notice to and disclosure by contractors shall be complied with. Without limitation of the foregoing, every contract entered into by the Board shall require the contractor and all subcontractors performing work under the contract to:
  - (i) Reveal any final determinations as such term is used in KRS 45A.343 of a violation by the contractor or subcontractor within the previous five-year period pursuant to KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that apply to the contractor or subcontractor; and
  - (ii) Be in continuous compliance with the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that apply to the contractor or subcontractor for the duration of the contract.
- (b) A contractor's failure to reveal such a final determination of a violation by the contractor of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 or to comply with these statutes for the duration of the contract shall be grounds for the Board's:
  - (i) Cancellation of the contract; and
  - (ii) Disqualification of the contractor from eligibility for future contracts awarded by the Board for a period of two years.
- (c) A Subcontractor's failure to reveal such a final determination of a violation by the subcontractor of KRS Chapters 136, 139, 141, 337, 338, 341, and 342 or to comply with these statutes for the duration of the contract shall be grounds for the disqualification of the subcontractor from eligibility for future contracts for a period of two years.

Contractor and or Subcontractor acknowledge that it has complied with the above requirements and have had the following violations as referenced above.

Listing of Violations (Attached separate sheet if necessary) Write "None" if no violations.

---

---

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor or Subcontractor (Print Name)

\_\_\_\_\_  
Contractor or Subcontractor (Signature)



**CONTRACTOR SAFETY (00 50 00)**

1. In order to provide a safe and healthful working environment, all contractors working for Bullitt County Public Schools are responsible for complying with all federal, state, and local regulations, such as, but not limited to, the Kentucky Occupational Safety and Health Standards for the Construction and General Industry, National Fire Protection Code, Kentucky Building Code, as incorporated in the **2015** International Building Code, Department of Health Regulations, Asbestos Hazard Emergency Response Act, Environmental Protection Agency, Team Kentucky Healthy at Work Requirements for Construction Businesses and Project Specifications.
2. Each Contractor shall always have a trained competent safety person on site who is required to conduct all necessary inspections and assessments. Each Contractor shall have a written company safety plan on the worksite.
3. Good housekeeping procedures and daily clean up shall be followed to minimize slip, trip, and fall hazards.
4. Material Safety Data Sheets (MSDS) shall be kept on site and employees familiar with their content.
5. Workers shall follow appropriate standards regarding specific eye protection, other personal protective equipment, or respiratory protection as required.
6. If required, and not included in the specifications, contractors shall follow proper disposal procedures of any hazardous waste.
7. No smoking is allowed in the school building or on school grounds.
8. Develop an emergency procedures plan to be utilized in the event of fire, tornado, or an earthquake, etc.
9. The contractor shall implement all required safety procedures when performing hot work on Bullitt County Public Schools projects.

**THE FOLLOWING IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY TO THE CONTRACTOR**

**WORKER PROTECTION**

The OSHA Construction Industry Standard (1926.62) applies to "all construction work where an employee may be exposed to lead." Construction work is defined as "work for construction, alteration and/or repair." It includes:

- (1) Demolition or salvage of structures where materials containing lead are present.
- (2) New construction, renovation of structures, or portions thereof where materials containing lead are present.
- (3) Maintenance operations associated with construction activities.

The rule requires "each employer who has a workplace or operation covered by the standard to initially determine if any employee may be exposed to lead at or above the action level." This is to be determined by personal exposure monitoring. The rule further states that "until the employer performs an employee exposure assessment as required, the employer shall treat the employee as if the employee were exposed above the PEL, and not in excess of ten times the PEL, and shall implement appropriate employee protective measures.

**The tasks covered by this requirement include manual demolition of structures (e.g. dry wall), manual scraping, manual sanding, heat gun applications and power tool cleaning with dust collection systems."**

The employee must collect at least one sample for each job classification.

Until an employer performs an initial employee exposure assessment, the employer must provide to the employees:

- (1) Appropriate respiratory protection and respirator physicals.
- (2) Appropriate personal protective equipment.
- (3) Change areas.
- (4) Hand washing facilities.
- (5) Biological monitoring.
- (6) Proper training.

However, "where the employer has previously monitored for lead exposure, and the data were obtained within the past 12 months during work operations closely resembling the process, type of material, work practices and environmental conditions used and prevailing in the employer's current operations, the employer may rely on this existing data to satisfy the initial monitoring requirements.

If the initial monitoring data indicates that workers are not exposed to lead concentrations at or above the 30 ug/m<sup>3</sup> action level, no additional control or worker protection measures are required. Should data indicate that employees may be exposed to elevated lead concentrations exceeding the action level, the other aspects of 1926.62 concerning worker protection shall apply.

**END OF SECTION 00 50 00**

## **Preface to the Geotechnical Report**

The Geotechnical Report is included in the Project Manual for informational purposes only.

It is not to be considered part of the Contract Documents. Contractor shall review the document and come to their own conclusion regarding sub-soil conditions. Additional borings can be made at the Bidder / Contractor's expense. If this is needed, the additional exploration shall be coordinated with the Owner.

The boring locations shown on the Civil Drawings are approximate based on the information provided in the geotechnical report that was performed during the Schematic Design Phase and are meant for Contractor reference only.

The Contractor may perform any additional borings, inspections and / or soil testing at their expense. Any additional testing performed prior to bidding shall be coordinated with the Owner.

### **1. Report of Geotechnical Exploration**

#### **Bullitt Central High School**

Shepherdsville, Kentucky

CSI Project No. LX220211

as prepared by Consulting Services Incorporated (CSI), 4 January 2023



# Report of Geotechnical Exploration Bullitt Central High School

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Prepared for :  
Bullitt County Schools

January 4, 2023

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**CONSULTING SERVICES INCORPORATED**  
Geotechnical & Materials Engineering | IBC Special Inspection | Material Testing

January 4, 2023

Bullitt County Board of Education  
% Studio Kremer Architects  
1231 S Shelby Street  
Louisville, Kentucky 40203

ATTN: Ms. Cate Ward, AIA

Subject: **Report of Geotechnical Exploration**  
Bullitt Central High School  
Shepherdsville, Kentucky  
CSI Project No. LX220211

Dear Ms. Ward:

Consulting Services Incorporated of Kentucky (CSI) is pleased to present our report for the geotechnical services completed for your new high school project located in Shepherdsville, Kentucky. We provided our services in general accordance with CSI's proposal number 8118 dated October 13, 2022.

Our report represents information provided to us, readily available published data relevant to the site and site area, our observations and subsurface conditions encountered and our opinion of primary geotechnical conditions (discussion and recommendations) affecting design, construction and performance of the proposed earth or rock supported portions of the project.

We appreciate the opportunity to provide our geotechnical services to you and the design team. Please do not hesitate to contact us for questions or comments about the information contained herein.

Cordially,



Megan R. Cleinmark, CPG, PG  
Senior Geologist  
Licensed KY 162598



Bruce L. Hatcher, PE  
Chief Engineer  
Licensed KY 14,527

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## INTRODUCTION

### 1 SCOPE OF THE GEOTECHNICAL EXPLORATION

We conducted a geotechnical exploration which is summarized in the following report. Our services included a review of the project information provided, conducting a geotechnical exploration that utilized soil test borings and rock coring to obtain samples for modeling the soil and rock conditions at the subject site, an analysis of the data and information obtained, and providing recommendations for the soil supported portions of the project site as listed in our proposal.

### 2 PROVIDED INFORMATION

Project information was provided to us via e-mail correspondence from Ms. Cate Ward of Studio Kremer Architects. We were provided the following documents:

- Bullitt 2022 - RFP enclosure - Geotechnical Investigation Maps.pdf
- BCPS - geotechnical RFP to CSI.pdf
- 2022-37 BCHS Renovation and Athletics\_Architecture\_v21\_cateVX6FQ.pdf

Based on the information obtained, the following is our understanding of the project:

- The project site is located at 1330 KY-44 in Shepherdsville, Kentucky. Reference the *Site Location Plan* in the Appendix for further details.
- We understand the project will consist of gymnasium improvements, gym locker room and office improvements, auditorium/office reconfiguration and connection, auditorium improvements, and Hub reconfiguration.

We were not supplied with a grading plan for this project. However, we expect that the new structure FFE's (Finished Floor Elevations) will be near existing grade. Based on our experience with similar projects, we expect construction will consist of CMU walls and slab-on-grade floors and have assumed the following:

Table 1: Anticipated Conditions	
Site Grading - Building Pad	
Finished Floor Elevations	Near existing grade
Foundation Loading Conditions	
Load Type	Load
Column	50 kips
Wall	4 kips/LF
Floor Slab	100 pounds/SF

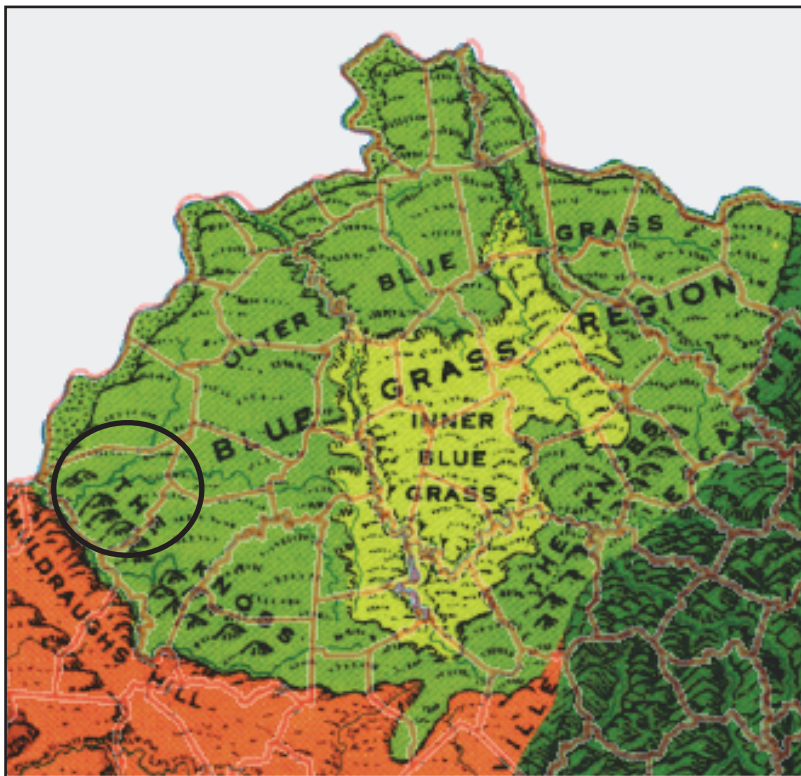
If any of the aforementioned information is in error or if the information changes during the course of the project, please contact our office so that we can re-evaluate the new information with respect to our recommendations.



### 3 AREA/SITE INFORMATION

#### 3A AREA TOPOGRAPHY/PHYSIOGRAPHY

The site is located in the Western Knobs area of the Bluegrass Region of the Bluegrass Physiographic Region of Kentucky. This area is located near the center of the state and is bordered by the Ohio River in the north and west and a ring of hills known as the Knobs in the west south, and east. It is a rolling plateau that becomes more rugged near the edges. The underlying limestone is often visible at the surface in road cuts and where eroded by streams. Published topographic mapping by the United States Geological Survey (USGS) indicates the elevations in the site vicinity range from 450 to 460 feet. Figure 1 shows the location of the site with respect to the regional physiography.



**Figure 1.** Kentucky Physiographic Map (site vicinity shown in the circle)

#### 3B SITE GEOLOGY

A review of the USGS Geologic Map of the Brooks, Bullitt and Jefferson Counties Quadrangle (dated 1972) indicates the project site is underlain by Louisville Limestone of the Middle Silurian aged rock deposits. The geologic quadrangle describes the Louisville Limestone as dolomitic limestone and dolomite that is yellowish-gray, light-olive-gray, pale-yellowish-brown to very pale orange. It is also fine grained, argillaceous in part, and very thin to thick bedded.

There are no faults mapped within the project vicinity. Dip in the vicinity of the site is less than 1 degree northeast. Please reference Figure 2 for more details of USGS mapped geology.

As with most of the geology of this portion of Kentucky, Karst (sinkholes, weathered bedrock, caverns, erratic bedrock, etc.) is associated with the site geology. Sinkholes are mapped to the northeast and east of the school, although no sinkholes are mapped near the project site. Some of the surrounding areas have been developed; therefore, obvious signs of sinkholes may have been filled. The Karst Occurrence in Kentucky map published by the Kentucky Geological Survey (KGS) indicates that the project site is in an area underlain by rock with a medium potential for Karst development. Please reference Figure 3 for more details.

January 4, 2023  
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### 3C PUBLISHED SITE SOIL CONDITIONS

- BrB— Bedford silt loam, 2 to 6 percent slopes
- Le— Lawrence silt loam
- Mc— McGary silt loam, 0 to 2 percent slopes

- Depth to restrictive feature for these soil series is listed as being greater than 80 inches.
- These soils series are listed as being “well drained” with a depth to water table greater than 80 inches.
- These soil series are listed as ranging from “Somewhat Limited” to “Very Limited” with respect to the construction of shallow excavations. Particular issues affecting construction include too clayey, dusty, depth to hard bedrock, slope, unstable excavation walls, ponding, and depth to saturated zone.

- These soil series are listed as ranging from “Somewhat Limited” to “Not Limited” with respect to construction of dwellings without basements. Particular issues affecting construction include too clayey, dusty, depth to hard bedrock, slope, unstable excavation walls, ponding, and depth to saturated zone.
- These soil series are listed as ranging from “Somewhat Limited” to “Very Limited” with respect to construction of dwellings with basements. Particular issues affecting construction include shrink-swell, and slope.
- These soil series are listed as being “Somewhat Limited” to Very Limited” with respect to construction of small commercial buildings. Particular issues affecting construction include slope, shrink-swell, depth to hard bedrock, depth to thin cemented pan, depth to thick cemented pan, depth to saturated zone, and ponding.
- These soil series are listed as being “Very Limited” with respect to construction of local roads and streets. Particular issues affecting construction include low strength, shrink-swell, soluble bedrock, frost action, ponding, depth to saturated hard bedrock, depth to thin cemented pan, depth to thick cemented pan, and slope.

Due to previous development surrounding the site, the soil survey information listed may no longer be useful since the site soils may have been altered. Thus, the soils described above may be on-site but not in their natural condition. Figure 4 shows the soils map from the USDA website.



**Figure 4:** USDA Soil Survey Map of Project Site (site vicinity outlined in green/orange)



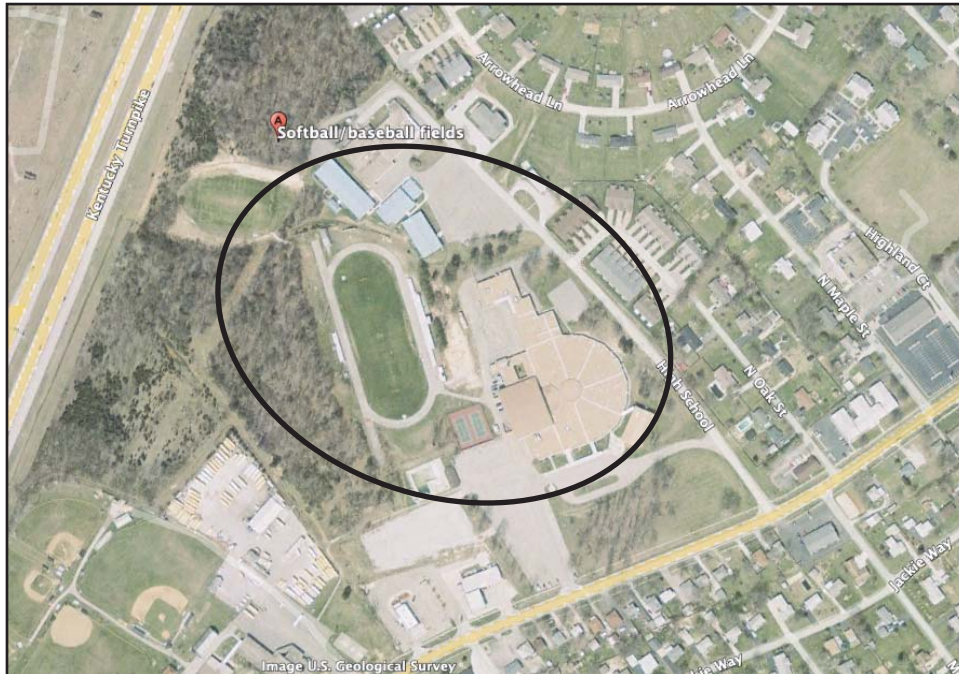
### 3D OTHER PUBLISHED SITE INFORMATION

We have reviewed several available aerial photographs, dated as far back as March 1998. The March 1998 aerial photograph indicates the project site is much the same as it was during our field reconnaissance. No other notable changes were observed near the project vicinity. Please reference the following aerial photographs for further details.



**Figure 5:** Aerial photograph, dated March 1998 from Google Earth  
(site vicinity shown in oval)

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**Figure 6:** Aerial photograph, dated December 2002 from Google Earth  
(site vicinity shown in oval)

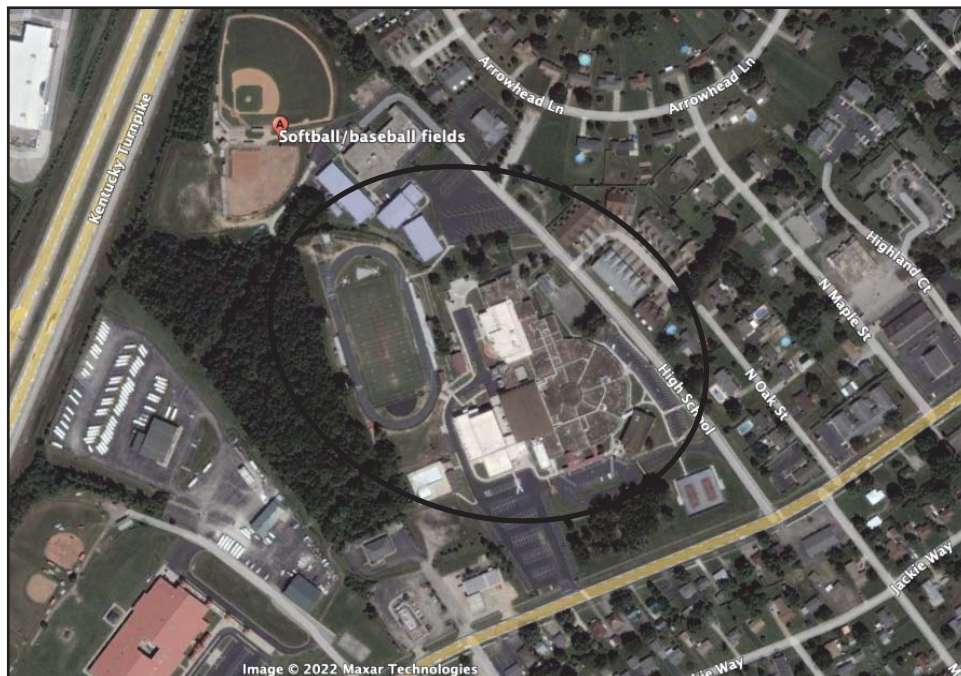


**Figure 7:** Aerial photograph, dated June 2006 from Google Earth  
(site vicinity shown in oval)





**Figure 8:** Aerial photograph, dated June 2010 from Google Earth  
(site vicinity shown in oval)



**Figure 9:** Aerial photograph, dated September 2016 from Google Earth  
(site vicinity shown in oval)



**Figure10:** Aerial photograph, dated March 2022 from Google Earth

#### 4 SITE SURFACE OBSERVATIONS

Mr. Kyle Pauley, PE of CSI conducted a site visit, performed a field reconnaissance, logged soil borings, rock coring, and directed drilling operations within the proposed project area on December 8, 2022.

The existing Bullitt Central High School is located at 1330 KY-44 in Shepherdsville, Kentucky. The high school is located in the southeastern quadrant of the property with the football field and track located in the northwestern portion.

The existing football field is entirely grass although some areas are bare earth. Based on our top of boring elevations, there is about 12 feet of vertical relief across our borings.

Public underground utilities (as marked by Before U Dig) were observed within the project vicinity. Also, Pinpoint Utility Protection cleared all of our borings for underground utilities. Please reference the following photographs for views of the site at the time of our services.





**Photo 1.** Overview of football field. View looking north.



**Photo 2.** Overview of football field. View looking south.



**Photo 3.** Overview of borings B-101 and B-102.



**Photo 4.** Overview of football field. View looking west.

## **5 SUBSURFACE CONDITIONS**

The subsurface conditions encountered at each of our soil boring locations are shown on the Logs in the Appendix. It should be noted that our soil borings were sampled according to the procedures presented in the Appendix. The Logs represent our interpretations of the subsurface conditions based on field logs, visual examination of field samples by an engineer, visual examination of auger cuttings, and tests of the samples collected. The letters in parentheses following the soil descriptions are the soil classifications in accordance with the Unified Soil Classification System. It should be noted that the stratification lines shown on the logs represent approximate transitions between material types. In-situ stratum changes could occur gradually or at slightly different depths. Water levels shown on the Boring Logs represent the conditions only at the time of our exploration.



## 5A SOIL CONDITIONS

Based on the boring plan provided, we performed 11 soil test borings:

- 2 in the school building addition (B-101 and B-102);
- 2 for the new field house (B-201 and B-202);
- 3 for the football fields (B-301 through B-303);
- 4 for the stadium facilities (B-401 through B-404);

Please reference the *Boring Location Plan* in the Appendix for details.

In general, we encountered the following in our soil borings: a layer of topsoil, overlying fill, overlying residual soils, overlying bedrock.

At the surface in all 11 borings, we encountered a layer of topsoil. The topsoil thickness ranged from 3 to 4 inches.

Beneath the topsoil, fill material was encountered in 9 of our 11 soil test borings ranging from 7 inches (B-302) to 4.6 feet (B-101) in thickness. In boring B-101, a layer of broken glass was encountered at a depth of 4.2 feet.

Beneath the fill, residual soils were encountered at all 11 of our borings. The first residual soil encountered consisted of dark gray lean clay (CL) and ranged in thickness from 2.2 feet (B-403) to 7.8 feet (B-201). The next residual soil encountered consisted of orangish-brown lean clay (CL) with black oxide nodules and gray/tan mottling. The thickness of the residual soils ranged from 1.4 feet (B-403) to 8.2 feet (boring B-402).

## 5B GROUNDWATER CONDITIONS

Water was not observed in any of our soil borings upon completion of augering. All of our borings were immediately backfilled auger cuttings upon completion of augering (due to safety concerns). Final groundwater readings were not obtained in the core holes since water was used to cool the coring bit.

Water conditions that usually affect construction and performance of projects consist of trapped/perched water zones which occur in various areas in the soil mass, at or near the bedrock bedding planes or at or near the soil/rock interface. Perched water sources are often not linked to the more continuous relatively stable groundwater table that typically occurs at greater depths. Due to the Karst terrain, this area can include springs and other water features. Site excavation activities or ground disturbance can expose these features and the resulting seepage can vary greatly. Finally, water issues are also dependent upon recent rainfall activity and surface and subsurface drainage patterns in the area.



## 5C BEDROCK INFORMATION

Auger refusal was encountered in 10 of the 11 soil test borings at depths ranging from 8 feet to 12.1 feet. We have interpreted auger refusal as the top of hard bedrock. It should be noted that there was no core water loss observed during coring activities.

Five feet of rock core was obtained in 2 borings (B-101 and B-401). The recovered rock cores consisted of medium gray dolomite that was medium grained, irregularly bedded, and highly weathered. The general core recovery and Rock Quality Designation (RQD) at each location is summarized in Table 2.

Table 2. General Core Recovery and Rock Quality Designation (RQD)		
Boring	Recovery	RQD
B-101	90%	60%
B-401	75%	6%

## 6 LABORATORY TESTING

Laboratory tests were performed on selected recovered samples from our borings. Detailed descriptions of these tests and the results of our testing are included in the Appendix. Tests performed included:

- Natural moisture contents
- Atterberg limits
- Percent fines analyses
- Unconfined compressive strength tests (soil)
- Standard Proctor test
- California Bearing Ratio (CBR) test

## GEOTECHNICAL DISCUSSION AND RECOMMENDATIONS

### 7 DISCUSSION-GEOTECHNICAL ISSUES

Based on our experience with similar projects and the conditions observed during our subsurface exploration, we believe the site is suitable for the proposed site improvements. However, this site will be more difficult (and more expensive) to develop when compared to some sites due to previously placed fill. The primary geotechnical concerns are:

- Previously Placed Fill
- Karst Geology

The following sections discuss each issue. However, recommendations to address the issues are contained in later sections of the report.



## 7A PREVIOUSLY PLACED FILL

Previously placed fill was encountered in 9 of our 11 soil test borings ranging from 7 inches (B-302) to 4.6 feet (B-101) in thickness. Previously placed fill consisted of brown/gray clay with black oxide nodules and glass fragments.

Fills placed in an uncontrolled manner have proven to be very problematic. The problems generally arise not from general settlement, but from erratic differential settling of the fill. The settlement of large masses is dependent upon several factors such as fill thickness, degree of compaction, fill contents, and age of the fill mass. Also, fills tend to settle linearly with thickness.

We typically recommend complete removal of any encountered previously placed fill within the proposed site improvement areas. We believe that most of the previously placed fill may be used as controlled fill, provided it meets specifications provided in our final geotechnical report. If any old fill is left in-place beneath the proposed site improvements, the Owner must be aware of the risk of construction over old fill material and hold CSI harmless for poor performance of the site improvements due to construction over the old fill.

## 7B KARST GEOLOGY

Karst is common in this area of Kentucky and typically includes, sinkholes, caverns, erratic/irregular (pinnacle and rock channels) bedrock surfaces, and “floater” type boulders or rock cobbles in the native soil overburden. Based upon initial research with the Kentucky Geologic Survey, there is a medium potential risk associated with Karst-related issues for this project site. However, multiple sinkholes are mapped to the east and northeast of the project.

Based on our knowledge of the area geology, sinkholes could be exposed during grading activities and foundation and utility construction. Detailed site proofrolling and foundation observations are frequently utilized in an attempt to locate incipient soil dropouts. Sinkholes, mud seams, or slots in bedrock must be evaluated and treated on an individual basis. A CSI geotechnical engineer must be retained for remediation recommendations if any of these features are exposed during construction. Where the soil overburden is relatively thick, treatment of depressions will likely involve monitoring by a CSI geotechnical engineer during earthwork operations to observe indications of sinkhole throats and conduits after soil cutting activities are complete.

## 8 EARTHWORK

Historically, more change orders (in total number and costs) occur during the earthwork portion of construction than in almost any other part of the project. Further, the site preparation phase of construction always affects the future performance of project structures and pavements. Add into this, the fact that earthwork is the portion of work most influenced by wet weather and unknown conditions and time-wise, this section of the report could be the most important to prevent and minimize delays and costs during construction and for the life of the project.

Please review the concerns listed in section 7 prior to reading the following recommendations. If problems occur that the recommendations do not address or do not adequately remedy, please contact CSI as soon as possible.



## **8A SITE PREPARATION (WORK PRIOR TO FILLING)**

- If applicable, remove/relocate utilities as required by the construction plans.
- All topsoil, tillzone, and organic materials should be removed (stripped) from the construction areas and all structural fill areas. These materials should be stockpiled for use as topsoil in landscape areas.
- Existing asphalt pavement should be removed and wasted off-site. The crushed stone beneath the asphalt can be left in-place provided it holds up well to a heavy proofroll. If the crushed stone has to be removed due to required grades, then it can be re-used as new fill provided that it does not contain any deleterious materials.
- Excavated old fill materials can be re-used as new structural fill provided they do not contain deleterious materials and meet the requirements of this report.
- Areas ready to receive new fill should be proofrolled with a heavily loaded dump truck (GVW of 80,000 pounds) or similar equipment judged acceptable by a CSI geotechnical engineer. No proofrolling of rock areas after heave rock has been removed;
- The level of proofroll for any site area should be determined by a CSI geotechnical engineer on a case-by-case basis;
- Perform the proofrolling after a suitable period of dry weather to avoid degrading the subgrade;
- Areas which pump, rut, or wave during proofrolling may require undercutting, depending on the location of the area and the use of the area, so the geotechnical engineer should be contacted for guidance;
- Backfill of undercut areas should be performed in accordance with sections 8B and 8C;
- Retain CSI to observe the proofrolling operations and make recommendations for any unstable or unsuitable conditions encountered. This can save time on the construction schedule and save unnecessary undercutting.

We recommend that site grading should take place between about late April to late October. Earthwork taking place outside this time period will likely encounter wet conditions and weather conditions that will provide little to no assistance with drying the soils.

## **8B NEW FILL OPERATIONS- SOIL FILL**

The on-site soils are suitable for use as fill, although minimal cuts are expected. If off-site fill material is imported to the project site, representative samples should be obtained of the proposed fill material to determine the moisture-density relationship and overall classification of the material. Off-site soils with a plasticity index (PI) greater than 25 percent should not be used for new fill.





After the subgrade has been approved to receive new fill, the fill may commence with the following procedures and guidelines recommended:

- Place fill in maximum 8-inch thick loose lifts;
- Fill lifts should be compacted to at least 95 percent of the soil's maximum dry density (ASTM D698) and maintain the moisture content of compacted fill within 3 percent of optimum moisture;
- Off-site soils with a plasticity index (PI) of greater than 25 percent should not be used as new fill;
- Fill compaction requirements should be extended to at least 5 feet outside the building footprints and pavement areas;
- Maximum particle size of the soil should be limited to 4 inches in any dimension with no concentrations of large fragments;
- Density testing should be performed as a means to verify percent compaction and moisture content of the material as it is being placed and compacted;
- Observation of fill "stability" is also critical, so it is recommended to observe the operation of the filling equipment traversing over the new fill to document movement (similar to proofrolling);
- Soils should not be "overcompacted" and construction traffic should be kept to minimum to assure compaction is achieved and that the soil is not allowed to "break down";
- Retain a representative of CSI to observe and document fill placement and compaction operations.

### **8C BACKFILL OPERATIONS (FOUNDATION WALLS, UTILITIES, ETC.)**

These materials are placed in more confined areas than mass earthwork materials and therefore cannot be placed in full compliance with sections 8A or 8B. The following are general recommendations for backfill areas:

- Fill lift thicknesses will vary dependent on compaction equipment available and material types, but in no case should exceed 8 inches;
- For crushed stone/aggregate backfills in trenches or wall backfill and when using smaller compaction equipment (such as a plate compactor or trench compactor or similar) the lift thickness should not exceed 4 inches;
- Compaction/moisture percentages and density testing requirements should be the same as in section 8B;
- CSI should be retained to provide additional recommendations for backfill (if necessary).

### **8D GENERAL NOTES**

- For all earthwork operations, positive surface drainage is prudent to keep water from ponding on the surface and to assist in maintaining surface stability;



- The surface should be sealed prior to expected wet weather. This can usually be accomplished with rubber-tired construction equipment or a steel-drum roller;
- If any soil placement problems occur, CSI should be retained to provide additional recommendations, as needed.

## 9 SITE DRAINAGE

During construction, water should not be allowed to pond in excavations or undercutting will likely be required. Additionally, allowing water to pond in excavations greatly increases the risk for activating latent Karst features. During the life of the project, slope the subgrade and other site features so that surface water flows away from the site structures. Structure roof drains should be piped away to proper storm drainage systems. Diversion ditches should be used to keep surface water from accumulating at or near site structures.

For excavations during construction, most free water could likely be removed via sump pumps and open channel flow (ditches) at or near the source of seepage. If normal dewatering measures prove insufficient due to shallow water conditions, CSI should be retained to provide recommendations on the issue.

Wet conditions are possible in excavations on-site during site construction and karst features such as springs are common to the underlying geology. Daylighting wet zones for drainage or the use of french/rock drains may be prudent or cost effective methods of de-watering wet areas of the site. Pumping with long-flexible hoses day-lighted hundreds of feet away or other types of sumping could also be utilized if necessary. CSI should be retained to observe all excavations in locations of springs or other water-bearing features.

## 10 FOUNDATIONS

Based on the encountered depths to bedrock, we expect the use of shallow spread foundations bearing on soil for this project. If there are any changes in the project criteria or structure locations, CSI should be allowed to review the recommendations to determine if any modifications are required.

### 10A SHALLOW SPREAD FOUNDATIONS ON SOIL

At present, we expect shallow foundations bearing on soil for the new structures. Shallow spread footings may be sized using a **maximum allowable bearing pressure of 2,000 psf** (pounds per square foot). Foundations should bear on the firm or better residual soil, or newly placed engineered fill. Foundations should not bear on the existing fill material.

If rock is encountered within 2 feet of the design bottom of foundation (BOF) elevation (not expected), then the rock should be undercut to at least 2 feet below the design BOF. The undercut area should then be backfilled with compacted soil fill, or DGA (dense graded aggregate). The use of No. 57 crushed stone as backfill material is not recommended.

A detailed settlement analysis was beyond the scope of this exploration. However, based on the expected structural loads, the anticipated behavior of soil types encountered during field activities, and



our experience with similar projects, we expect that total settlements will not exceed 1-inch, and that differential settlements will not exceed ½-inch along continuous footing distances of 30 feet or less. We recommend the structures be designed to accommodate these magnitudes of total and differential settlements.

Additional design considerations for spread foundations bearing on soil are outlined as follows:

- Design all footings with a minimum 24 inches width;
- All exterior footing bottoms should bear at least 24 inches below finished exterior grading (Kentucky Building Code, Table 1809.5 for Bullitt County);
- Interior footings (those not exposed to freezing) may be placed at nominal depths or 18 inches deep, whichever is deeper;
- Include control joints at suitable intervals in the walls of structures and in areas where changes in support from native soil to fill are anticipated, to help accommodate differential foundation movements.

## **10B SHALLOW FOUNDATIONS ON SOIL - CONSTRUCTION NOTES**

Any soils can lose strength if they become wet, so we recommend the foundation subgrades be protected from exposure to water. For foundation construction, we also recommend the following procedures.

- For soils that will remain exposed overnight or for an extended period of time, place a "lean" concrete mudmat over the bearing areas. The concrete should be at least 4 inches thick. Flowable fill concrete or low-strength concrete is suitable for this cover, as conditions allow.
- Disturbed soil should be removed prior to foundation concrete placement;
- Foundation bearing conditions should be benched level;
- Areas loosened by excavation operations should be recompact prior to reinforcing steel placement;
- Loose soil, debris, and excess surface water should be removed from the bearing surface prior to concrete placement;
- Retain a CSI geotechnical engineer to observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.

## **11 SEISMIC SITE CLASSIFICATION**

The latest edition of the Kentucky Building Code (KBC) was reviewed to determine the Site Seismic Classification. Based on our review of geologic data, our experience and subsurface conditions encountered, we recommend a Seismic **SITE CLASS "C"** for soil bearing foundations.





A detailed geotechnical earthquake engineering analysis was not performed since it was beyond the scope of our authorized work. However, based on a review of published literature and our experience with similar subsurface conditions, we believe the potential for slope instability, liquefaction, and surface rupture due to faulting or lateral spreading resulting from earthquake motions is low. However, this potential could be elevated during wet periods of the year unless adequate drainage is provided.

## 12 CONCRETE SLABS-ON-GRADE

A grade supported floor slab is suitable for the proposed structures provided all new fill is placed as recommended in this report and observed by CSI. Additionally, all soils (residual or new fill) must pass a level of proofrolling recommended by a CSI geotechnical engineer.

If rock is encountered within 1 foot of the slab subgrade elevation (not expected), we recommend that the rock be undercut at least 1 foot below slab subgrade elevation and the excavation be backfilled with structural soil fill or compacted dense graded crushed stone up to the design slab subgrade elevation.

The following features are recommended as part of the concrete slab construction:

- Provide isolation joints between the slab and columns along footing supported walls.
- Adequate joint patterns (ACI and ICC guidelines) should be used to permit slab movement due to normal settlement, normal subgrade disturbance and material expansion/contraction;
- Place a minimum of 4 inches of compacted dense graded crushed stone beneath the slab to provide a working base. The actual thickness of the crushed stone layer should be based on design requirements;
- Keep the crushed stone or gravel moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab;
- Retain CSI to review the actual subgrade conditions prior to slab construction and make recommendations for any unsuitable conditions encountered.

**Note:** Slab subgrade conditions are also considered earthwork areas and the recommendations contained in the Earthwork section of the report. See Section 8 of this report for specific details.

## 13 PAVEMENT RECOMMENDATIONS

We were not supplied expected traffic loadings for this project. Based on our experience with similar projects, we expect that the traffic in the light-duty pavement areas will be limited primarily to automobiles. Buses, occasional delivery trucks, and an occasional garbage truck are expected for heavy-duty pavement areas. Please refer to the recommendations contained in the Earthwork section of this report for subgrade preparation.

Adequate soil/subgrade support is critical for any pavement area. Please refer to the recommendations contained in the Earthwork section of this report for subgrade preparation. Also, prior to stone base



placement, areas to be paved with asphalt must be proof rolled at the direction of CSI. Soft or wet areas not “passing” proof roll criteria at that time must be stabilized at our direction.

Adequate drainage and slope of the pavement subgrade and pavement section should be provided to promote adequate drainage. Edges of the pavement should be provided a means of water outlet by extending the aggregate base course through to side ditches or providing drain pipes and weep holes at catch basin walls.

The following pavement recommendations are based on our experience with similar materials and loading conditions. The recommendations are based on the assumption that the soil subgrade will be compacted and/or remediated according to the recommendations contained in this report.

### 13A ASPHALT PAVEMENT

Typically, pavement design is based on supplied traffic loads and California Bearing Ratio (CBR) values. However, no traffic loads were provided to us for this project. Our laboratory testing indicated a CBR value of 4.2 percent for the on-site soils. Thus, we used a CBR value of 4 percent for our pavement design calculations. Generalized pavement designs for light duty and heavy duty pavement are given in Table 3 and Table 4.

Table 3. Light Duty Asphalt Pavement Section	
Pavement Section Component	Thickness (in)
Bituminous Surface Course	1.5
Bituminous Binder Course	1.5
Dense Graded Aggregate (DGA)*	8.0*

\*DGA to be placed in 6 inch thick maximum, compacted lifts

Table 4. Heavy Duty Asphalt Pavement Section	
Pavement Section Component	Thickness (in)
Bituminous Surface Course	1.5
Bituminous Binder Course	2.5
Dense Graded Aggregate (DGA)*	8.0*

\*DGA to be placed in 6 inch thick maximum, compacted lifts

The dense graded aggregate (DGA) should be placed and compacted in accordance with Kentucky Department of Highways Standard Specifications, latest edition. The asphalt should be mixed, placed, and compacted in accordance with Kentucky Department of Highways Standard Specifications, latest edition. It is common practice to place the base stone and binder course prior to completion of construction without placing the surface course. It should be noted that repeated passes of heavily loaded construction traffic on the binder course will decrease the service life of your pavement.



## 13B RIGID PAVEMENT (CONCRETE)

We anticipate reinforced concrete pavement will be used in areas where the pavement is subjected to high stresses such as entrances/exits and dumpster pads. Prior to stone base placement, we recommend an additional heavy proofroll of the subgrade be performed to verify subgrade conditions. Recommendations for undercutting/repair of the subgrade can be made at that time by a CSI geotechnical engineer.

Again, no expected traffic loadings were supplied to us for this project. As such, we recommend a minimum DGA thickness of 8 inches beneath the new concrete pavement and a minimum concrete thickness of 6 inches for new pavement areas. We also recommend that the concrete pavement be reinforced with heavy welded wire fabric or reinforcing steel. For dumpster pads and refuse container pads, the concrete pads should be large enough to accommodate both the refuse container and all axles of the truck.

## 14 NOTES ON REPORT AND RECOMMENDATIONS

We recommend that this complete report be provided to the various design team members, the contractors and the project Owner. Potential contractors should be informed of this report in the "Instructions to Bidders" section of the bid documents. A geotechnical exploration, such as the one we performed, uses widely spaced borings to attempt to model the subsurface conditions at the site. Because no exploration contains complete data or a complete model, there is always a possibility that conditions between borings will be different from those at specific boring locations. Thus, it is possible that some subsurface conditions will not be as anticipated by the project team or contractor. If this report is included or referenced in the actual contract documents, **it shall be explicitly understood that this report is for informational purposes only**. CSI shall not be responsible for the opinions of, or conclusions drawn by, others.

It has been our experience that the construction process often disturbs soil conditions and this process, no matter how much experience we use to anticipate construction methodology, is not completely predictable. Therefore, changes or modifications to our recommendations are likely needed due to these possible variances. Experienced CSI geotechnical personnel should be used to observe and document the construction procedures and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. We recommend that the Owner retain CSI to provide this service based upon our familiarity with the project, the subsurface conditions and the intent of our recommendations.

This report is based on the supplied project information, the subsurface conditions observed at the time of the report, and our experience with similar conditions. As such, it cannot be applied to other project sites, types, or combinations thereof. If the Project Information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations. Our recommendations may then require modification.

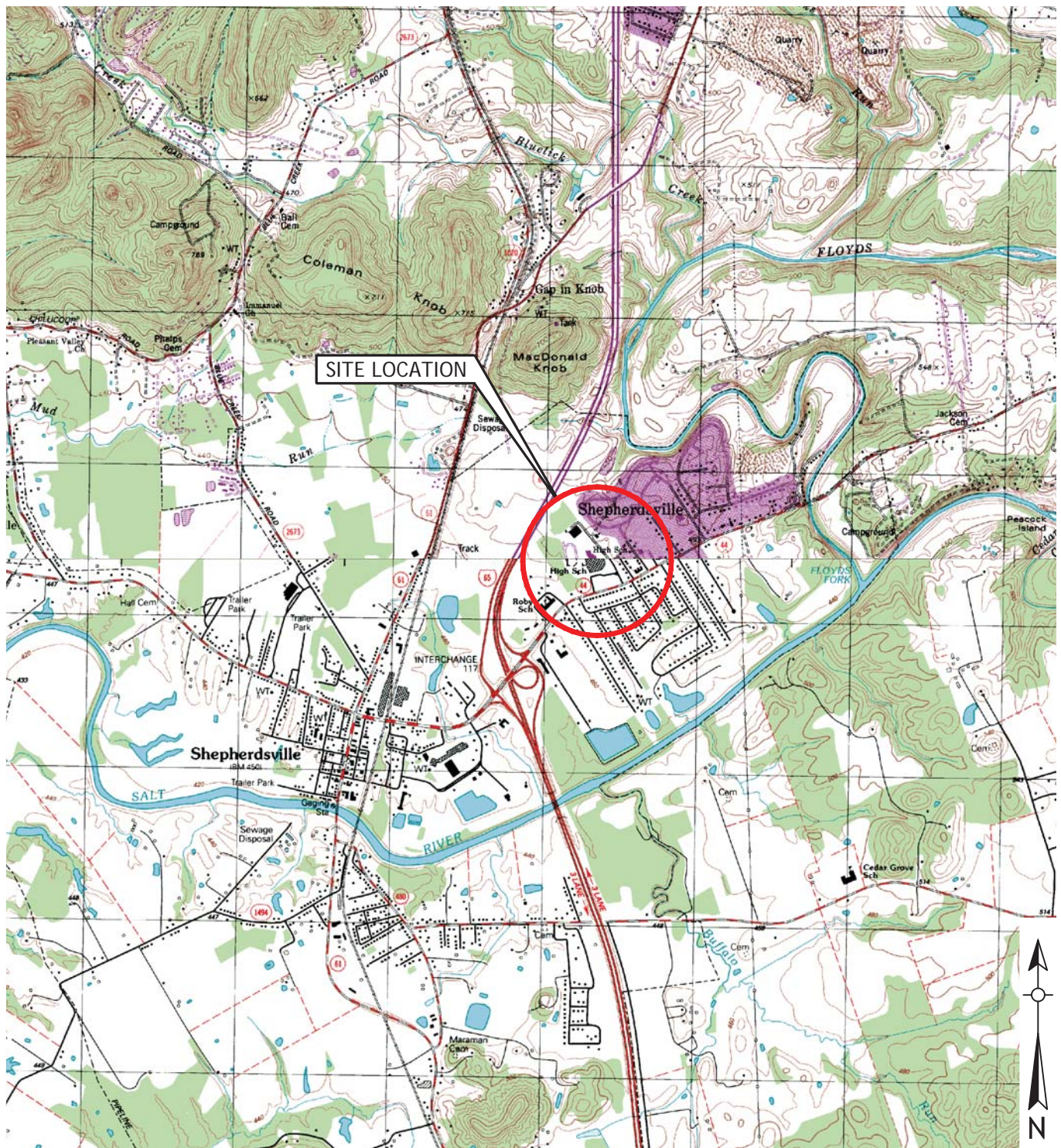
No section or portion of this report (including Appendix information) can be used as a stand alone article to make distinct changes or assumptions. The entire report and Appendix should be used together as one resource.



While this report deals with samples of subsurface materials and some comments on water conditions at the site, no assessment of site environmental conditions or the presence of contaminants were performed.

We wish to remind you that our exploration services include storing the soil and rock core samples collected and making them available for inspection for 30 days. The soil and rock core samples are then discarded unless you request otherwise. Please inform us if you wish to keep any of the obtained samples.





Site Location Plan adapted from USGS Brooks and Sheperdsville, Kentucky Topographic Quadrangle map (dated 1997 and 1991), with further adaptation by CSI personnel.

FOR ILLUSTRATION PURPOSES ONLY



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#### SITE LOCATION PLAN

Bullitt Central High School  
Shepherdsville, KY

Project No:  
LX220211

Date:  
01/04/2023

Scale: Not To Scale

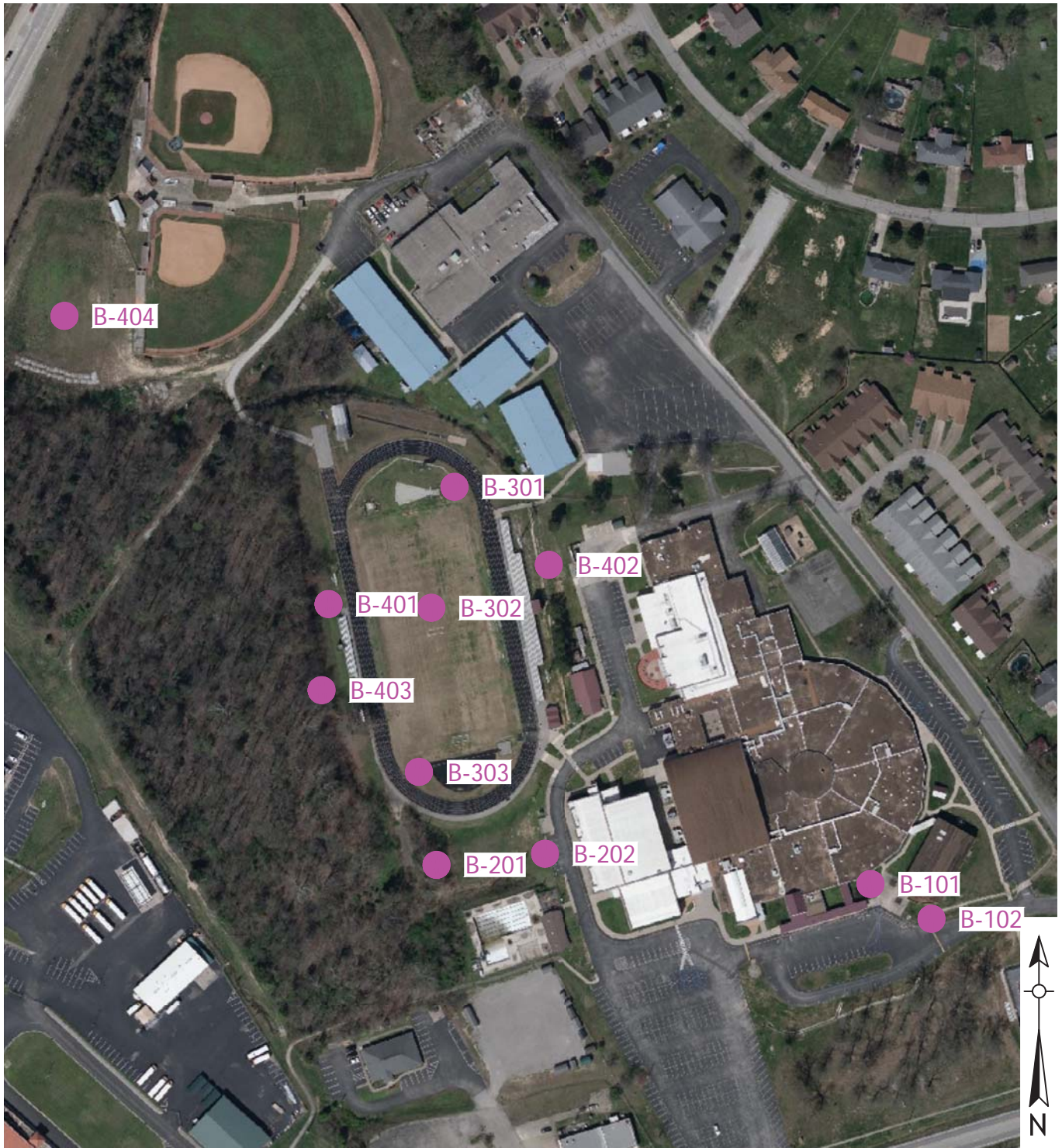
Drawn By:  
HH

Checked By:  
BH

Drawing No:  
SLP - 1

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Boring Location Plan adapted from provided Geotechnical Investigation Map, not dated, and aerial imagery with further adaptation by CSI personnel.

LEGEND

● B-XXX BORING LOCATIONS

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BORING LOCATION PLAN

Bullitt Central High School  
Shepherdsville, KY

Project No:  
LX220211

Date:  
01/04/2023

Scale: Not To Scale

Drawn By:  
SM

Checked By:  
BH

Drawing No:  
BLP - 1

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## Geotechnical Boring Information Sheet

Sample Type Symbols		Definitions
Splitspoon (SPT)		SPT-"Splitspoon" or standard penetration test. Blow counts are number of drops required for a 140 lb hammer dropping 30 inches to drive the sampler 6 inches.
Shelby Tube		N-value is the addition of the last two intervals of the 18-inch sample.
Grab		Shelby tubes are often called "undisturbed samples". They are directly pushed into the ground, twisted, allowed to rest for a small period of time and then pulled out of the ground. Tops and bottoms are cleaned and then sealed.
Rock Core		
Auger Cuttings		
Surface Symbols		Sample classification is done in general accordance with ASTM D2487 and 2488 using the Unified Soil Classification System (USCS) as a general guide.
Topsoil		Soil moisture descriptions are based on the recovered sample observations. The descriptors are dry, slightly moist, moist, very moist and wet. These are typically based on relative estimates of the moisture condition of a visual estimation of the soils optimum moisture content (EOMC). Dry is almost in a "dusty" condition usually 6 or more percent below EOMC. Slightly moist is from about 6 to 2 percent below EOMC at a point at which the soil color does not readily change with the addition of water. Moist is usually 2 percent below to 2 percent above EOMC and the point at which the soil will tend to begin forming "balls" under some pressure in the hand. Very moist is usually from about 2 percent to 6 percent above EOMC and also the point at which it's often considered "muddy". Wet soil is usually 6 or more percent above EOMC and often contains free water or the soil is in a saturated state.
Asphalt		Silt or Clay is defined as material finer than a standard #200 US sieve (<0.075mm) Sand is defined as material between the size of #200 sieve up to #4 sieve. Gravel is from #4 size sieve material to 3". Cobbles are from 3" to 12". Boulders are over 12".
Concrete		
Lean Clay		
Fat Clay		
Glacial Till		
Sandy Clay		
Silt		
Elastic Silt		
Lean Clay to Fat Clay		
Gravelly Clay		
Sandy Silt		
Gravelly Silt		
Sand		
Gravel		
Fill		
Limestone		
Sandstone		
Shale/Siltstone		
Weathered Rock		
Samples Strength Descriptors		
<b>Cohesive Soils:</b> N		
Very Soft	0-1	Water or cave-in observed in borings is at completion of drilling each boring unless otherwise noted.
Soft	2-4	
Firm	5-8	
Stiff	9-15	
Very Stiff	16-30	
Hard	31+	
<b>Non-cohesive Soils:</b>		
Very Loose	0-4	Strata lengths shown on borings represents a rough estimate. Transition may be more abrupt or gradual. Soil borings are representative of that estimated location at that time and are based on recovered samples. Conditions may be different between borings and between sample intervals. Boring information is not to be considered stand alone but should be taken in context with comments and information in the geotechnical report and the means by which the borings are logged, sampled and drilled.
Loose	5-10	
Firm	11-20	
Very Firm	21-30	
Dense	30-50	
Very Dense	51+	



# BORING LOG

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BORING: **B-101**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 478.0 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
			TOPSOIL - 0.4 feet									
			FILL - sampled as STIFF, brown and gray clay, with gravel, with glass, moist	3-6-9 (15)	16	13.3						
476	2			2-6-6 (12)	14	15.9						
474	4			4-5-7 (12)	18	17.4						
472	6		LEAN CLAY (CL) - STIFF, gray, with tan mottling, moist	4-5-5 (10)	17	19.9						
470	8			4-6-16 (22)	18	20.7						
468	10		LEAN CLAY (CL) - VERY STIFF, orange, with tan mottling, with black oxide nodules, moist									
466	12		Auger Refusal at 11.8 feet Begin Coring at 11.8 feet									
464	14		DOLOMITE - medium grained, irregularly bedded, medium gray, highly weathered		54							REC (%) - 90 RQD (%) - 60 No core water loss observed
462	16		Coring Terminated at 16.8 feet									



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring



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BORING: **B-102**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 473.7 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
			TOPSOIL - 0.4 feet									
			FILL - sampled as FIRM, brown and gray clay, moist	1-2-3 (5)	18							Dry upon completion of soil augering
472	2		LEAN CLAY (CL) - FIRM, dark gray, silty, moist	2-2-3 (5)	18							
470	4											
468	6				17	24.2	45	22	23	86		Qu (psf) = 828
466	8		LEAN CLAY (CL) - FIRM, orange, with gray and tan mottling, with black oxide nodules, moist	3-3-4 (7)	16							
464	10		Auger Refusal at 9.1 feet	50/1"	1							
462	12											
460	14											
458	16											
456												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-201**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 464.8 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
464			TOPSOIL - 0.4 feet	WH-2-1 (3)	18							Dry upon completion of soil augering
	2		LEAN CLAY (CL) - SOFT to VERY STIFF, drak gray, with tan mottling, with rock fragments, silty, moist	3-4-4 (8)	14							WH = Weight of hammer
462												
	4			2-2-2 (4)	12							
460												
	6											
458				1-10-10 (20)	16							
	8											
456			Auger Refusal at 8.2 feet									
	10											
454												
	12											
452												
	14											
450												
	16											
448												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-202**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 472.1 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
470	2		TOPSOIL - 0.3 feet FILL - sampled as FIRM to STIFF, brown clay, with gravel, moist	4-3-4 (7)	18							Dry upon completion of soil augering
				4-10-5 (15)	16							
468	4		LEAN CLAY (CL) - SOFT to FIRM, dark gray, with black oxide nodules, moist	3-2-2 (4)	12							
466	6			3-3-3 (6)	18							
464	8											
462	10		LEAN CLAY (CL) - HARD, orange brown, with tan mottling, with black oxide nodules, with rock fragemnts, moist	4-6-50/2"	14							
			Auger Refusal at 10.2 feet									
460	12											
458	14											
456	16											



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-301**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 470.4 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
470			TOPSOIL - 0.3 feet	WH-WH-3	16							Dry upon completion of soil augering
	2		FILL - sampled as SOFT, brown, clay, with rock fragments, moist	5-7-8 (15)	12							WH = Weight of hammer
468			LEAN CLAY (CL) - STIFF, orange, with tan mottling, with black oxide nodules, with rock fragments, moist	5-5-7 (12)	14							
466	4			3-4-50/2"	14							
464	6											
462	8		Auger Refusal at 8.0 feet									
460	10											
458	12											
456	14											
454	16											



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-302**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 471.9 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
			<b>TOPSOIL - 0.3 feet</b> FILL - sampled as STIFF, light brown clay, moist	2-5-4 (9)	16							Dry upon completion of soil augering
470	2		POSSIBLE FILL - sampled as STIFF, orange and brown clay, with tan mottling, with black oxide nodules, moist	4-5-6 (11)	8							
468	4		LEAN CLAY (CL) - STIFF, dark gray, with fine roots, silty, moist	4-6-6 (12)	15							
466	6											
464	8		LEAN CLAY (CL) - FIRM to HARD, light gray, with tan mottling, silty, moist	2-2-3 (5)	14							
462	10			2-50/2"	8							
460	12		Auger Refusal at 11.2 feet									
458	14											
456	16											



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-303**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 471.2 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
470			TOPSOIL - 0.4 feet	2-3-2 (5)	12	14.1						Dry upon completion of soil augering
	2		FILL - sampled as FIRM, dark brown clay, with fine roots, with gravel, moist	3-4-11 (15)	15	18.1						
468			POSSIBLE FILL - sampled as STIFF, orange clay, with tan mottling, with black oxide nodules, moist									
466	4		LEAN CLAY (CL) - VERY STIFF, dark gray clay, silty, moist	7-8-10 (18)	16	17.4						
464	6		LEAN CLAY (CL) - STIFF to HARD, light gray clay, silty, moist	3-6-5 (11)	14	15.0						
462	8											
460	10			3-35-50/1"	13							
	12		Auger Refusal at 11.3 feet									
458	14											
456	16											
454												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

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BORING: **B-401**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 470.1 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
			TOPSOIL - 0.4 feet									
			FILL - sampled as STIFF, light brown clay, moist	2-4-6 (10)	18	17.0						
468	2		POSSIBLE FILL - sampled as STIFF, orange brown clay, with tan mottling, with black oxide nodules, moist	4-5-5 (10)	16	20.6						
466	4		LEAN CLAY (CL) - SOFT, dark gray, silty, moist	2-2-2 (4)	18	22.0						
464	6											
462	8		LEAN CLAY (CL) - FIRM, light gray, with tan mottling, silty, moist	3-3-5 (8)	17	22.8						
460	10											
458	12		Auger Refusal at 12.1 feet Begin Coring at 12.1 feet									
456	14		DOLOMITE - medium grained, irregularly bedded, medium gray, highly weathered		45							REC (%) - 75 RQD (%) - 7
454	16											No core water loss observed
			Coring Terminated at 17.1 feet									



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-402**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 473.2 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
472	2		TOPSOIL - 0.3 feet LEAN CLAY (CL) - STIFF, orange brown, with tan mottling, with black oxide nodules, moist	3-6-6 (12)	18	24.2						Dry upon completion of soil augering
470	4			2-6-9 (15)	18	18.7						
468	6			6-7-8 (15)	16	22.6						
466	8			4-5-6 (11)	18	25.0						
464	10		Auger Refusal at 8.5 feet									
462	12											
460	14											
458	16											
456												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring



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BORING: **B-403**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 467.5 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
466	0.3		TOPSOIL - 0.3 feet	2-3-4 (7)	14	22.0						Dry upon completion of soil augering
	2		FILL - sampled as FIRM, gray and brown clay, with black oxide nodules, with fine roots, LEAN CLAY (CL) - STIFF, dark gray, silty, moist	2-3-6 (9)	8	17.9	40	21	19	90		
464	4		LEAN CLAY (CL) - STIFF, gray brown, with orange mottling, with black oxide noudles, moist	4-5-7 (12)	12	19.4						
462	6											
460	8		LEAN CLAY (CL) - STIFF, orange, with tan mottling, with black oxide nodules, moist	3-5-6 (11)	18	20.6						
	8.4		Auger Refusal at 8.4 feet									
458	10											
456	12											
454	14											
452	16											
450												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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BORING: **B-404**

Project Number: LX220211 Name: Bullitt Central High School Client: Bullitt County Public Schools Location: Shepherdsville, KY Logged By: K. Pauley, PE	Weather: Rainy, 40-50's *Elevation (ft): 469.5 Date Started: 12/8/22 Date Completed: 12/8/22 Checked By: B. Hatcher, PE	Contractor: CSI Drill Rig: B-57 Method: SFA Hole Size (in): 4
--	---	--

Elev. (ft)	Depth (ft)	Symbol	Description	Blow Counts (N Value)	Recov. (in)	WC (%)	LL	PL	PI	%<#200	Water Level	Remarks
			TOPSOIL - 0.3 feet									
468	2		FILL - sampled as STIFF, light brown clay, with fine roots, moist	2-4-10 (14)	16	17.2	37	21	16	91		
466	4		LEAN CLAY (CL) - VERY STIFF, orange, with tan mottling, with black oxide nodules, moist	7-10-15 (25)	14							
464	6		Boring Terminated at 5.5 feet	8-13-15 (28)	18							
462	8											
460	10											
458	12											
456	14											
454	16											
452												



\*Elevations were determined using Real Time Kinematic Differential GPS referencing the KYCORS network.

Left Photo: Photo of Approximate Boring Location  
Right Photo: Photo of Boring

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## FIELD TESTING PROCEDURES

**Field Operations:** The general field procedures employed by CSI are summarized in ASTM D 420 which is entitled "Investigating and Sampling Soils and Rocks for Engineering Purposes." This recommended practice lists recognized methods for determining soil and rock distribution and ground water conditions. These methods include geophysical and in situ methods as well as borings.

Borings are drilled to obtain subsurface samples using one of several alternate techniques depending upon the subsurface conditions. These techniques are:

- a. Continuous 2-1/2 or 3-1/4 inch I.D. hollow stem augers;
- b. Wash borings using roller cone or drag bits (mud or water);
- c. Continuous flight augers (ASTM D 1425).

These drilling methods are not capable of penetrating through material designated as "refusal materials." Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams, or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

The subsurface conditions encountered during drilling are reported on a field test boring record by the chief driller. The record contains information concerning the boring method, samples attempted and recovered, indications of the presence of various materials such as coarse gravel, cobbles, etc., and observations between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are on file in our office.

The soil and rock samples plus the field boring records are reviewed by a geotechnical engineer. The engineer classifies the soils in general accordance with the procedures outlined in ASTM D 2488 and prepares the final boring records, which are the basis for all evaluations and recommendations.

The final boring records represent our interpretation of the contents of the field records based on the results of the engineering examinations and tests of the field samples. These records depict subsurface conditions at the specific locations and at the particular time when drilled. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change in the subsurface soil and ground water conditions at these boring locations. The lines designating the interface between soil or refusal materials on the records and on profiles represent approximate boundaries. The transition between materials may be gradual. The final boring records are included with this report.

The detailed data collection methods using during this study are discussed on the following pages.

**Soil Test Borings:** Soil test borings were made at the site at locations shown on the attached Boring Plan. Soil sampling and penetration testing were performed in accordance with ASTM D 1586.

The borings were made by mechanically twisting a hollow stem steel auger into the soil. At regular intervals, the drilling tools were removed and soil samples obtained with a standard 1.4 inch I.D., 2 inch O.D., split tube sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the "penetration resistance". The penetration resistance, when properly evaluated, is an index to the soil strength and foundation supporting capability.

Representative portions of the soil samples, thus obtained, were placed in glass jars and transported to the laboratory. In the laboratory, the samples were examined to verify the driller's field classifications. Test Boring Records are attached which graphically show the soil descriptions and penetration resistances.

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**Core Drilling:** Refusal materials are materials that cannot be penetrated with the soil drilling methods employed. Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

Prior to coring, casing is set in the drilled hole through the overburden soils, if necessary, to keep the hole from caving. Refusal materials are then cored according to ASTM D 2113 using a diamond-studded bit fastened to the end of a hollow double tube core barrel. This device is rotated at high speeds, and the cuttings are brought to the surface by circulating water. Core samples of the material penetrated are protected and retained in the swivel-mounted inner tube. Upon completion of each drill run, the core barrel is brought to the surface, the core recovered is measured, the samples are removed and the core is placed in boxes for storage.

The core samples are returned to our laboratory where the refusal material is identified and the percent core recovery and rock quality designation is determined by a soils engineer or geologist. The percent core recovery is the ratio of the sample length obtained to the depth drilled, expressed as a percent. The rock quality designation (RQD) is obtained by summing up the length of core recovered, including only the pieces of core which are four inches or longer, and dividing by the total length drilled. The percent core recovery and RQD are related to soundness and continuity of the refusal material. Refusal material descriptions, recoveries, and RQDs are shown on the "Test Boring Records".

**Hand Auger Borings and Dynamic Cone Penetration Testing:** Hand auger borings are performed manually by CSI field personnel. This consists of manually twisting hand auger tools into the subsurface and extracting "grab" or baggie samples at intervals determined by the project engineer. At the sample intervals, dynamic cone penetration (DCP) testing is performed. This testing involves the manual raising and dropping of a 20-pound hammer, 18 inches. This "driver" head drives a solid-1 3/4 inch diameter cone into the ground. DCP "counts" are the number of drops it takes for the hammer to drive three 1 3/4 inch increments, recorded as X-Y-Z values.

**Test Pits:** Test pits are excavated by the equipment available, often a backhoe or trackhoe. The dimensions of the test pits are based on the equipment used and the power capacity of the equipment. Samples are taken from the spoils of typical buckets of the excavator and sealed in jars or "Ziploc" baggies. Dynamic Cone Penetration or hand probe testing is often performed in the upper few feet as OSHA standards allow. Refusal is deemed as the lack of advancement of the equipment with reasonable to full machine effort.

**Water Level Readings:** Water table readings are normally taken in conjunction with borings and are recorded on the "Test Boring Records". These readings indicate the approximate location of the hydrostatic water table at the time of our field investigation. Where impervious soils are encountered (clayey soils) the amount of water seepage into the boring is small, and it is generally not possible to establish the location of the hydrostatic water table through water level readings. The ground water table may also be dependent upon the amount of precipitation at the site during a particular period of time. Fluctuations in the water table should be expected with variations in precipitation, surface run-off, evaporation and other factors.

The time of boring water level reported on the boring records is determined by field crews as the drilling tools are advanced. The time of boring water level is detected by changes in the drilling rate, soil samples obtained, etc. Additional water table readings are generally obtained at least 24 hours after the borings are completed. The time lag of at least 24 hours is used to permit stabilization of the ground water table, which has been disrupted by the drilling operations. The readings are taken by dropping a weighted line down the boring or using an electrical probe to detect the water level surface.

Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the caved-in zone. The cave-in depth is also measured and recorded on the boring records.

# Summary of Laboratory Results

Sheet 1 of 1

Borehole	Depth	Sample Type	Liquid Limit	Plastic Limit	Plasticity Index	Classification	Water Content (%)	Unconfined Compressive Strength (ksf)	Dry Density (pcf)	Wet Density (pcf)	Max. Dry Density (pcf)	Opt. Water Content (%)	CBR	Swell (%)	RQD	Percent Recovery	k (cm/sec)	% Finer #200
B-101	0.0	SS					13.3											
B-101	1.5	SS					15.9											
B-101	4.0	SS					17.4											
B-101	6.5	SS					19.9											
B-101	9.0	SS					20.7											
B-102	4.0	UD	45	22	23	CL	24.2	828	101.4	125.9								86.2
B-303	0.0	SS					14.1											
B-303	1.5	SS					18.1											
B-303	4.0	SS					17.4											
B-303	6.5	SS					15.0											
B-401	0.0	SS					17.0											
B-401	1.5	SS					20.6											
B-401	4.0	SS					22.0											
B-401	6.5	SS					22.8											
B-402	0.0	SS					24.2											
B-402	1.5	SS					18.7											
B-402	4.0	SS					22.6											
B-402	6.5	SS					25.0											
B-403	0.0	SS					22.0											
B-403	1.5	SS	40	21	19	CL	17.9											90.3
B-403	4.0	SS					19.4											
B-403	6.5	SS					20.6											
B-404	0.0	GRAB	37	21	16	CL	17.2				108.4	16.0	4.2					91.1

## PROJECT INFORMATION

Client: Bullitt County Public Schools  
 Project Name: Bullitt Central High School  
 Project Number: LX220211  
 Project Location: Shepherdsville, KY

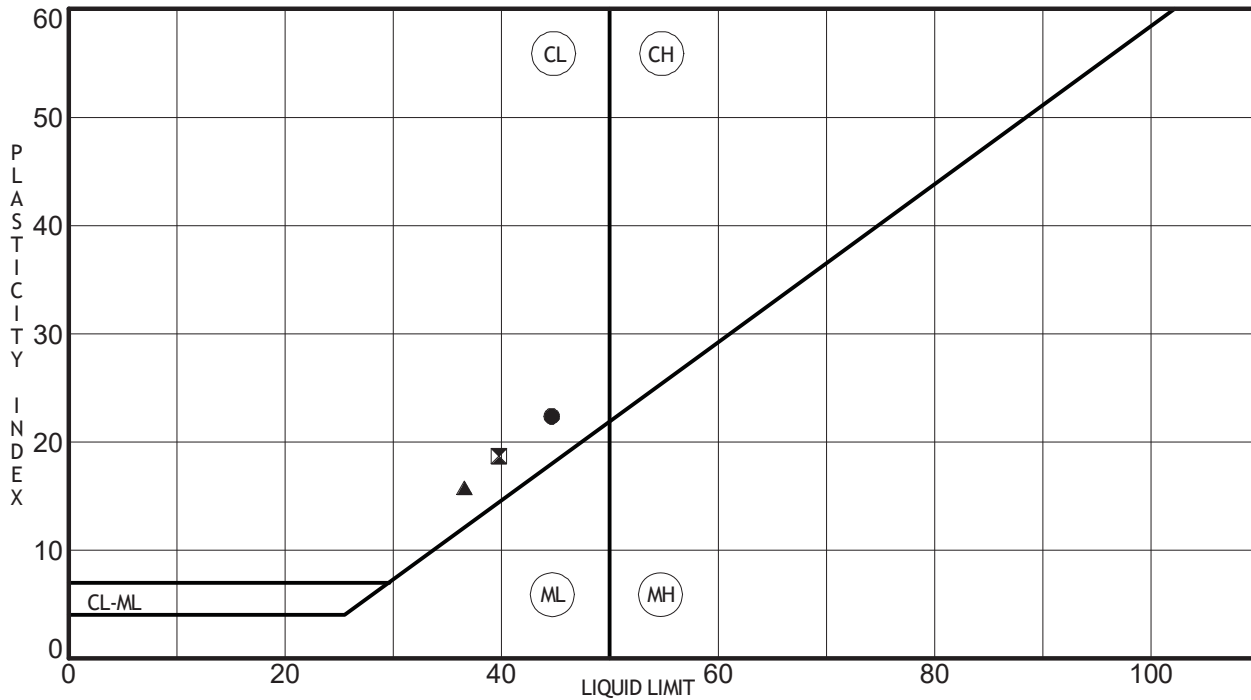
## Consulting Services Incorporated

858 Contract Street  
 Lexington, Kentucky 40505  
 Phone: 859.309.6021  
 Fax: 888.792.3121



SS - Split Spoon Sample  
 GRAB - Bulk Grab Sample  
 k - Coefficient of Permeability  
 - See Attached test Results

# Liquid and Plastic Limits Test Report

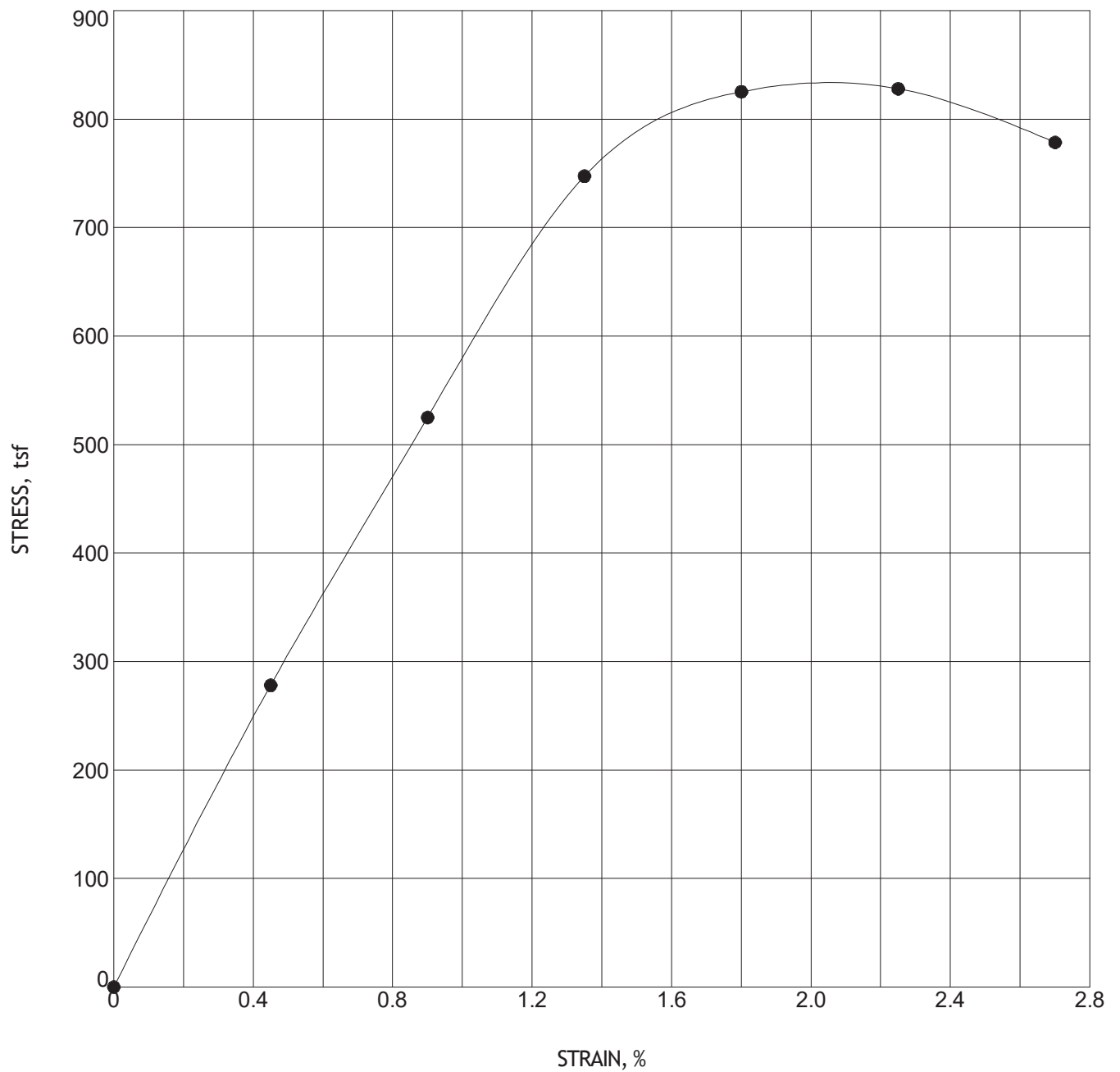
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Fax: 888.792.3121

## PROJECT INFORMATION

Client: Bullitt County Public Schools  
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# UNCONFINED COMPRESSION TEST



Specimen Identification	Description	Unconfined Compressive Strength (tsf)	Failure Strain (%)	$\gamma_d$	MC%
● B-102 4.0	brown LEAN CLAY (CL)	828	2.3	101	24

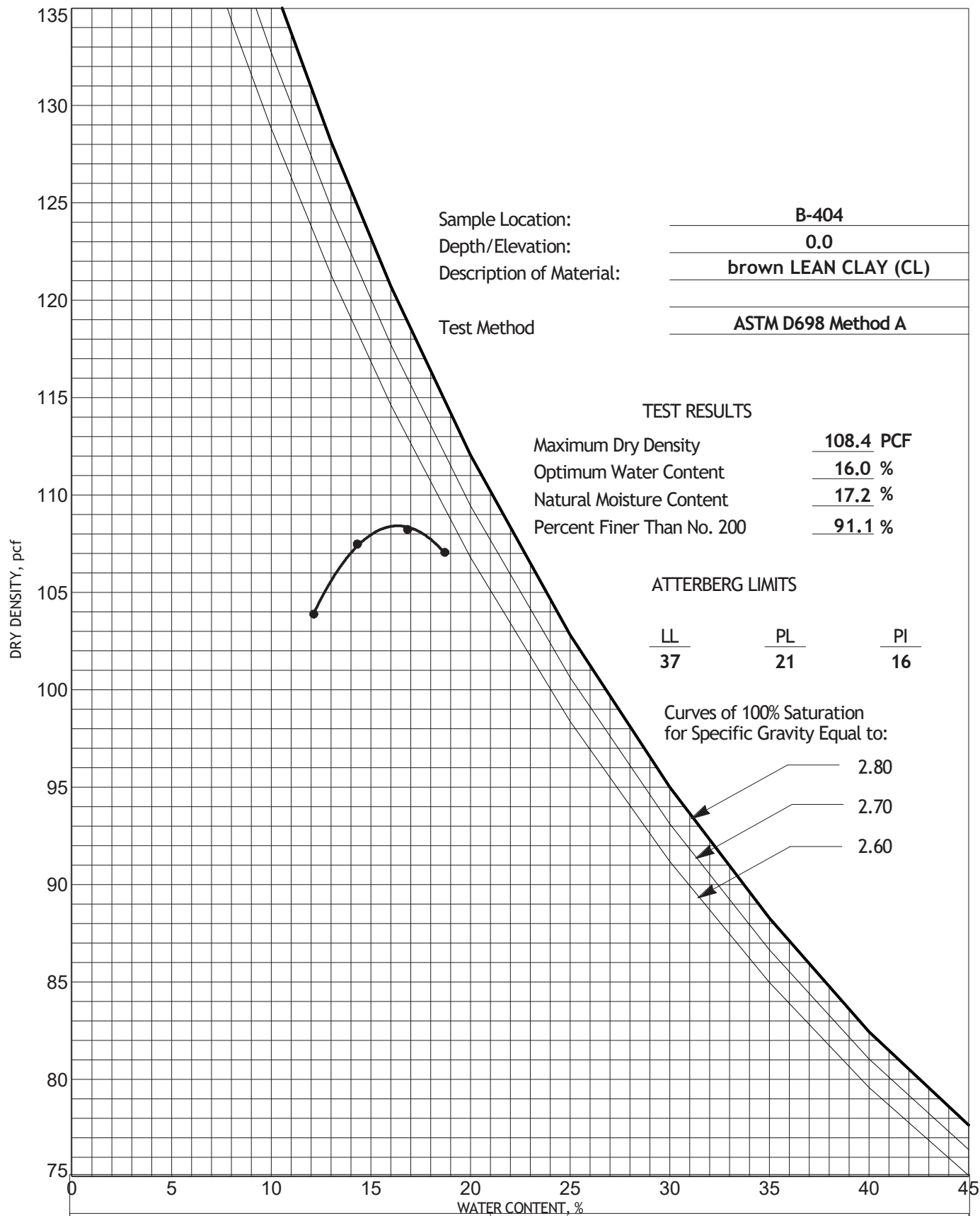


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## PROJECT INFORMATION

Client: Bullitt County Public Schools  
 Project Name: Bullitt Central High School  
 Project Number: LX220211  
 Project Location: Shepherdsville, KY

# MOISTURE-DENSITY RELATIONSHIP



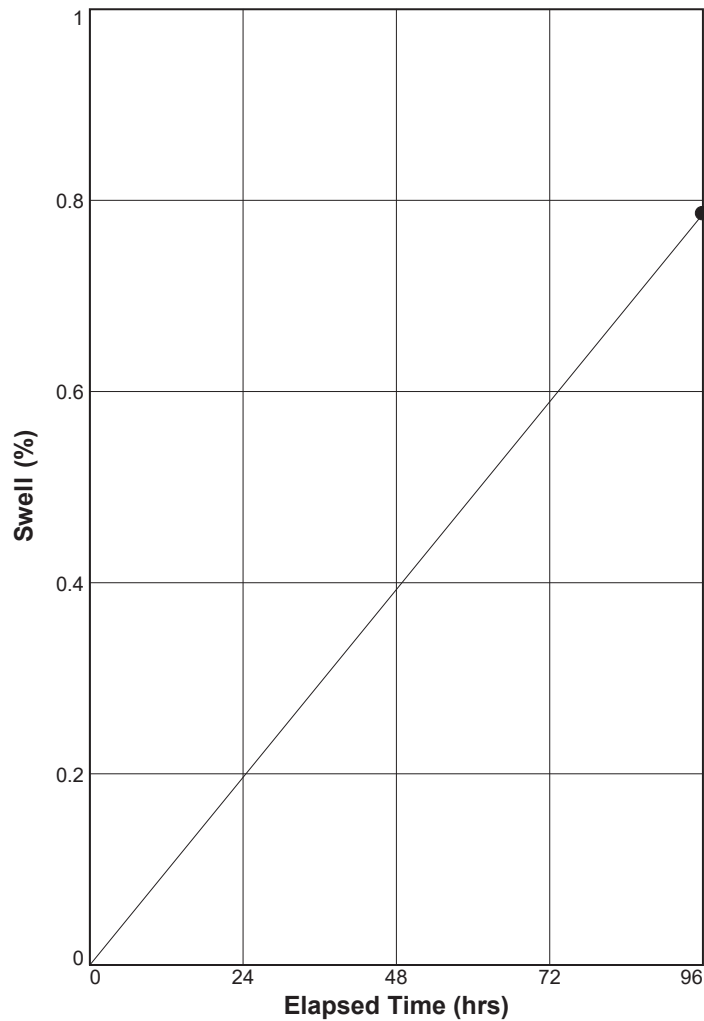
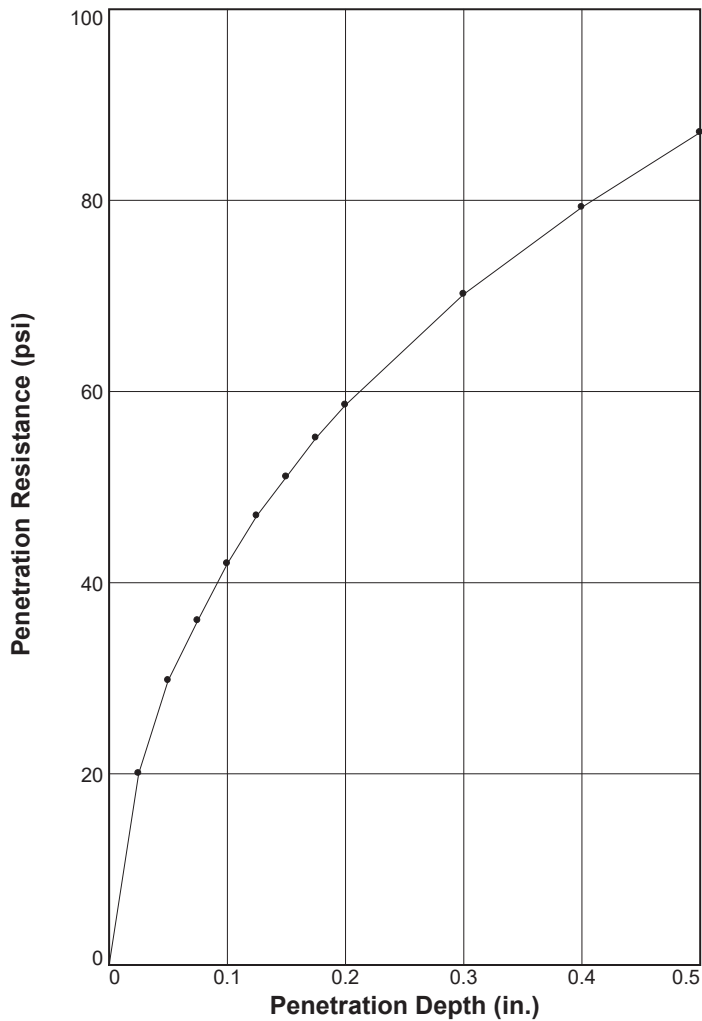
Consulting Services Incorporated  
 858 Contract Street  
 Lexington, Kentucky 40505  
 Phone: 859.309.6021  
 Fax: 888.792.3121

## PROJECT INFORMATION

Client: Bullitt County Public Schools  
 Project Name: Bullitt Central High School  
 Project Number: LX220211  
 Project Location: Shepherdsville, KY



BEARING RATIO TEST REPORT  
ASTM D1883-16



	Molded		Soaked		CBR (%)		Linearity Correction (in.)	Surcharge (lbs.)	Max. Swell (%)
	Dry Density (pcf)	Moisture (%)	Dry Density (pcf)	Moisture (%)	0.10 in.	0.20 in.			
1 ○	103.4	17.8	102.6	19.8	4.2	3.9	0.000	15	0.8
2 △									
3 □									
Material Description					USCS	Max. Dens. (pcf)	Optimum Moisture (%)	LL	PI
brown LEAN CLAY									
					CL	108.4	16.0	37	16

Project No: LX220211

Project: Bullitt Central High School

Sample Number: B-404      Depth: 0.0

Test Description/Remarks:

BEARING RATIO TEST REPORT

CSI of Kentucky

Figure \_\_\_\_\_

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## LABORATORY TESTING PROCEDURES

Soil Classification: Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our investigations, samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests), color and texture. These classification descriptions are included on our "Test Boring Records."

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D 2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented in this report.

Rock Classification: Rock classifications provide a general guide to the engineering properties of various rock types and enable the engineer to apply past experience to current situations. In our explorations, rock core samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The rock cores are classified according to relative hardness and RQD (see Guide to Rock Classification Terminology), color, and texture. These classification descriptions are included on our Test Boring Records.

Atterberg Limits: Portions of the samples are taken for Atterberg Limits testing to determine the plasticity characteristics of the soil. The plasticity index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the liquid limit (LL) and the plastic limit (PL). The liquid limit is the moisture content at which the soil becomes sufficiently "wet" to flow as a heavy viscous fluid. The plastic limit is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into tiny threads. The liquid limit and plastic limit are determined in accordance with ASTM D 4318.

Moisture Content: The Moisture Content is determined according to ASTM D 2216.

Percent Finer Than 200 Sieve: Selected samples of soils are washed through a number 200 sieve to determine the percentage of material less than 0.074 mm in diameter.

Rock Strength Tests: To obtain strength data for rock materials encountered, unconfined compression tests are performed on selected samples. In the unconfined compression test, a cylindrical portion of the rock core is subjected to increasing axial load until it fails. The pressure required to produce failure is recorded, corrected for the length to diameter ratio of the core and reported.

Compaction Tests: Compaction tests are run on representative soil samples to determine the dry density obtained by a uniform compactive effort at varying moisture contents. The results of the test are used to determine the moisture content and unit weight desired in the field for similar soils. Proper field compaction is necessary to decrease future settlements, increase the shear strength of the soil and decrease the permeability of the soil.

The two most commonly used compaction tests are the Standard Proctor test and the Modified Proctor test. They are performed in accordance with ASTM D 698 and D 1557, respectively. Generally, the Standard Proctor compaction test is run on samples from building or parking areas where small compaction equipment is anticipated. The Modified compaction test is generally performed for heavy structures, highways, and other areas where large compaction equipment is expected. In both tests a representative soil sample is placed in a mold and compacted with a compaction hammer. Both tests have three alternate methods.

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Test	Method	Hammer Wt./ Fall	Mold Diam.	Run on Material Finer Than	No. of Layers	No. of Blows/ Layer
Standard D 698	A	5.5 lb./12"	4"	No. 4 sieve	3	25
	B	5.5 lb./12"	4"	3/8" sieve	3	25
	C	5.5 lb./12"	6"	3/4" sieve	3	56

Test	Method	Hammer Wt./ Fall	Mold Diam.	Run on Material Finer Than	No. of Layers	No. of Blows/ Layer
Modified D 1557	A	10 lb./18"	4"	No. 4 sieve	5	25
	B	10 lb./18"	4"	3/8" sieve	5	25
	C	10 lb./18"	6"	3/4" sieve	5	56

The moisture content and unit weight of each compacted sample is determined. Usually 4 to 5 such tests are run at different moisture contents. Test results are presented in the form of a dry unit weight versus moisture content curve. The compaction method used and any deviations from the recommended procedures are noted in this report.

Laboratory California Bearing Ratio Tests: The California Bearing Ratio, generally abbreviated to CBR, is a punching shear test and is a comparative measure of the shearing resistance of a soil. It provides data that is a semi-empirical index of the strength and deflection characteristics of a soil. The CBR is used with empirical curves to design pavement structures.

A laboratory CBR test is performed according to ASTM D 1883. The results of the compaction tests are utilized in compacting the test sample to the desired density and moisture content for the laboratory California Bearing Ratio test. A representative sample is compacted to a specified density at a specified moisture content. The test is performed on a 6-inch diameter, 4.58-inch-thick disc of compacted soil that is confined in a cylindrical steel mold. The sample is compacted in accordance with Method C of ASTM D 698 or D 1557.

CBR tests may be run on the compacted samples in either soaked or unsoaked conditions. During testing, a piston approximately 2 inches in diameter is forced into the soil sample at the rate of 0.05 inch per minute to a depth of 0.5 inch to determine the resistance to penetration. The CBR is the percentage of the load it takes to penetrate the soil to a 0.1 inch depth compared to the load it takes to penetrate a standard crushed stone to the same depth. Test results are typically shown graphically.

Consolidation Tests: Consolidation tests are conducted on representative soil samples to determine the change in height of the sample with increasing load. The results of these tests are used to estimate the settlement and time rate of settlement of structures constructed on similar soils. A consolidation test is performed according to ASTM D2435 on a single section of an undisturbed sample extruded from a sample tube. The sample is trimmed into a disc 2.5 inches in diameter and 0.75 inch thick. The disc is confined in a stainless steel ring and sandwiched between porous plates. It is then subjected to incrementally increasing vertical loads, and the resulting deformations are measured with a micrometer dial gauge. Void ratio are then calculated from these deformation readings. The test results are typically provided in tabular form or in the form of plots of void ratio versus applied stress (e-log p curves).

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Organic Content: The Organic Content is determined according to ASTM D2974. The moisture content is first determined by drying portions of the sample at 105 degrees Celsius. The ash content is then determined by igniting the oven-dried sample from the moisture content determination in a muffle furnace at 440 degrees Celsius. The substance remaining after ignition is the ash. The organic content is expressed as a percentage by subtracting the percent ash from one hundred.

Direct Shear Tests: Direct shear tests are performed according to ASTM D3080 to determine the shear strength parameters of the soil. The specimen of soil is placed in a rigid box that is divided horizontally into two frames. The specimen is then confined under a vertical or normal stress and horizontal force is applied to fail the specimen along a horizontal plane at its mid-height.

Because drainage of the soil specimen cannot be easily controlled, undrained tests (i.e., UU and CU tests) are possible only on impervious soils and pore pressure measurements cannot be made. Drained tests (i.e., CD tests), however, are possible on all soil types. Since the drainage paths through the specimen are short and pore water pressures are dissipated fairly rapidly, the direct shear test is well suited to the CD test.

A minimum of three test specimens are required to establish the strength envelope of a soil. The soil parameters obtained are the cohesion and angle of internal friction.

Unconfined Compression Tests: The unconfined compression test is an unconsolidated-undrained triaxial shear test with no lateral confining pressure. This test is used to determine the shear strength of clayey soils. An unconfined compression test is performed according to ASTM D2166 on a single section of an undisturbed sample extruded from a sampling tube. The sample is trimmed to a length-to-diameter ratio of about 2 and placed in the testing device. Incrementally increasing vertical loads are applied until the sample fails. Test results are provided in the form of a stress-strain curve or a value representing the unconfined compressive strength of the sample.

Grain Size Tests: Grain Size Tests are performed to determine the soil classification and the grain size distribution. The soil samples are prepared for testing according to ASTM D421 (dry preparation) or ASTM D2217 (wet preparation). The grain size distribution of soils coarser than a number 200 sieve (0.074 mm opening) is determined by passing the samples through a standard set of nested sieves. Materials passing the number 200 sieve are suspended in water and the grain size distribution calculated from the measured settlement rate. These tests are conducted in accordance with ASTM D422.

Triaxial Shear Tests: Triaxial shear tests are used to determine the strength characteristics and friction angle of a given soil sample. Triaxial tests are also used to determine the elastic properties of the soil specimen. Triaxial shear tests are performed on several sections of a relatively undisturbed sample extruded from the sampling tube. The samples are trimmed into cylinders 1.4 to 2.8 inches in diameter and encased in rubber membranes. Each is then placed in a compression chamber and confined by all around water pressure. Samples are then subjected to additional axial and/or lateral loads, depending on the soil and the field conditions to be simulated. The test results are typically presented in tabular form or in the form of stress-strain curves and Mohr envelopes or p-q plots.

Three types of triaxial tests are normally performed. The most suitable type of triaxial test is determined by the loading conditions imposed on the soil in the field and the soil characteristics.

1. Consolidated-Undrained (designated as a CU or R Test).
2. Consolidated-Drained (designated as a CD or S Test).
3. Unconsolidated-Undrained (designated as a UU or Q Test).

## **Preface to the Stormwater Pollution Prevention Plan**

The Stormwater Pollution Prevention Plan is included in the Project Manual for informational purposes to assist the Contractor in compliance with the KYR10 permit and is not considered a part of the Contract Documents. The Contractor is responsible for complying with all the requirements of the KYR10 permit from the Kentucky Division of Water including filing for the Notice of Intent. Inspection report templates have been included with the SWPPP that can be used on the site for the weekly inspections required by the permit. The Contractor may elect to use other templates for site inspections, as long as the requirements of the KYR10 permit are maintained.

Documents provided:

### **Stormwater Pollution Prevention Plan for:**

Bullitt Central High School – Phase III Athletics – Physical Science Center  
Shepherdsville, KY  
Bullitt County Board of Education  
Shepherdsville, KY 40165

### **SWPPP Contact:**

#### **Buzick Construction, Inc.**

Robin Mills, P.E.  
702 Beechwood Ave.  
Bardstown, KY 40004  
Phone: (502) 350-9423  
Email: rmills@teambuzick.com

**SWPPP Preparation Date:** 5/##/2025



**Bullitt County Public Schools**  
**New Construction and Renovation Design Guidelines**

**Prepared by Bullitt County Public Schools**

**Updated: [October 19, 2023](#)**



## OVERVIEW

This document contains design guidelines and specifications for Bullitt County Public Schools for all new construction and renovation projects. These specifications have been developed as a collaborative cross-departmental effort in coordination with the Director of Facilities or designee. In the broadest term, this document links the district staff with the architectural and engineering firms on all projects.

This document details district requirements and preferences ranging from parking lots and landscaping, to the building envelope, to interior finishes and the mechanical, electrical, and plumbing systems. These are minimum standards for the design of the project, and contain some, but not all, of the criteria pertinent to the design of a new building or renovation project. Where technical design criteria is lacking in this document, the architectural and engineering consultants shall follow industry (ASHRAE, NFPA, IECC, etc.) and KDE standards.

Based on the architects' and engineers' professional experience, they are encouraged to recommend in writing for the district's consideration - alternative products, systems, means, methods, etc. that add to the project's value. Under no circumstances will the architects or engineers deviate from the district's minimum design standards without prior consent of the Director of Facilities or designee in writing.

This document is a snapshot of the current district design specifications. The document is continually reviewed, evaluated, and modified as required and as new technologies and products enter the market. The cover page will always indicate the date on which the latest review and revisions occurred. This document is an indispensable tool that will help BCPS staff provide this district with the quality facilities that are desired, required, and deserved for our students.

It is the obligation of the architectural and engineering firms to review this document and submit any questions to the Director of Facilities or designee. During the design process for any project, the architectural and engineering firms will be required to work with the Director of Facilities or designee to arrange design meetings once every two weeks. These design meetings may include district staff from the Facilities, Food Service, and Technology Departments, as well as any other district staff that may need to provide input during the design process.

Each architectural and engineering firm will be presumed to have reviewed this document, and included these items in the design and formal specifications of the project. After this document has been reviewed, a signed copy from the architect shall be submitted back to the BCPS Director of Facilities or designee. This signed document confirms that the architectural firm has reviewed the document and understands that they are agreeing to follow BCPS design guidelines and specifications on the current project.

## **Acknowledgement**

**The BCPS Construction Design Guidelines and Specifications document has been a collaboration between the Director of Facilities or designee and several Support Services departments. Special thanks to the following people:**

- Part 3 Utilities: George Brock
- Part 4 Mechanical Systems: Sonny Arnold and District Energy Auditor
- Part 5 Plumbing: Trevor Lewis and Rob Graham
- Part 6 Electrical Systems: George Brock, and Brad Marcum
- Part 7 Building Envelope and Exterior: Danny Clemens
- Part 8 Interior: Danny Clemens and George Brock
- Part 9 Parking Lots and Landscaping: George Brock
- Part 10 Technology: Kevin Fugate, Adam Bates
- Part 11 Kitchens and Kitchen Equipment: Donnie Jessie

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## **Part 11 Kitchens and Kitchen Equipment**

## **BCPS Acknowledgement Form**

# **Bullitt County Public Schools: Construction Design Guidelines and Specifications**

## **Part 1 Building Design and Approval**

### **Design meetings and Board approval**

- Once an architectural firm has been awarded a contract by Bullitt County Public Schools, design meetings will be arranged with the district's Facilities, Technology and Food Service departments and their key technicians and staff. These departments will be involved with the construction design process, and their input should be seriously considered in any design
- Once the project plans are finalized by the architects and engineers, the final plans will be submitted to the Bullitt County Public Schools Director of Facilities or designee two (2) weeks before they are presented to the Board of Education for approval. Any issues that are discovered with the plans and/or changes that need to be made will need to be addressed before the plans are submitted to the Board for approval
- Use of any allowance money in all construction projects must be approved in writing and in advance by the BCPS Director of Facilities or designee. The Director of Facilities or designee will document and track all allowance expenditures. The Director of Facilities or designee will maintain documentation on allowance expenditures, and periodically report on the various allowance amounts included in the contract and the amount remaining in each allowance
- As-built drawings and documents shall be submitted to owner within 180 days of acceptance of the building
- After being awarded the construction project, the General Contractor and his Sub Contractors will provide a 9-panel drug screen and criminal background check to BCPS for each worker. Once BCPS has both documents, then the worker will be issued a Photo ID badge, which MUST be worn at all times on the job site
- No tobacco, alcohol, or vapor products are allowed on school property. Anyone using these products will be removed from the site and not be allowed to return
- Firearms are prohibited on school grounds
- After being awarded the construction contract, the general contractor must submit a resume for both the project manager and site superintendent. Also, if requested, any subcontractor may be asked to submit resumes for their team leaders. BCPS has the right to reject any contractor leadership that does not meet our approval
- BCPS reserves the right to remove project leadership if BCPS standards are not followed
- All contractors are required to attend the Pre-construction meeting
- A minimum of 15 construction signs must be placed around the project site and maintained for the duration of the project. The signage must say:
  - BCPS badges are required
  - No Tobacco or Vapor products allowed on site
  - No weapons or firearms allowed on site
- All equipment that is demoed from the site is the property of BCPS. If BCPS does not want the equipment, then the general contractor must remove from the job site

- BCPS reserves the right to hold 3% of the retainage until the final punch list for the project has been completed

## **Part 2 Environmental Hazards**

- Bullitt County Public Schools Facilities Department has the sole responsibility to document and identify any harmful conditions concerning any environmental hazards. The Facilities Department possesses updated records for all buildings owned by BCPS. The Director of Facilities or the Maintenance Supervisor shall provide these records to the Director of Facilities or designee, architect, engineers, and any general contractor before a project begins
- The Architect will be responsible to inquire with the Facilities Department about any environmental hazards (past or present) at the project site.
- The architect is responsible for writing project specs to include all abatements, removal, and remediation work
- If an environmental hazard is discovered, a third-party company will be hired directly by Bullitt County Public Schools Facilities Department to monitor the air quality during the abatement or remediation process

## **Part 3 Utilities**

- The General Contractor is responsible to coordinate with Director of Facilities or designee and BCPS Facilities Department to make sure that all existing utility lines are marked by BUD and a licensed utility inspection service
- Any overhead OR underground utility lines or pipes that are damaged during construction are to be repaired by the General Contractor. The General Contractor is also responsible for any third-party damages (i.e. subcontractors)
- The General Contractor is responsible for requesting temporary electrical service and meter to serve any construction trailers, construction machinery, construction lighting, etc. The General Contractor is responsible for the electric bill for these services.
- For new construction, the General Contractor is responsible for the electric and natural gas (if applicable) for the new building until BCPS receives the certificate of occupancy for the building
- For new construction, the General Contractor is responsible for the water and sewer charges for the new building until BCPS receives the certificate of occupancy for the building
- BCPS has an energy management program. The General Contractor and all subcontractors are expected to be as efficient as possible when using the district's electrical service (i.e. turning off lights at the end of day or when no one is working in an area)
- Any outdoor cable relating to telephone, cable, fiber optic cable, etc. should be coordinated through the BCPS Technology Department



## Part 4 Mechanical Systems

### Basic Mechanical Requirements

- Minimum one year warranty or manufacturer's standard, whichever is greater
- Five year warranty on all compressors
- Two year warranty on Building Automation System (BAS)
- All warranty end dates clearly documented
- All closeout documentation (O&M manuals, record drawings, as built, warranty documents, etc.) shall be provided in hardcopy and electronically
- Trainings shall be videoed, and all training videos shall be submitted with the closeout documentation
- Trane controls are the district standard for HVAC systems. If necessary, Trane controls will be submitted as a preferred alternate
- No additional/auxiliary mechanical equipment shall be part of the specifications or purchased as part of the mechanical equipment package

### Valves

- Valves 2 ½ "or smaller shall be ball valves
- Valves 3" or more shall be butterfly valves
- Provide sufficient valves throughout the building to isolate systems for drain down and repair

### Gauges and Thermometers

- No mercury filled thermometers or thermostats shall be used

### Geothermal or Traditional Boiler/Chiller Heat Pump System: Piping & Accessories

- All geothermal fields are preferred to have a 10 year warranty
- Avoid the use of iron piping; all hydronic piping should be HDPE
- Include loop/side stream filter on all building HVAC loops - geothermal or traditional boiler/chiller/cooling tower loops
- Contract shall provide closed loop water treatment for a minimum of 2 years
- Centralized pumping – preferred are Bell & Gossett pumps; no Armstrong pumps
- Variable Frequency Drives (VFDs) on any pumps or large equipment (i.e. cooling towers)
  - **See Building Automation section for additional information on VFDs**
- Geothermal Vaults should be gravity draining. If they require a sump pumps – the preference is to use Zoeller pumps
  - **Confirm that electricity has been run to the vault to make the pump operational**
- A five-year warranty shall be provided on the water tightness/seal on the geothermal vault(s)
- Make-up water on any geothermal loop; make up water shall have a meter and have a point tied back into the building automation system (BAS) for alarming purposes
- Cooling towers – no Dolphin systems

- Flush hookups shall be provided in the main mechanical room of the building and the geothermal field (in case system flushing by BCPS is needed)
- Geothermal Vaults
  - External shell to be constructed of one (1) inch thick HDPE with a cell classification of 345444 with a UV stabilizer of “C”
  - Purge port provided at supply/return header
  - Six (6) inch main (typical), supply below and return above
  - Butterfly valves
  - Circuits with supply below and return above
  - Access pad that is 10 feet by 5 feet 2 inches
  - Two access doors, with access covers; 30” minimum opening
  - 18 inch wide ladders to access vault
  - Interior of vault to be white

### Water-Source Heat Pumps

- Heat pumps preferred to be high efficiency, 2-stage
- Provide all heat pumps with a uniform, **manufacturer-built filter rack** consisting only of MERV 8, 24X24X2 filters where possible. Filter section shall have a hinged door with gasket
- Units shall have a valve and hose connected to condensate drain in order to flush strainers
- One shared heat pump for every two classrooms is an acceptable design for efficiency and reducing mechanical equipment costs. Each room shall be provided with a room temperature sensor (thermostat) tied back to the BAS, averaging the two space temperatures
- NO HVAC UNITS SHALL BE INSTALLED ABOVE CEILINGS
- A floor mounted mop service sink provided on any mechanical mezzanines
- Provide Hot Gas Reheat function on units serving certain spaces for humidity control. These spaces include:
  - Gym
  - Cafeteria
  - Media Center
  - Band Room
  - Vocal Music Room
  - Auditorium

### Air Handling Units

- Dedicated outdoor air unit shall condition outdoor air before being distributed to the building. Outdoor air shall be supplied directly to the spaces at room neutral temperature
- Demand controlled ventilation

### Rooftop Units

- Rooftop units preferred to be high efficiency
- Natural gas heat on any RTUs (when available) preferred over electric heat

### HVAC Ductwork

- All return air shall be ducted
- All ductwork shall be externally insulated
- Provide access door in return ductwork for cleaning coils

### **Testing, Adjusting & Balancing**

- Testing, Adjusting, & Balancing (TAB) Contractor shall contract directly with the Bullitt County Public Schools
- General Contractor and Architect shall submit shop drawings to TAB Contractor for coordination with the Mechanical, Controls, and Geothermal (if applicable) contractors
- TAB contractor shall be responsible for testing geothermal/water loops and all internal HVAC equipment

### **Building Automation System (BAS)**

- Acceptable manufacturer is Trane (May have to be listed as preferred alternate)
- The BAS must seamlessly tie into the BCPS Tracer ES system
- Alternate controls, if selected, must be tied into the existing Tracer Summit front end
- Points shall include, but are not limited to:
  - Fan Status (heat pumps, energy recovery units, kitchen makeup air units and exhaust fans)
  - Supply air temperatures
  - Room temperatures
  - Leaving water temperature
  - Relative humidity (Coordinate with OWNER on locations for RH sensors)
  - Carbon Dioxide
  - Kitchen Refrigerator and Freezer Temperatures – and they shall be monitored through the building automation system (BAS)
  - Circulating pump suction pressure
  - Make up water for geothermal loops (gpm)
- Trends shall be set up for all points listed above
- Energy recovery unit(s) shall have a separate schedule for operation
- Classrooms shall be divided into zones with separate schedules for each zone  
Coordinate zoning with the district's Energy Manager
- Classrooms shall have adjustable thermostats with limits set through the BAS
- VFDs and control valves shall be furnished and installed by Controls Contractor
- Control dampers shall be furnished and installed by Controls Contractor
- **Electric and natural gas consumption shall be monitored through the BAS and tied into the district's Eco Rate program**
- **Install Ethernet drop at head end equipment for connection to district WAN**

### **OTHER GENERAL HVAC DESIGN GUIDELINES**

- MDF/IDF Rooms are preferred to have a stand-alone air conditioning unit, monitored through the BAS. These HVAC units shall preferably be mini-split units or other solution that is not tied into the main building loop (in cases of geothermal or standard boiler/chiller loops)

- Food Storage Rooms are preferred to have a stand-alone HVAC unit (monitored through BAS) in order to keep the room below 70 degrees year round
- Ensure that manufacturer's recommended clearance or 30" (whichever is greater) is maintained around all HVAC units and units are easily accessible for maintenance
- Provide copper runouts to Heat pumps. (Mains to be HDPE) Runouts to tap off from side, or above main. DO NOT tap branch piping to bottom of main.

## **Part 5 Plumbing**

### **Plumbing Fixtures**

- Acceptable manufacturer is Delta, Zurn, T&S, or Central
- Delta faucets – Delta 86T1153 – preferred for restrooms
- Urinals shall have an integral strainer
- Restroom sinks are preferred to be white trough porcelain, with double faucets
- No sensor-controlled toilets or urinals
- Preferred urinal manufacturer is American Standard; no Briggs urinals
- Floor mounted water closets (American Standard)
- Each restroom shall have a floor drain, a hose bib, and cleanout accessibility
- Preferred manufacturers are American Standard, Royal Sloan, or Zurn for flush valves in restrooms
- Solid interceptors shall be Zurn
- Cleanouts and floor drains shall be Zurn
- Preferred manufacturer for mop sinks is Mustee
- Preferred manufacturer for RPZ backflow preventers is Watts
- Preferred manufacturer for mixing valves is Bradley
- Handles on flush valves. Consider water conservation features
- Bradley (or approved equal) wash stations shall be used in restrooms
- Water fountains should be stainless steel, not painted; Elkay is preferred
- Classroom sinks shall have shutoff valves for both hot and cold water
- Shutoffs shall be provided at every restroom main
- Preferred manufacturer is Sioux Chief for hammer arresters, installed where applicable; preference to have installed in restroom risers
- Provide a sufficient amount of mop sinks throughout the building
- Preferred manufacturer for pumps is Bell & Gossett
- Ball valves
- Manual toilets and faucets (history of expensive and unreliable sensors on bathroom fixtures)
- Trap primers are required for all floor drains
- Water softeners. Preferred brand is Kinetico
- Provide isolation valves to be able to shut off/isolate both hot and cold water to the kitchen, in case of repair or needed maintenance

## **Fire Suppression System**

- Provide sufficient valves throughout the building to isolate systems for drain down and repair
- Flex heads on sprinklers

## **Potable Water Piping**

- Provide isolation valves for each restroom group
- All systems must drain completely
- Provide backflow preventers
  - Contractor to perform first year inspection and provide all necessary and required information to Louisville Water Company, Mt. Washington Water & Sewer, or the city of Lebanon Junction
- Piping shall be PEX pipe and fittings
- Schedule 40 Sewer Pipes; mandatory cleanouts every 100' (per code)
- Water softening required for dishwasher water only. All other areas DO NOT require water softening.

## **Water Heaters & Boilers**

- Acceptable manufacturers are Aerco, Lochinvar, AO Smith, or approved equal
- Lochinvar is the preferred brand for water heaters
- Provide energy controls on water heaters. A temperature sensor for all DHW shall be provided on each water heater, which will tie into the building automation system (BAS)
- Water heaters and boilers shall be natural gas (when available). Explore possible tankless water heaters for efficiency
- Water heaters shall be glass lined or stainless, when using conventional water heaters.

## **Part 6 Electrical Systems**

### **Basic Electrical Materials and Methods**

- All equipment and systems shall be covered by a minimum one-year warranty
- Electric meters shall have a pulse output to the building automation system (BAS) for monitoring of electric demand and consumption, and natural gas consumption (if applicable)
- All closeout documentation (O&M Manuals, record drawings, as built, etc.) shall be provided in hardcopy and electronically
- Trainings shall be videotaped, and training videos shall be submitted with close out documents
- Replacement of ALL outlet and switches, leaving no existing outlets or switches in place (RENOVATIONS)
- Installation of outlets for projectors, smartboards, and TVs in the classroom or any other location requiring an outlet for technology equipment
- Acceptable hand dryer manufacturers are Dayton or World push-button hand dryers, with a 25 second time limit
- Switchgear – preference for Siemens ,Square D or GE/ABB

- Electric Panels – must match switchgear manufacturer
- Hallway lights should be occupancy sensor controlled per adopted energy code.
- Use of MC cable allowed where concealed in walls/above ceilings in spaces. Transitions to EMT in the corridors for homeruns. EMT shall be used where exposed.
- Phase loss protection shall be provided on all new switchgear. If phase loss protection is not present on existing switchgear (and switchgear is not being replaced), then phase protection shall be installed
- Power studies shall be provided by a professional engineer employed by equipment manufacturer providing the electrical distribution equipment. Studies shall include a coordination study (required where a legally required emergency generator system is provided), fault current study and arc flash study. Arc flash labeling for each equipment shall indicate at a minimum, arc flash hazard warning, the incident energy at that location, the arc flash boundary, the level of PPE required, safe approach distances, safe working distances, and any other information recommended or required per NFPA 70E, OSHA and the NEC.
- All J-Box covers shall be marked with circuit numbers. In finished space, where jbox'es are exposed to view, the inside of the cover shall marked.
- 3/4" conduit shall contain no more than three (3) circuits which is six (6) current carrying conductors consisting of three (3) phase and (3) neutral (grounded) conductors and (1) grounding. Minimum conduit size 3/4" and minimum box size depth 2 1/8" where new construction.
- All technology and electric conduit that is designed to be below the floor slab must be encased in a 6" to 12" concrete trench
- Pathways for Ethernet cabling must be kept free from other obstructions that would limit access to cabling once all above ceiling installations are complete
- Minimum of 6" of clearance from tray to ceiling is required
- DO NOT PAINT any data cabling
- Color code Device Boxes and Conduit as follows:
  - o Low Voltage (120) – Standard EMT Color
  - o Communication – Blue
  - o High Voltage (480) – Orange
  - o 277/480 Emergency – Green
  - o 120/208 Emergency – Yellow
- Fire alarm conduit must be red and boxes and must be labeled.
- All device cover plates shall be labeled with clear adhesive labels on panel and circuit served from.
- Breakers shall be minimum of 20A.
- Wire shall be minimum of 12AWG, THHN/THWN.
- Load center shall not be acceptable. Panelboards shall utilize bolt-on breakers.
- 1200A and larger devices shall be provided with an arc flash reduction maintenance switch per the national electric code.
- Coordinate storm shelter requirements and backup power needs with architectural and ventilation design. Backup lighting is required for 1fc for 2-hrs. Ventilation is required. Where mechanical ventilation is provided, backup power for 2-hrs will be needed and must be protected within the storm shelter.
- No conduit shall be installed underground unless required for the application (floor boxes, islands, etc,) or specifically indicated as such in construction documents. No conduit shall be installed within concrete slabs. Where required, minimum bury shall be 24".
- All primary electric raceways shall be concrete encased.
- Provide service receptacle near MAU and freezer/cooler condensers.



## Lighting

- All outdoor lighting shall be LED;
- Outdoor lighting should be controlled from a building automation system controller (provided by Controls Contractor) utilizing a dry contact output from the controller to control multiple relays. A hand-off-auto switch should be provided to allow for manual override.
- All indoor lighting shall be LED
- Local (non-centralized/non-networked), standalone lighting controls for each space meeting vacancy, occupancy and daylighting requirements of current adopted IECC/ASHRAE energy codes. Switch-plate style controls with integral occupancy/vacancy are also acceptable where coverage is adequate.
- Standalone daylight dimming systems shall be provided where required by current adopted IECC/ASHRAE energy codes. Where provided, systems shall integrate with room controls already being provided.
- Avoid placing fixtures where it would be difficult to change the light bulbs or light fixtures
- No regular key switches for any lighting in the building; fork keys are acceptable
- CREE Brand light fixture are NOT ALLOWED.
- Spaces with code required multi-level lighting controls shall utilize dimming functionality with four preset lighting scenes at 25%, 50%, 75%, 100% and off. Small spaces shall have the option to utilize integral raise/lower/occupancy/vacancy switch plate controls. Multi level control switches shall be labeled/engraved with operation.
- Corridor and public space lighting shall utilize occupancy sensors.
- Plastic switch plate covers are not allowed.
- Ganged restroom lighting shall utilize occupancy sensors with fork key manual control at exterior of ganged restroom.
- Classrooms without exterior windows shall be provided with a minimum of (1) emergency light.
- Industrial strip fixtures shall have frosted lenses and wire guards.
- Restroom with tall vertical partition or wall systems shall be provided with linear wall mounted, vandal resistant light fixtures over the stalls.
- Adequate lighting shall be provided for the dumpster and kitchen staff parking location for morning kitchen activities. Confirm requirements with building layout and BCPS project manager.
- Three manufacturer spec is required for KDE. Cooper/Eaton, Lithonia/Acuity and Phillips are examples
- Standard Flagpole light is an LED External Halyard Flagpole Beacon – Global Flags Unlimited #208360.

## Wiring Devices

- Provide numerous maintenance receptacles around exterior of buildings
- Use panel circuit breakers in lieu of GFI outlets.
- Surge protection at all panels and branch circuits
- All devices shall be 20 amp minimum
- Device plates shall be unbreakable nylon.
- Workrooms shall have sufficient amount of receptacles and workable space
- All mechanical rooms shall have sufficient space around switchgear and panels, and yellow lines marking the space according to code
- Devices shall be specification grade.

## Legally Required and Optional Standby Emergency Power Systems

- Acceptable manufacturers are Cummins, Caterpillar and Kohler.
- Generators are preferred to be natural gas. If natural gas is not available, then generators shall be diesel. No propane generators will be accepted
- Legally required standby systems shall be provided with means for connecting and utilizing a temporary power source while the permanent system is being serviced per NEC.
- Walk-in Coolers/Freezers, MDF/IDF rooms, gymnasium (and associated HVAC), and mechanical room shall be included on the generator service. Coordinate with Bullitt County Public Schools for complete list of items and equipment to include on generator.
- BCPS prefers generators for emergency code required lighting. A generator shall be include as basis of design and budgeting.

## Surge Protective Devices

- Main switchgear must have SPD with ~~external~~ maintenance disconnect/operator.
- Branch circuit panelboards for all low voltage receptacles and LED lighting shall have SPD protection.
- Manufacturer of switchgear/switchboard and all panelboards shall be utilized to provide the SPD protection package.

## Panel boards

- All panel board schedules shall be completely typed out
- Acceptable manufacturers are Siemens ,Square D or GE/ABB
- All panel covers shall be hinged

## Additional Receptacles

- Receptacle located near loading area of the kitchen, outside the building. Receptacle shall be 30 amp 125/250 V – L14-30R (for district's freezer trailer, see owner for questions) **Coordinate with owner for specific location**
- Receptacle located near parking area for the mobile science lab. Receptacle shall be 50 amp 125/250 V. **Coordinate with owner for specific location and if required**

## Fire Alarm

- All alarms shall be addressable type – voice evacuation as required per code.
- A minimum one-year monitoring service shall be included in the bid documents if not able to be monitored through central office Fireworks Monitoring.
- Fire alarm wiring shall be in RED conduit; no flex is acceptable for fire alarm wiring
- Fire Alarm system shall be Edwards, Simplex or Honeywell and be compatible and tied into BCPS's central Fireworks Monitoring System.

## Part 7 Building Envelope and Exterior

**Any existing structures that are required to be relocated for the construction or renovation process must be part of the contract.**

### Doors

- No Piano Hinges; preference for 3 pin hinges
- No vertical locks
- No closers on classroom doors
- Primus keying is the district standard, and **all cores shall be stamped** per owner's instructions
- Door jambs will have a double 2x fire treated studs from floor to ceiling
- The head of the frame shall also have 2- 2x studs
- Welded metal frames on all doors, and wood doors on classrooms and office areas. Metal doors at mechanical rooms, as well as all exterior doors
- Mag locks are not to be used to hold doors "closed"
- Electric crash bars shall be used on exterior doors as specified by the district
- Pathways to door jamb shall have conduit stubbed above ceiling for door jambs, to provide access to electronic crash bars, hinges, etc.
- For all ADA operators, two buttons need to be installed for each operator (entrance and exit button for interior and exterior doors)
- At least one door on every side of the building, not including the kitchen, must have a key cylinder
- A Steelmaster Dupli-Key Cabinet, model #201824003, shall be provided and installed in the principal's office. Inquire with Director of Facilities or designee for specific location
- Do not locate glazing near classrooms doors that would allow an intruder to break glass and unlock door.
- 3M protective security film to be added at exterior glazed entrances. Final locations to be coordinated with BCPS Facilities.

### Ceilings

- Drywall ceilings shall not be used in new construction or renovations.
- If necessary for restroom ceilings, drywall tiles can be used, but must include hold-down clips.

### Windows

- If Daylighting opportunities exist, provide opportunities to reduce/control lighting levels by use of lighting shelves. Window coating/film is required for lighting and heat load reduction
- No windows shall be installed below the dirt line. (Example Hebron Middle School cafeteria windows).
- 3M protective security film to be added at exterior glazed entrances. Final locations to be coordinated with BCPS Facilities.

## Roofing

- BCPS preference is for white, spray foam roofing

## Walls

- Preference for ICF (insulated concrete form) construction for all new buildings

## Concrete

Cast in place concrete	Minimum cement material LB. per CB. YD.
• Footings – 3,000PSI	470
• Interior Slabs on grade-4,000PSI	550
• Exterior and other concrete exposed to weather-4,500 ---	564

## Vapor Barrier

- Polyolefin/Resin sheet not less than 15 mils thick, blue in color and white tape spec to use

## Exterior Canopy

- No flat edges
- Metal underdeck, leaving no spaces for birds' nests

## Part 8 Interior

## Restrooms

- No wall tile in bathrooms. Painted block wall will be sufficient for restroom design
- Stall walls must be constructed with 6" CMC with 8" minimum and 12" maximum clearance from the floor
- Stall doors must be hollow metal with locks. They also must be 8" from the floor
- Floor shall be ceramic or porcelain tile with dark grout. The district prefers a medium to dark gray floor tile, with a dark gray or black grout. Or if color scheme dictates, a dark brown tile with dark brown grout. The baseboard shall be a less porous material, like a ceramic tile – to aid in cleaning and disinfecting the area.
- No VCT in restrooms
- Maximum restroom floor tile (ceramic) size is 6" x 6"; larger tiles shall not be accepted
- Toilet tissue holders, soap dispenser, towel dispensers are part of the contract and submittals must be submitted to owner for approval
- Paper towel dispensers (if used) shall be 11.5" X 9". Hand dryers are typically preferred instead of paper towel dispensers
- Acceptable hand dryer manufacturers are Dayton or World push-button hand dryers, with a 25 second time limit

## Interior Blocking

- All blocking and backing must be fire treated lumber

## Hallways

- Provide tack strips in hallways for student work
- Heavy-duty corridor lockers. Subject to compliance with requirements, provide Republic's Heavy Duty Corridor Locker or comparable product
  - Arrangement of lockers: 12 inches by 12 inches by 60 inches, double-tier
  - Door style: vented panel
  - Hinges: welded to door and attached to door frame with no fewer than two factory installed rivets per hinge that are completely concealed and tamper resistant when door is closed; fabricated to swing 180 degrees
  - Locks: attached combination

## Classrooms

- Block provided for pencil sharpener, 40" from floor
- Provide tack strips in the front of the classrooms
- Provide tack strips in hallways
- Consult with BCPS Director of Facilities or designee for the mounting heights of all dry erase boards, marker boards, white boards, tack strips, etc.
- Casework - Elementary Schools
  - Preferred cubbies unit T8440-15, double tier, 30 total. Dimensions are 15"X52"X15"
  - Each cubbie unit shall also house a 31"X45"X15" storage unit on top, with lockable doors and adjustable shelves for additional teacher storage space
  - Preferred wardrobe cabinet unit T2592 for each classroom. Dimensions are 36"X84"X24". The cabinet shall have lockable doors and adjustable shelves

## Flooring

- At new and existing concrete floor slabs, floor covering contractor shall conduct a minimum of three (3) pull up tests, within seven (7) days of installation, per 10,000 ft<sup>2</sup> of floor covering(s) at field designated areas - randomly selected by the BCPS or project architect. Pull up test criteria will be defined by floor covering manufacturer to confirm manufacturer installation and warranty criteria. Floor covering installations that fail the random pull up test(s) will be subject to additional test(s) to the satisfaction of BCPS.  
**Materials that fail multiple tests will be subject to complete removal and replacement. Additional testing may be required subject to the architect and BCPS discretion**
- No calcium tests will be allowed
- Hand roll all new floors with a 90 lb. hand roller
- Contractors are responsible for cleaning all floor products according to manufacturer's written recommendations. Any tile flooring like VCT shall then be sealed with two (2) coats of sealer, stripped (if necessary), and coated with a minimum of three (3) coats of wax
- Existing slab (renovations) will require a trowelable leveling compound, with 100% coverage

## Part 9 Parking Lots and Landscaping

- No islands, raised curbs, etc. in the parking lots to interfere with snow removal or creation of additional grass to cut
- Consider low concrete curbing (gutter curb) for durability
- Parking lot striping must be approved by the maintenance department
- Minimal shrubbery: prefer trees (ground cover-lava rock, mulch, etc.)
- Provide allowance if school signage or message board to be relocated at existing school
- Any areas on the school property that are disturbed during the construction process must be returned to new condition. **No rock or construction debris will be accepted in the soil**
- Any undisturbed areas must be repaired with no less than 6" of manufactured topsoil before any sod or seeding and straw is put in place
- All grass areas directly in contact with the school, or in medians, shall be finished with sod. For additional direction, please confer with the architect and Director of Facilities or designee

### Playground Equipment

- All new play structures shall be installed as part of the contract
- For any renovation work, ALL playground equipment will be relocated by the General Contractor as part of the construction contract. Contractor shall also provide storage of all playground equipment if necessary
- Provide French drainage out of all playground areas
- Canopy designs must discourage birds nesting.
- Fencing – Fenced enclosures to be discussed and confirmed by BCPS Leadership and Facilities prior to finalization of design.

### Enclosures

- Transformers shall be enclosed with fencing or a brick enclosure
- Dumpsters locations shall have a pad, and also have required fencing or enclosure based on local city and health department codes

## Part 10 Technology

**Any amendments to items listed below shall be approved by the BCPS Technology Department**

### Public Address and Master Clock Systems

- Coordinate with BCPS staff
- Prefer that no clocks are installed in classrooms and hallways. Clocks are not required by KDE or district standards
- If clocks are installed in hallways, they shall be hardwired
- School wide PA system shall be installed independent of the phone system. Each room shall operate on a separate dedicated circuit. System type shall be confirmed with

BCPS.

- Emergency alarms (fire, tornado, etc.) should be sounded through the PA system
- Must connect to any existing analog Intercom systems and provide a path for a full network critical communication system
- Centralized, web based, credential protected (Microsoft Active Directory Interface) bell schedule that is flexible and easily adjusted from anywhere in the district
- BCPS Technology Department will provide specific pre-recorded instructions in the event of an emergency
- Provide an efficient way to automatically communicate the notification of an emergency
- Have the ability to provide pre-recorded instructions before and during an emergency
- Ability to log activity in the system, for awareness and evaluation after a crisis or a drill
- Provide technology offering Situational Awareness during an emergency with a check-in feature for each classroom
- Need to leverage existing data network and School Security Plan
- Budget considerations – Affordable, NO recurring charges, Single District Software Package
- If new school wide paging system (speakers and controls) is not installed, new installation shall incorporate IP Technology to the classroom and system must integrate with any existing speakers and controls that shall remain
- Training must be provided to end users (principals, key office and clerical personnel) and shall be videotaped for future trainings and reference
- Provide a **five-year Equipment Warranty** as specified by the manufacturer and one year for labor from date of completion
- Rauland - is the preferred paging manufacturer. May have to be specified as a preferred alternate in bid documents.
- All technology and electric conduit that is designed to be below the floor slab must be encased in a 6" to 12" concrete trench System type shall be confirmed with BCPS.

## **Security System**

- Security system shall be DMP, Bosch or Tyco and monitored by the local access control system and fire alarm system.
- System shall include and motion detectors for hallways and exterior doors.
- Contractor must coordinate with BCPS for security system and access control design and installation
- Pathways and conduits must be provided in door frames and single gang boxes must be located at the exterior for access control devices
- Verify that addressing is correct
- Integrate security system with the district Access Control System with:
  - Armed Status output
  - Arm/Disarm input
  - Panic button interface

## **Access Control**

- The power supply for owner supplied access control systems shall be mounted on the wall, just above the ceiling tile, above the doorway and controlled by an electrical switch. Coordinate with BCPS technology staff on power supply specifications and locations. Power Supply should be above accessible ceiling.



- Conduit shall be routed down both sides of the door frame to the hinges with no obstructions inside of the conduit and install 18/2 low voltage cable inside. Remember: Take precautions to ensure the conduit is free of concrete or other debris and does not block the pathway
- Each leaf in a bank of doors shall have electric crash bars with conduit/pathways as stated above
- Doors will need 18/2 low voltage cable installed and connected from the crash bars to the hinges, and from the hinges to the power supply above ceiling
- (2) 1 1/4" conduits shall be installed from the reception desk and stubbed out above the ceiling
- Use only solid conduit and no flexible conduit
- Any empty conduits shall have a pull string installed, with no obstructions for pulling cable
- Install single gang boxes for owner supplied Video Door Intercom and electronic card readers
- Powered crash bars are preferred over mechanical strikes

### **Video Surveillance**

- Contractor shall verify final rough-in locations with BCPS Technology Staff prior to installation
- Install single gang boxes, (with conduit stubbed out inside) flush with building exterior for outside security cameras. Coordinate with BCPS technology department for exact location and height, but in no circumstances shall it be located more than 12' above finished floor
- Data cables shall have Panduit style mini-com connectors (see Horizontal Cabling specifications) and terminated at conduit stub out location
- Put single gang box at least 2 feet away from downspouts or any other visual obstructions
- Interior security cameras shall have biscuit box with Panduit mini-com connector above ceiling where the camera will be located. (see Horizontal Cabling specifications) Place identifier on tile grid so the drop can be easily located at a future time.
- Cameras shall have a 15'-0" service loop.
- Where exterior site cameras are needed, utilize a fiber and a fiber converter at the pole with 120v power.

### **Digital Signage**

- Power and data shall be installed together and located at 7' (field verify) above finished floor in corridors, and commons areas (reference Horizontal Cabling specifications). Locations shall be coordinated with BCPS technology and school.

### **Large Scale Displays**

- Rear projection screens shall be installed in stage areas, where a projector can be mounted behind the screen
- Screens shall have a dual projection surface, where a projector can project on the front or the rear of the screen

- The screen shall not have any black header
- Screens shall have electronic controls (field verify) where the screen can be raised or lowered
- Boxes should be installed to prevent unauthorized access
- A/V controls should be located in areas as specified by BCPS Technology Department
- Electric for projectors should be installed at projector height
- Projector screens shall be properly sized for the area in which they will be used

### **Other Technology Notes:**

- All TV, computer outlets, copiers, above ceiling outlets for technology, and projector outlets shall have SPD protection, unless devices is powered from electrical panel with integral SPD protection.
- Backer Board shall be installed on all walls of MDF/IDF locations. Backer boards shall encompass the entire room
- Security, intercom/paging, access control and fire system head ends shall be installed in MDF
- Wiring closet size must meet KETS standards. (See 702 KAR 4:170 Facility Programming and Construction Criteria Planning Guide, pg. 57 c.3 Technology). MDF rooms shall include PBB/SBB grounding bus bar.
- Cable tray shall be routed to avoid ductwork and shall provide a minimum of 10" of clearance between the top of the tray and any other obstacles above
- Specify on ceiling grids where wireless drops are located – putting a drop number on the grid
- For large scale displays, verify with the owner the projector number, so the projector throw distance can be calculated for electrical and AV connections
- Data shall be coordinated with BCPS technology at all restrooms for VAPE sensors.
- A separate technology bid package shall be utilized for low voltage data cabling, access control cabling and sound systems. Coordination SOW with BCPS technology.

### **Technology Raceway System**

- Coordinate all data jack locations with the BCPS Technology Director and Technology staff
- All conduits shall be 1" minimum
- Preferred cable tray manufacturer is WBT, LLC. Performance Cable Tray
- Nylon bushings shall be used on all conduits that are stubbed out for data and telecommunications cable
- Velcro straps shall be used instead of nylon cable ties
- Install cable tray for runs with six or more drops
- J-Hooks should be installed every three feet or less for drops with five cables or less where pathway does not stub out directly to main cabling path.
- Bridle rings shall only be utilized with approval of BCPS technology.
- Provide common grounding for video/audio components
- Provisions shall be provided for wireless drops throughout the school. Locations to be coordinated with BCPS technology.
- Floor boxes and the conduit running to them must be encased in 6" of concrete min.

## Horizontal Cabling

- Horizontal cabling is the portion of the cabling system that extends from the work area to the MDF/IDF. The horizontal cabling shall be configured in a star topology. The horizontal cabling includes the horizontal cables, the mechanically terminated jacks/inserts and the faceplates that the jacks/inserts snap into, in the work area
  - Horizontal Data cabling:
    - Category 6/6A UTP Cable from TR to Workstation
    - Category 6/6A Jacks
    - Category 6/6A Patch Cables
    - Faceplates
    - Installation and Termination Methods
  - Related Sections include the following:
    - 25150 Backbone Cabling Requirements
- All cable shall be installed in a neat and workmanlike manner. All methods of construction that are not specifically described or indicated in the Contract Documents shall be subject to the control and approval of BCPS Technology Department and BCPS Facilities Department. Equipment and materials shall be of the quality and manufacture indicated. The equipment specified is based on the acceptable manufacturers listed. Where "approved equal" is stated, equipment shall be equivalent in every way to that of the equipment specified, and subject to approval by BCPS Technology Department and BCPS Facility Management. Strictly adhere to all Category 6/6A installation practices when installing UTP data cabling. Installation may be subject to inspection by a certified technician, hired by BCPS, which will evaluate all work to at

regular intervals during installation to ensure installation and materials are installed properly and in accordance with the specifications in this document

- Materials and work specified herein shall comply with the applicable requirements of:
  - Panduit Certification Plus certified system requirements
  - ANSI/TIA/EIA - 568-C.1 Commercial Building Telecommunications Cabling Standard
  - ANSI/TIA/EIA - 569-C Commercial Building Standard for Telecommunications Pathway and Spaces
  - EIA/TIA-606-B Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
  - EIA/TIA-607-C Commercial Building Grounding and Bonding requirements for Telecommunications
  - NEMA - 250
  - Federal Communications Commission 47 CFR 68
  - BICSI Telecommunications Distribution Methods Manual (13<sup>th</sup> edition)
  - BICSI Customer Owned Outside Plant Design Manual (5<sup>th</sup> edition)
  - BICSI Telecommunications Cabling Installation Manual (2<sup>nd</sup> edition)

- ANSI/NECA/BICSI 568-2006 Standard for Installing Commercial Building Telecommunications Cabling
- ADA - Americans with Disabilities Act
- NFPA 70 - 2011, including:
  - NEC - Article 770
  - NEC - Article 800
  - Underwriters Laboratory

## SUBMITTALS

- Manufacturer's catalog sheets, specifications, and installation instructions for all cable, Category 6/6A inserts, faceplates, and jacks
- If providing pre-standards manufacturer system solution, submit installer/contractor certification documentation and channel certification information and requirements from manufacturer

## PRODUCTS

- Cable Colors
  - Ethernet – Yellow
  - Paging – Green
  - Security – White
  - Access Control – Gray
  - Fire System – Red
  - HVAC – Purple
  - Local Sound - Yellow
- Do NOT paint low voltage cable
- All trades must avoid paint overspray on all low voltage cable – especially Ethernet cable
- The color coding of pairs shall be:

Pair 1	W-BL; BL
Pair 2	W-O; O
Pair 3	W-G; G
Pair 4	W-BR; BR

- **Riser Category 6A Design Make:**
  - Panduit-TX6A 10Gig UTP (CMR Riser-PVC)
    - Part # PUR6AM04YL-UG (Yellow)
  - General GenSPEED 10,000 Category 6A Cable

- Part # 7131822 (Yellow)
  - Hitachi (CMR Riser)
    - Part # 3022-8-YL3 – Supra 10G 6A (Yellow)
- **Riser Category 6 Design Make:**
  - Panduit-TX 6000 UTP (CMR Riser-PVC)
    - Part # PUR6004YL-UY (Yellow)
  - General GenSPEED 6000E series
    - Part # 7133900-PULL PAC (Yellow)
  - Hitachi (CMR Riser)
    - Part # 30024-8YL2
- **Plenum Category 6A Design Make:**
  - Panduit- TX6A 10Gig UTP (CMP Plenum-PVC Alloy)
    - Part # PUP6AM04YL-UG (Yellow)
  - General GenSPEED 10,000 Category 6A Cable
    - Part # 7131822 (Yellow)
  - Hitachi CMP
    - 30218-8-YL3 Supra 10G 6A (Yellow)
- **Plenum Category 6 Design Make:**
  - Panduit- TX6000 UTP (CMP Plenum-PVC Alloy)
    - Part # PUP6004YL-UY (Yellow)
  - General GenSPEED 6000E series
    - Part # 7131902 PULL PAC (Yellow)
  - Hitachi CMP
    - Part #30025-8YL2
- **CATEGORY 6 JACKS/PATCH PANELS FOR DATA NETWORK CABLING**
  - Physical Characteristics
    - Jacks shall meet Panduit Certification Plus TX System Warranty requirements
    - Shall be tested in accordance with ANSI/EIA/TIA-568-B.2-1 for Category 6 and ANSI/TIA-568-C.2 for Category 6A
    - Shall be modular RJ45 jacks that snap into user configurable faceplates meeting durability requirements specified in IEC 603-7. Provide impact resistant faceplates nylon with label and adhere to BCPS Technology standards as described in section 3.2, subsections A & B
    - Shall have 8 position, 8 conductor universal modular jack.
    - Termination cap is color coded for T568A and T568B wiring schemes

- Exceeds all ANSI/EIA/TIA-568-C.2 Category 6A connector requirements including Powersum, ACR, ELFEXT and Return Loss.
- Can be clearly identified with labels
  
- Shall be designed to retain conductor pair twists through a forward motion termination
- Designed employing a forward termination method that places no localized stress on critical internal components
  
- Design Make
  - Panduit Mini-Com TX6A 10Gig UTP Modular Jack: CJ6X88TGYL.
  - Panduit Patch Panels: CPP48FMWBLY
  - Panduit GIGA-CHANNEL™ MINI-JACK TX-6™ Modular Jack
  - 100 OHM UTP PATCH CABLES for data network cabling
  
- Physical Characteristics
  - Patch Cable shall meet Panduit Certification Plus certified system requirements
  - Shall have stranded conductors and meet Category 6 performance criteria as defined by TIA 568-B.2-1 or Category 6A performance criteria as defined by TIA 568-C.2
  - Shall be ETL tested and approved for Category 6A component compliance
  - Shall exceed FCC part 68 Subpart F requirements
  - Lengths required will range from 4' to 20' as specified by customer
  - Jacket color shall be yellow
  
- Design Make: Panduit
  - UTPSP series Cat 6 Device and Rack
  - UTP28SP5YL (small diameter) Rack
  - UTP6A series (24 AWG) \*Device End
  - UTP28X series (28 AWG/small diameter) \*Racks

## FACEPLATES

- Faceplates installed in office and classrooms shall be high impact thermoplastic flush mounted design
- Horizontal and Single gang faceplates shall be 0.22" x 2.75" x 4.5"
- Faceplates accept Mini-Com copper and fiber modules, designed to snap in and out
- Shall have label with cover to protect labeling and provide easy identification
- Design Make:
  - Panduit
    - Vertical faceplates CFPL series
    - Horizontal faceplates CFPH series
    - Blank module inserts: CMB series

## UTP INSTALLATION

- UTP CABLE
  - All cabling shall be installed to meet Panduit Certification Plus certified system channel performance requirements. All wiring concealed in walls or soffits shall be installed in metal conduits.
  - All exposed wiring shall be installed in surface raceway.
  - All wiring above ceilings shall be installed in cable tray or open top cable hangers such as J-hooks.
  - Cable above accessible ceilings shall be supported 2' on center from cable support attached to building structure. When using J-hooks, the cable will be bundled every two feet. The cable will be secured with a hook and loop fastener at every J-hook. There will be a maximum 1 inch of sag between J-hooks. The cable will be bundled tight and neat.
  - Do not untwist cable pairs more than 0.5 in. when terminating.
  - The Contractor shall be responsible for replacing all cables that do not pass Category 6/6A requirements.
  - Maximum length of any horizontal cable shall be 290 feet. Work area outlets should be located so that the permanent link is not longer than 290 feet.
  - Cable shall have no physical defects such as cuts, tears or bulges in the outer jacket. Cables with defects shall be replaced.
  - Leave sufficient cable for 90° sweeps at all vertical drops.
  - Follow specifications below for service loops. Neatly dress in excess cable but do not coil.
  - Maintain the following clearances from EMI sources.
    - Power cable - 6"
    - Fluorescent Lights - 12"
    - Transformers - 36"
  - Do not install security or other non-ethernet cable in common cable hangers
  - Do not install Category 6/6A cable with tie wraps, lay cable in tray or cable support as to permit limited continuous contact between any 2 Category 6A cables running parallel to one another. The purpose of this is to limit the potential of interference and performance degradation
  - Do not install Category 6/6A cable with more than 110N (25 lbs) pull force, as specified in EIA/TIA and BICSI practices. Utilize appropriate cable lubricant in sufficient quantity to reduce pulling friction to acceptable levels on: long pulls inside conduit, pulls of multiple cables into a single small bore conduit, on conduit runs greater than 100 lineal feet with bends of opposing directions, and in conduit runs that exceed 180 degrees of accumulated bends. Use of tensile rated cords (i.e. fishing line) should be used for difficult or questionable pulls - to judge to go/no-go



condition of the conduit and pulling setup

- Cables jackets that are chafed or burned exposing internal conductor insulation or have any bare copper (“shiners”) shall be replaced
- Fire stop all openings where cable is installed through a fire barrier

o Inserts and Faceplates

- All cables shall be terminated with “YELLOW” high density modular jacks that snap into an “electric ivory” faceplate mounted on a wall outlet box, surface raceways or power pole
- Outlet boxes shall be secured to building with mechanical fasteners. Adhesive fasteners are not allowed
- All extra openings to be filled with blank inserts (electric ivory for faceplates and black inserts for patch panel inserts)
- Terminate cable per EIA/TIA **T568B** standard pin assignments
- Locate so that combined length of cables and cords from panel to phone or computer does not exceed 3m

o Labeling (Example of a Label **121aD1M**)

- 121 room number
- The “a” is the faceplate identifier. Label these drops based on the closest room number. This letter should be lower case.
  - t = Teacher faceplate
  - pa = Public Address System
  - s = Security cameras
  - w = Access Points
  - a b c shall be used for all other faceplates in the room
- The “D1” is the drop designator and number, “V” for voice, “D” for data. The letter should be uppercase
- The “M” is the distribution frame locator, “M” for MDF, “A” for IDF A, “B” for IDF B and so on. The letter should be uppercase. The MDF is the distribution frame where all fiber optic connections are terminated from other distribution frames. This is also where all multi-pair cables, 25 pair and up, from other distribution frames will terminate
- Place a label above the upper termination and below the lower termination on each and every drop on the faceplate. Place a permanent label one inch behind the termination on both ends of the cable. Also put a label above each and every drop on patch panels in the distribution frames. There should be a total of 4 labels per cable

- Termination

- Cables will be terminated at the patch panels to reflect a sequential labeling scheme. All cables from a specific room will be bundled next to each other. The teacher drops from the teacher faceplates will be terminated first on the patch panel, then the other drops in the room terminated after that by faceplate, then drop number. Ex: 202tD1A, 202aD1A, 202aD2A, 202bD1A
- Place PA, security camera and access point drops on a separate patch panel and grouped by faceplate identifier, followed by room or location number. Ex: 202paD1A, 202paD2A, 202sD1A, 202sD2A, 202wD1A, 202wD2A. Consult with BCPS Technology Department for clarification before labeling
- Cables will be terminated at the faceplate with the data drops starting at the top/left

- RACK INSTALLATION

- Rack Layout

- Use 45u free-standing rack with full height vertical wire management on both sides. The front and rear of the vertical management shall have at least a width of 6 inches, and a depth of 6 inches. If two free-standing racks are placed beside each other, then only one vertical management system shall be placed between the two. The vertical management shall be mounted to both racks
  - For the data termination, place the fiber patch panel on the top RMU, if the fiber patch panel is 2u, then there should be no spaces left after the fiber patch panel. If the fiber patch panel is 1u, then leave 1u open under the fiber patch panel. Starting on the third RMU from the top, install a 48 port patch panel, 2u horizontal wire management, leaving 2u open for network equipment. Continue this same scheme of installing a 48 port patch panel, 2u wire management, and leaving 2u rack space until all the patch panels are installed
- 25 pair cat 6 cable shall be provided between closets, terminated on patch panels.

## Fiber Optic

- All installed fiber optic cabling will be multimode and have a 50 micron core OM3 GLASS, and a 125 micron cladding multi-mode. Fiber optic cable will be rated for 10GB minimum. All fiber optic terminations will be SC LC. Fiber Optic cable shall be armored or in inner duct

- Coordinate with BCPS technology staff for any moves that are needed with fiber located on the exterior of the building
- Conduits shall be installed underground from the service pole to the MDF for outside fiber optic cable, phone and cable TV

## **Part 11 Kitchens and Kitchen Equipment**

- All kitchen and cafeteria equipment must be approved by the BCPS Food Service Director and the Facilities Department
- Kitchen walk-in freezers and coolers shall not be connected to the building's geothermal or water loop system
- No equipment plugs above ceiling. All outlets and shut-offs must be accessible for fire and safety
- C Vap/Winston Industries equipment will not be allowed in any BCPS project
- When billing for kitchen equipment, 30% of the total invoice will be held until the kitchen equipment has been used a minimum of 60 days and inspected and approved by the Facilities Department
- Mop sinks shall be installed in both the kitchens and locker rooms
- The 1 year warranty on all kitchen equipment will start after the first day of the new full school year
- Maximum Kitchen floor tile (quarry tile) size is 6" x 6"; larger tiles shall not be accepted
- Videotaped training on all kitchen equipment; with 2 copies of the training video turned over to BCPS
- Cafeteria must include an accessible water/drinking fountain
- Food storage room must have a lockable, solid door so that the room can be sealed off from the rest of the kitchen
- Provide isolation valves to be able to shut off/isolate both hot and cold water to the kitchen, in case of repair or needed maintenance.

**Bullitt County Public Schools**  
**New Construction and Renovation Specifications**  
**Acknowledgement Form**

**NAME:**\_\_\_\_\_

**ARCHITECTURAL FIRM:**\_\_\_\_\_

**PHONE:**\_\_\_\_\_

**ADDRESS:**\_\_\_\_\_

**ARCHITECT'S NAME (Printed):**\_\_\_\_\_

**ARCHITECT'S SIGNATURE:**\_\_\_\_\_

**DATE:**\_\_\_\_\_

**NAME:**\_\_\_\_\_

**GENERAL CONTRACTOR:**\_\_\_\_\_

**PHONE:**\_\_\_\_\_

**ADDRESS:**\_\_\_\_\_

**CONTRACTOR (Printed):**\_\_\_\_\_

**CONTRACTOR :**\_\_\_\_\_

**DATE:**\_\_\_\_\_



# Kentucky Department of Education Version of AIA® Document A101 – 2007

## **Standard Form of Agreement Between Owner and Contractor** where the basis of payment is a Stipulated Sum

**AGREEMENT** made as of the \_\_\_\_\_ day of \_\_\_\_\_  
in the year \_\_\_\_\_  
(In words, indicate day, month and year.)

**BETWEEN** the Owner:  
(Name, legal status, address and other information)

**Bullitt County Public Schools**  
1040 Highway 44 East  
Shepherdsville, Kentucky

and the Contractor:  
(Name, legal status, address and other information)  
T B D

for the following Project:  
(Name, location and detailed description)

Bid Package #1: General Construction  
Phase III Athletics - Bullitt Central Physical Science Center

The Architect:  
(Name, legal status, address and other information)

**Studio Kremer Architects, Inc.**  
1231 S Shelby Street  
Louisville, Kentucky

The Owner and Contractor agree as follows.



This version of AIA Document A101–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A101 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A101–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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## TABLE OF ARTICLES

1	THE CONTRACT DOCUMENTS
2	THE WORK OF THIS CONTRACT
3	DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
4	CONTRACT SUM
5	PAYMENTS
6	DISPUTE RESOLUTION
7	TERMINATION OR SUSPENSION
8	MISCELLANEOUS PROVISIONS
9	ENUMERATION OF CONTRACT DOCUMENTS
10	INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Owner direct Purchase Orders, Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

### ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

**§ 3.1** The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

**§ 3.2** The Contract Time shall be measured from the date of commencement.

**§ 3.3** The Contractor shall achieve Substantial Completion of the entire Work not later than ( ) days from the date of commencement, or as follows:  
*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work. Either list requirements for earlier Substantial Completion here or refer to an exhibit attached to this Agreement.)*

**Portion of Work**

**Substantial Completion Date**

, subject to adjustments of this Contract Time as provided in the Contract Documents.

Liquidated Damages: As actual damages for delay in completion of Work are impossible to determine, the Contractor and his Surety shall be liable for and shall pay to the Owner the sum of

(\$ ), not as a penalty, but as fixed, agreed and liquidated damages for each calendar day of delay until the Contract Work is substantially completed as defined in the General Conditions of the Contract for Construction. The Owner shall have the right to deduct liquidated damages from money in hand otherwise due, or to become due, to the Contractor, or to sue and recover compensation for damages for failure to substantially complete the Work within the time stipulated herein. Said liquidated damages shall cease to accrue from the date of Substantial Completion.

**ARTICLE 4 CONTRACT SUM**

**§ 4.1** The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be

(\$ ), subject to additions and deductions as provided in the Contract Documents.

*(List the base bid amount, sum of accepted alternates, total construction cost (the sum of base bid amount plus sum of accepted alternates), sum of Owner's direct Purchase Orders. The Contract Sum shall equal the sum of Total Construction Cost, less Owner direct Purchase Orders. Either list this information here or refer to an exhibit attached to this Agreement.)*

	Amount
Base Bid	\$
Sum of Accepted Alternates	\$
Total Construction Cost (the sum of base bid amount plus sum of accepted alternates)	\$
Sum of Owner's direct Purchase Orders	\$
Contract Sum (total construction cost less Owner direct Purchase Orders)	\$

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**§ 4.2** The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

*(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires. Either list alternates here or refer to an exhibit attached to this Agreement.)*

Number	Item Description	Amount
Total of Alternates		

**§ 4.3** Unit prices, if any:

*(Identify and state the unit price; state quantity limitations, if any, to which the unit price will be applicable. Either list unit prices here or refer to an exhibit attached to this Agreement.)*

<b>Item</b>	<b>Units and Limitations</b>	<b>Price per Unit (\$0.00)</b>
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**§ 4.4** Allowances included in the Contract Sum, if any:

*(Identify allowance and state exclusions, if any, from the allowance price. Either list allowances here or refer to an exhibit attached to this Agreement.)*

<b>Item</b>	<b>Price</b>
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## ARTICLE 5 PAYMENTS

### § 5.1 PROGRESS PAYMENTS

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the \_\_\_\_\_ day of a month, the Owner shall make payment of the certified amount to the Contractor not later than the \_\_\_\_\_ day of the \_\_\_\_\_ month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than \_\_\_\_\_ ( ) days after the Architect receives the Application for Payment.

State law (KRS 371.405) requires the Owner to pay undisputed Applications for Payment within forty-five (45) business days following receipt of the invoices. If the Owner fails to pay the Contractor within forty-five (45) business days following receipt of an undisputed Application for Payment, state law requires the Owner shall pay interest to the Contractor beginning on the forty-sixth business day after receipt of the Application for Payment, computed at the rate required by state law.

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of \_\_\_\_\_ percent ( \_\_\_\_\_ %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™-2007, General Conditions of the Contract for Construction — KDE Version;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of \_\_\_\_\_ percent ( \_\_\_\_\_ %);
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201-2007 — KDE Version.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims; and  
(Section 9.8.5 of AIA Document A201-2007 — KDE Version requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)

- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007 — KDE Version.

**§ 5.1.8** Reduction or limitation of retainage, if any, shall be as follows:

*When Owner direct Purchase Orders are used, retainage that would otherwise be held on materials and equipment shall transfer to the Contractor, and the material suppliers will be paid the full amount of their invoices. The Owner shall retain ten percent (10%) from each Application for Payment, and an amount equal to ten percent (10%) of approved Purchase Order payments, up to fifty percent (50%) completion of the Work, then provided the Work is on schedule and satisfactory, and upon written request of the Contractor together with consent of surety and the recommendation of the Architect, the Owner shall approve a reduction in Retainage to five percent (5%) of the current Contract Sum plus Purchase Orders. No part of the five percent (5%) retainage shall be paid until after Substantial Completion of the Work, as defined in the General Conditions of the Contract for Construction. After Substantial Completion, if reasons for reduction in retainage are certified in writing by the Architect, a reduction to a lump sum amount less than the five percent (5%) retainage may be approved by the Owner when deemed reasonable. The minimum lump sum retainage shall be twice the estimated cost to correct deficient or incomplete work.*

**§ 5.1.9** Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

**§ 5.2 FINAL PAYMENT**

**§ 5.2.1** Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007 — KDE Version, and to satisfy other requirements, if any, which extend beyond final payment;
- .2 a final Certificate for Payment has been issued by the Architect; and
- .3 the Contractor provides the Owner with affidavits that all payrolls, bills for materials, supplies and equipment, and other indebtedness connected with the Work have been paid or otherwise satisfied, and with Consent of Surety for final payment.

**ARTICLE 6 DISPUTE RESOLUTION**

**§ 6.1 INITIAL DECISION MAKER**

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007 — KDE Version, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

*(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)*

## § 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007 — KDE Version, the method of binding dispute resolution shall be as follows:

*(Check the appropriate box. If the Owner and Contractor do not select a method of binding dispute resolution below, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.)*

- ☐ Arbitration pursuant to Section 15.4 of AIA Document A201–2007 — KDE Version
- ☐ Litigation in a court of competent jurisdiction where the Project is located
- ☐ Other: *(Specify)*

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007 — KDE Version.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007 — KDE Version.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 — KDE Version or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at such rate required by state law, or in the absence of law, at the legal rate prevailing at the time and place where the Project is located.  
*(Insert rate of interest agreed upon, if any.)*

§ 8.3 The Owner's representative:  
*(Name, address and other information)*

§ 8.4 The Contractor's representative:  
*(Name, address and other information)*

§ 8.5 Neither the Owner's nor the Contractor's representative shall be changed without ten days written notice to the other party.

§ 8.6 Other provisions:

## ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor — KDE Version.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction — KDE Version.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

*(Either list Supplementary and other Conditions of the Contract here or refer to an exhibit attached to this Agreement.)*

Document	Title	Date	Pages
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§ 9.1.4 The Specifications:

*(Either list the Specifications here or refer to an exhibit attached to this Agreement.)*

Section	Title	Date	Pages
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**§ 9.1.5 The Drawings:**

*(Either list the Drawings here or refer to an exhibit attached to this Agreement.)*

Number	Title	Date
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**§ 9.1.6 The Addenda, if any:**

*(Either list the Addenda here or refer to an exhibit attached to this Agreement.)*

Number	Date	Pages
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Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

**§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:**

- .1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following
- .2 Other documents, if any, listed below:

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*(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 — KDE Version provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor’s bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)*

- A. AIA Document A701–1997, Instructions to Bidders — KDE Version
- B. Contractor’s Form of Proposal
- C. KDE Purchase Order Summary Form

#### ARTICLE 10 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201–2007 – KDE Version.

*(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201–2007 – KDE Version. Either list insurance and bond information here or refer to an exhibit attached to this Agreement.)*

Type of Insurance or Bond

Limit of Liability or Bond Amount (\$0.00)

This Agreement entered into as of the day and year first written above.

\_\_\_\_\_  
OWNER (Signature)

\_\_\_\_\_  
CONTRACTOR (Signature)

\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
(Printed name and title)

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**TERMS OF THE AGREEMENT BETWEEN OWNER AND CONTRACTOR (00 60 00)**

(AIA A101-2007, KDE Version):

The following supplements modify, change, delete from or add to the “Standard Form Agreement Between Owner and Contractor”. Where any Article of the Agreement Between Owner and Contractor is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Instructions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.

**Add the following:**

**ARTICLE 3 - DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

*Paragraph 3.1, add after the first paragraph:*

The Date of Commencement of the Work shall be the date of the “Notice to Proceed” issued by the Owner.

*Paragraph 3.3, replace the first sentence with the following:*

The Contractor shall achieve Substantial Completion of the Work as follows:

- .1 **August 15, 2025 | December 1, 2025.** Punch inspection establishing Substantial Completion is performed and achievement of Substantial Completion agreed by Owner and Architect. Facility has Certificate of Occupancy and is suitable for school district to move in furnishings and equipment and occupy.

*Paragraph 3.3, insert the following in the second paragraph:*

Liquidated Damages: \$1,000.00 per calendar day.

*Paragraph 3.3, insert the following:*

- .1 Refer to Division 01 Sections “Summary of Work” and “Contract Closeout” for description of penalties that will be applied (\$1,000.00 per calendar day) for work not completed within time frames described.

**ARTICLE 5 - PAYMENTS**

*Paragraph 5.1.3, add the following in parenthesis:*

Provided that an Application for Payment is received by the Architect not later than the (First) day of the month, the Owner shall make payment of the certified amount to the Contractor not later than the (Fifteenth) day of the (Same) month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than (Forty-Five) days after the Architect received the Application for Payment.

*Paragraph 5.1.4, insert the following:*

- .1 Each portion of the Work as listed in Schedule of Values must be broken down into material and labor. Complete markup including overhead and profit shall be included in labor cost. Material amounts as listed in Schedule of Values shall be listed as accurately as possible.



- .2 Owner will not pay any material amount in excess of material amount listed on Schedule of Values, except for Change Orders made to the Contract that increases materials amounts.

*Paragraph 5.1.6, insert the following:*

.1... less retainage of ten percent (10%)

.2 ...less retainage of ten percent (10%)

*Paragraph 5.1.8, replace with the following:*

Reduction or limitation of retainage, if any, shall be as follows:

The Owner shall retain ten percent (10%) from each Application for Payment until installed Work reaches fifty Percent (50%) completion. Then, provided the Work is on schedule and satisfactory, upon written request of the Contractor together with consent of surety and the recommendation of the Architect, the Owner shall approve a reduction in Retainage to five percent (5%) of the current Contract Sum. No part of the five percent (5%) retainage shall be paid until the last Punch List is completed and no other work is required.

## **ARTICLE 6 - DISPUTE RESOLUTION**

*Paragraph 6.2, refer to the following section:*

**6.2** [ X ] Litigation in a court of competent jurisdiction in Bullitt Co., Kentucky.

## **ARTICLE 8 - MISCELLANEOUS PROVISIONS**

*Paragraph 8.3, replace with the following:*

The Owner's representative:

Danny Clemens, Director of Facilities  
Bullitt County Public Schools  
1040 Highway 44 East  
Shepherdsville, KY 40165

ARTICLE 9 - ENUMERATION OF CONTRACT DOCUMENTS

Paragraph 9.1.3, insert the following:

The Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
1.	Section 00 70 00 Supplementary Conditions to Owner- Contractor Agreement	May 21, 2025	11

Paragraph 9.1.7.2, add the following:

- .2 D. Invitation to Bid
- E. Supplemental Instructions to Bidders (00 20 00).

END OF SECTION 00 60 00

# Kentucky Department of Education Version of AIA® Document A201™ – 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

*(Name and location or address)*

Bid Package #1: General Construction

Phase III Athletics - Bullitt Central Physical Science Center

### THE OWNER:

*(Name, legal status and address)*

**Bullitt County Public Schools**

1040 Highway 44 East

Shepherdsville, Kentucky

### THE ARCHITECT:

*(Name, legal status and address)*

**Studio Kremer Architects, Inc.**

1231 S Shelby Street

Louisville, Kentucky

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This version of AIA Document A201–2007 is modified by the Kentucky Department of Education. Publication of this version of AIA Document A201 does not imply the American Institute of Architects' endorsement of any modification by the Kentucky Department of Education. A comparative version of AIA Document A201–2007 showing additions and deletions by the Kentucky Department of Education is available for review on the Kentucky Department of Education Web site.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Init.

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## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 Basic Definitions

#### § 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Owner direct Purchase Orders, Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

#### § 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### § 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### § 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

#### § 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### § 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### § 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### § 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

### § 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

**§ 1.2.2** Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

**§ 1.2.3** Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### **§ 1.3 Capitalization**

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

### **§ 1.4 Interpretation**

In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### **§ 1.5 Ownership and Use of Drawings, Specifications and Other Instruments of Service**

**§ 1.5.1** The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

**§ 1.5.2** The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

### **§ 1.6 Transmission of Data in Digital Form**

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

## **ARTICLE 2 OWNER**

### **§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term “Owner” means the Owner or the Owner’s authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein.

### **§ 2.2 Information and Services Required of the Owner**

#### **§ 2.2.1 (Not Used)**

**§ 2.2.2** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

**§ 2.2.3** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.2.4** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.2.5** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

### **§ 2.3 Owner's Right to Stop the Work**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

### **§ 2.4 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## **ARTICLE 3 CONTRACTOR**

### **§ 3.1 General**

**§ 3.1.1** The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

**§ 3.1.2** The Contractor shall perform the Work in accordance with the Contract Documents.

**§ 3.1.3** The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### **§ 3.2 Review of Contract Documents and Field Conditions by Contractor**

**§ 3.2.1** Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

**§ 3.2.2** Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for



information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

**§ 3.2.3** The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

**§ 3.2.4** If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### **§ 3.3 Supervision and Construction Procedures**

**§ 3.3.1** The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### **§ 3.4 Labor and Materials**

**§ 3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 3.4.2** Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

**§ 3.4.3** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

### **§ 3.5 Warranty**

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further

warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### **§ 3.7 Permits, Fees, Notices and Compliance with Laws**

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

**§ 3.7.3** If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

### **§ 3.7.4 Concealed or Unknown Conditions**

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

**§ 3.7.5** If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### **§ 3.8 Allowances**

**§ 3.8.1** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.



**§ 3.8.2** Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

**§ 3.8.3** Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### **§ 3.9 Superintendent**

**§ 3.9.1** The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

**§ 3.9.2** The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

**§ 3.9.3** The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### **§ 3.10 Contractor's Construction Schedules**

**§ 3.10.1** The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

**§ 3.10.2** The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

**§ 3.10.3** The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### **§ 3.11 Documents and Samples at the Site**

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### **§ 3.12 Shop Drawings, Product Data and Samples**

**§ 3.12.1** Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design

concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### **§ 3.13 Use of Site**

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

### **§ 3.17 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### **§ 3.18 Indemnification**

**§ 3.18.1** To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## ARTICLE 4 ARCHITECT

### § 4.1 General

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

### § 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment, and, at the discretion of the Owner may be the Owner's representative during the one-year period for correction of Work described in Section 12.2. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

#### § 4.2.4 Communications Facilitating Contract Administration

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance

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with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

**§ 4.2.8** The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

**§ 4.2.9** The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

**§ 4.2.10** If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

**§ 4.2.11** The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

**§ 4.2.12** Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

**§ 4.2.13** The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

**§ 4.2.14** The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## **ARTICLE 5 SUBCONTRACTORS**

### **§ 5.1 Definitions**

**§ 5.1.1** A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

**§ 5.1.2** A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### **§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

**§ 5.2.1** Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design)

proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### **§ 5.3 Subcontractual Relations**

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

**§ 5.4.2** Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

**§ 5.4.3** Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

### § 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

## ARTICLE 7 CHANGES IN THE WORK

### § 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.



§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

§ 7.1.4 Proposed Change in the Work equal to or exceeding \$25,000 additive or deductive, shall be subject to approval by the Kentucky Department of Education prior to execution of the Change Order by the Owner.

## § 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

## § 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

**§ 7.3.7** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit not to exceed fifteen (15%) of the net cost of the change. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

**§ 7.3.8** The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

**§ 7.3.9** Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

**§ 7.3.10** When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### **§ 7.4 Minor Changes in the Work**

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

### **ARTICLE 8 TIME**

#### **§ 8.1 Definitions**

**§ 8.1.1** Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

**§ 8.1.2** The date of commencement of the Work is the date established in the Agreement.

**§ 8.1.3** The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

**§ 8.1.4** The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### **§ 8.2 Progress and Completion**

**§ 8.2.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be

furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

**§ 8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

### **§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

## **ARTICLE 9 PAYMENTS AND COMPLETION**

### **§ 9.1 Contract Sum**

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

### **§ 9.2 Schedule of Values**

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

### **§ 9.3 Applications for Payment**

**§ 9.3.1** At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage as stipulated in Section 9.3.4.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the

Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

**§ 9.3.4** When Owner direct Purchase Orders are used, retainage that would otherwise be held on materials and equipment shall transfer to the Contractor, and the material suppliers will be paid the full amount of their invoices. The Owner shall retain ten percent (10%) from each Application for Payment, and an amount equal to ten percent (10%) of approved Purchase Order payments, up to fifty percent (50%) completion of the Work, then provided the Work is on schedule and satisfactory, and upon written request of the Contractor together with consent of surety and the recommendation of the Architect, the Owner shall approve a reduction in Retainage to five percent (5%) of the current Contract Sum plus Purchase Orders. No part of the five percent (5%) retainage shall be paid until after Substantial Completion of the Work, as defined in Section 9.8. herein. After Substantial Completion, if reasons for reduction in retainage are certified in writing by the Architect, a reduction to a lump sum amount less than the five percent (5%) retainage may be approved by the Owner when deemed reasonable. The minimum lump sum retainage shall be twice the estimated cost to correct deficient or incomplete work.

#### **§ 9.4 Certificates for Payment**

**§ 9.4.1** The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

**§ 9.4.2** The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### **§ 9.5 Decisions to Withhold Certification**

**§ 9.5.1** The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.



§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

## § 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents or as required by state law, whichever is more restrictive, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

## § 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

## § 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use. The ability to occupy and utilize the Work or designated portion thereof shall require an

occupancy permit issued by the Kentucky Department of Housing, Building, and Construction and any other agencies that have statutory authority and approval requirements.

**§ 9.8.2** When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

**§ 9.8.3** Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

**§ 9.8.4** When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

**§ 9.8.5** The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

### **§ 9.9 Partial Occupancy or Use**

**§ 9.9.1** The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

**§ 9.9.2** Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

**§ 9.9.3** Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

### **§ 9.10 Final Completion and Final Payment**

**§ 9.10.1** Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

- .1 Upon receipt and approval of the final Application for Payment, for each Contract and Purchase Order, if any, the Architect will prepare, and the Architect and Owner shall complete their portion of the Kentucky Department of Education BG-4 Contract Closeout Form – 2013, and forward the board-approved BG-4 form to the Kentucky Department of Education with a copy of the final Certificate for Payment upon the Board authorizing the BG-4 form, accepting the Work, and approving final payment to the Contractor or Material Supplier.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

### **§ 10.2 Safety of Persons and Property**

**§ 10.2.1** The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.



§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

#### § 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

### § 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

**§ 10.3.3** To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

**§ 10.3.4** The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

**§ 10.3.5** The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

**§ 10.3.6** If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

#### **§ 10.4 Emergencies**

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### **ARTICLE 11 INSURANCE AND BONDS**

#### **§ 11.1 Contractor's Liability Insurance**

**§ 11.1.1** The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

**§ 11.1.2** The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents. Such insurance shall be no less than the following amounts:

(1) Public Liability	\$200,000.00 one person/maximum each person \$500,000.00 one accident/maximum each person
(2) Property Damage	\$200,000.00 one accident/maximum \$500,000.00 aggregate

**§ 11.1.2.1** The insurance required by Section 11.1.1 shall be written for not less than the following limits, or greater if required by law:

- (1) Worker's Compensation:
  - a. State Statutory
  - b. Applicable Federal (e.g., Longshoreman's) Statutory
  - c. Employer's Liability \$500,000
- (2) Comprehensive or Commercial General Liability (including Premises-Operations; Independent Contractor's Protection; Product Liability and Completed Operations; Broad Form Property Damage):
  - a. General Aggregate (except Products-Completed Operations) \$1,000,000
  - b. Products-Completed Operations Aggregate \$1,000,000
  - c. Personal/Advertising Injury (per person/organization) \$1,000,000
  - d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
  - e. Limit per Person Medical Expense \$10,000
  - f. Exclusions of Property in Contractors Care, Custody or Control will be eliminated.
  - g. Property Damage Liability Insurance will provide Coverage for Explosion, Collapse, and Underground Damage.
- (3) Contractual Liability:
  - a. General Aggregate \$1,000,000
  - b. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
- (4) Automobile Liability:
  - a. Bodily Injury \$500,000 Each Person  
\$1,000,000 Each Accident
  - b. Property Damage \$500,000 Each Accident, or  
a combined single limit of \$1,000,000
- (5) Liability coverage for the Owner, the Architect, the Architect's Consultants and others listed in the Supplementary Conditions will be provided (subject to customary exclusions for professional liability), by endorsement as additional insured's on the Contractor's Liability Policy.
- (6) Excess Liability Umbrella Form:
  - a. General Aggregate \$1,000,000
  - b. Each Occurrence \$1,000,000

**§ 11.1.2.2** There shall be an endorsement in each of the above policies reading as follows: "It is hereby agreed that in the event of a claim arising under this policy, the company may not deny liability be reason of the insured being a state, county, municipal corporation or governmental agency."

**§ 11.1.3** Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

**§ 11.1.4** The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

## **§ 11.2 Owner's Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

## **§ 11.3 Property Insurance**

**§ 11.3.1** Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

**§ 11.3.1.1** Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

**§ 11.3.1.2** If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

**§ 11.3.1.3** If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

**§ 11.3.1.4** This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

**§ 11.3.1.5** Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or



companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

#### **§ 11.3.2 Boiler and Machinery Insurance**

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

#### **§ 11.3.3 Loss of Use Insurance**

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

**§ 11.3.4** If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

**§ 11.3.5** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

**§ 11.3.6** Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

**§ 11.3.7** Before an exposure to loss may occur, the Owner shall provide the Architect and the Kentucky Department of Education with certificates of insurance coverage required by this Section 11.3.

#### **§ 11.3.7 Waivers of Subrogation**

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

**§ 11.3.8** A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

#### § 11.4 Performance Bond and Payment Bond

§ 11.4.1 Unless otherwise provided, when the Contract Sum exceeds twenty-five thousand dollars (\$25,000) the Contractor shall furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder. A surety company authorized to do business in Kentucky shall execute bonds, and the cost thereof shall be included in the Contract Sum. Unless otherwise provided, the amount of each bond shall be equal to 100% of the Contract Sum plus Purchase Orders, or 100% of the Lump Sum Base Bid plus or minus accepted Alternates, whichever is greater.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

### ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

#### § 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

#### § 12.2 Correction of Work

##### § 12.2.1 Before or After Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

##### § 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the

Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

### **§ 12.3 Acceptance of Nonconforming Work**

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

## **ARTICLE 13 MISCELLANEOUS PROVISIONS**

### **§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

**§ 13.1.1** None of the Contract Documents for this project shall be construed against the party preparing documents on the grounds that the party prepared or drafted the document, or any portion thereof.

### **§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

**§ 13.2.2** The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

### **§ 13.3 Written Notice**

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.



## **§ 13.4 Rights and Remedies**

**§ 13.4.1** Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

**§ 13.4.2** No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

## **§ 13.5 Tests and Inspections**

**§ 13.5.1** Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

**§ 13.5.2** If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

**§ 13.5.3** If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

**§ 13.5.4** Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

**§ 13.5.5** If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

**§ 13.5.6** Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

## **§ 13.6 Interest**

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as required by state law, or in the absence of law, at the legal rate prevailing at the time and place where the Project is located.

## **§ 13.7 Time Limits on Claims**

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

## **ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

### **§ 14.1 Termination by the Contractor**

**§ 14.1.1** The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any

other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

**§ 14.1.2** The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

**§ 14.1.3** If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

**§ 14.1.4** If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

## **§ 14.2 Termination by the Owner for Cause**

**§ 14.2.1** The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

**§ 14.2.2** When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

**§ 14.2.3** When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case

may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

### **§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

### **§ 14.4 Termination by the Owner for Convenience**

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

## **ARTICLE 15 CLAIMS AND DISPUTES**

### **§ 15.1 Claims**

#### **§ 15.1.1 Definition**

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

#### **§ 15.1.2 Notice of Claims**

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

#### **§ 15.1.3 Continuing Contract Performance**

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

#### **§ 15.1.4 Claims for Additional Cost**

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

### **§ 15.1.5 Claims for Additional Time**

**§ 15.1.5.1** If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

**§ 15.1.5.2** If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

### **§ 15.1.6 Claims for Consequential Damages**

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### **§ 15.2 Initial Decision**

**§ 15.2.1** Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

**§ 15.2.2** The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

**§ 15.2.3** In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

**§ 15.2.4** If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

**§ 15.2.5** The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.



§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation, which shall be in accordance with the Construction Industry Mediation Procedures of the American Arbitration Association in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### § 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

**§ 15.4.4 Consolidation or Joinder**

**§ 15.4.4.1** Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

**§ 15.4.4.2** Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

**§ 15.4.4.3** The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

Sample

**SUPPLEMENTARY CONDITIONS TO  
GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION**

(AIA A201-2007, KDE Version):

- A. The following supplements modify, change, delete from or add to the “General Conditions”. Where any Article of the General Conditions is modified or any Paragraph, Subparagraph or Clause thereof is modified or deleted by these Supplementary Conditions, the unaltered provisions of that Article, Paragraph, Subparagraph or Clause shall remain in effect.
- B. These “Supplementary General Conditions” and Specifications may in some cases be of the abbreviated or “streamlined” type and include incomplete sentences. Omissions of words or phrases such as “the Contractor shall”, “in conformity therewith”, “shall be”, “as noted on the Drawings”, “according to the plans”, “a”, “the”, and “all” are intentional. Omitted words and phrases shall be supplied by inference in the same manner as they are when a “note” occurs on the Drawings. Words “shall be” or “shall” will be supplied by inference where colon (:) is used within sentences or phrases.
- C. The contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on the Drawings and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.
- D. References to known standard specifications shall mean the latest edition of such specifications adopted and published at date of invitation to submit proposals unless noted otherwise.
- E. Reference to technical society, organization or body is made in Specifications in accordance with following abbreviations:

AIA	American Institute of Architects
AASHO	American Association of State Highway Officials
ACI	American Concrete Institute
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
ASA	American Standards Association
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWSC	American Welding Society Code
CSI	Construction Specifications Institute
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NEC	National Electric Code
UL	Underwriters’ Laboratories, Inc.

**ARTICLE 1 - GENERAL PROVISIONS**

**1.1 BASIC DEFINITIONS**

*Add the following to the end of paragraph 1.1.1:*

The Contractor acknowledges and agrees that the Contract Documents are sufficient to provide for the completion of the Work and agrees to include Work, whether or not shown or described, which reasonably



may be inferred to be required or useful for the completion of the Work in accordance with applicable laws, codes, and customary standards of the industry.

*Add the following paragraph:*

**1.1.9 Miscellaneous Definitions**

- .1 The term “product” as used herein includes materials, systems, and equipment.
- .2 The term “supplier” as used herein, includes a firm or organization furnishing or delivering products directly to the job site, and because of such direct delivery, could be construed under the lien laws of the State in which the Work is being performed as having lien rights against the funds due the Contractor. Suppliers of material and equipment, delivering to Contractor or Subcontractor on an open account basis and not having lien rights on the Work, will not be considered suppliers within the meaning of the Contract Documents.
- .3 A bidder selected to enter into a Contract with the Owner for Work included under the bidder’s proposal is termed an “Awardee,” until such time as he is awarded a Contract and becomes the Contractor.
- .4 Where “request”, “approval”, “satisfactory”, and similar words appear, it is the request, approval, or satisfaction of the Architect/Engineer that is intended.
- .5 Where “complete” is used, it shall mean, “complete with connections, supports, attachments, and incidental items necessary for a finished and properly operating assembly or installation.” Completed work does not include materials stored on-site.
- .6 Where “drawing” is used, it shall mean plans and detail drawings, both large and small scale, furnished by the Architect/Engineer for the purpose of showing the Work to be done.
- .7 The term “furnish” – to supply (only) to another party for their use of installation, including cost of delivery and unloading to job site.
- .8 The term “install” – to distribute, uncrate, assemble, and fix into the intended final positions, the installer to provide all miscellaneous hardware and supplies required to anchor and support securely, clean up, and dispose of rubbish.
- .9 The term “connect” – to bring service(s) to the point of installation and make final connections of the service(s) to the installed equipment and provide miscellaneous auxiliary appurtenances necessary to make operable for its intended use.
- .10 The term “provide” – to furnish, install, and connect complete.

**ARTICLE 3 - CONTRACTOR**

**3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

*Add the following sub-paragraphs to paragraph 3.2.1:*

- 3.2.1.1 By execution of this Contract, the Contractor warrants that they have visited the site of the proposed work and are fully acquainted with the conditions as they relate to the construction of

- the new work, and that they fully understand the facilities, difficulties and restrictions attending the execution of the Work under Contract.
- 3.2.1.2 By execution of this Contract, the Contractor warrants that they have thoroughly examined and are familiar with the Drawings, Specifications and all other documents comprising the Contract.
- 3.2.1.3 By execution of this Contract, the Contractor warrants that it is their responsibility, during the bidding process, to visit the site and acquaint themselves with the existing conditions. Failure on the Contractor's part to visit the site during their review / examination of forms, instruments or documents in no way relieves them from this responsibility. The Contractor agrees that the Owner shall be justified in rejecting any claim based on facts regarding existing conditions of which they should have been aware.
- 3.2.1.4 Before ordering material or performing any work, the Contractor shall verify all measurements at the work site. Any difference between the dimensions on the Drawings and actual measurements shall be brought to the Architect's attention for their consideration before work may proceed. No extra compensation will be allowed because of difference between actual measurements and dimensions indicated on the Drawings. The Contractor shall assume full responsibility for accuracy of measurements obtained at the Work Site.
- 3.2.1.5 Dimensions which are lacking shall be obtained from the Architect. In no case shall Drawings be scaled.

*Add the following paragraph:*

- 3.2.5 Plans and Specifications for this Project show or specify various structural, architectural, mechanical, and electrical entities, diagrams, and devices for each item. The mention of acceptable manufacturer does not necessarily imply that their particular "standard" product meets all of the requirements of any detail or specification. Therefore, the cost of deviations, extensions or adjustments required for the Low Bidder's product must be included in the Prime/General Contractor's bid. No additional cost will be considered.

### **3.4 LABOR AND MATERIALS**

*Add the following paragraph:*

- 3.4.4 Where the salvage of materials is indicated on the Drawings and Specifications, all such materials shall be carefully removed and stored as directed by the Owner or Architect.

### **3.5 WARRANTY**

*Add the following paragraph:*

- 3.5.1 The Contractor shall provide all warranties as required by the Project Manual.

### **3.7 PERMITS, FEES, AND NOTICES**

*Add the following paragraphs:*

- 3.7.6 All Contractors and Subcontractors of the Work shown on the Plans or Specifications shall be executed in strict compliance with all local or state regulations and codes, and shall be in compliance with all National Codes, when same have jurisdiction.
- 3.7.7 All Contractors and Subcontractors must be qualified, and meet all requirements provided and/or required under any local and/or state statute, code, ordinances, or rule, governing the performance of the type of work for which they submit a bid, and they must be able to submit proof thereof upon request.

### **3.9 SUPERINTENDENT**

*Add the following to the end of paragraph 3.9.1:*

The Superintendent shall be satisfactory to the Owner, and the Owner shall have the right to require the Contractor to remove a Superintendent from the Project whose performance is not satisfactory to the Owner, and to replace the Superintendent with a Superintendent who is satisfactory to the Owner. The Contractor shall not replace the Superintendent without the consent of the Owner, except with another Superintendent who is satisfactory to the Owner.

## **ARTICLE 5 - SUBCONTRACTORS**

### **5.3 SUB-CONTRACTUAL RELATIONS**

*Add the following paragraph:*

- 5.3.1 All subcontractors shall familiarize themselves with all conditions relating to this Contract since the terms set forth in the General Conditions bind all subcontractors to the Contract.

## **ARTICLE 7 - CHANGES IN WORK**

### **7.2 CHANGE ORDERS**

*Add the following to paragraph 7.2.1:*

- .4 The Contractor's proposals for work to be covered by Change Order shall contain a detailed breakdown of all costs. The Contractor shall provide Architect with a cost breakdown of the lump sum, showing trades involved and their portion of the total cost. Provide material, labor, overhead and profit breakdowns for each category as required by Architect.
- .5 The Contractor shall be paid the net cost of said work, plus profit and overhead. The 15% maximum profit and overhead mark-up allowed by the Kentucky Department of Education shall be divided between the Prime/General Contractor and their subcontractors as mutually agreed among themselves. Bond and insurance costs are not allowed profit and overhead mark-up.
- .6 The following shall be covered by Overhead and Profit Mark-Up:
- |                   |                         |               |
|-------------------|-------------------------|---------------|
| Office Personnel  | Site Investigation Time | Truck Expense |
| Field Supervision | Shop Drawing Time       | Small Tools   |
| Estimating Time   |                         |               |

*Paragraph 7.3.7:*

The allowed mark-up for overhead and profit shall be as specified in Paragraph 7.2.1

*Paragraph 7.3.7.5 - Delete*

*Paragraph 7.3.9, replace the first sentence with the following:*

Changes in the work may not be included on the Application for Payment until a Change Order has been executed by all parties.

**ARTICLE 8 - TIME**

**8.2 PROGRESS AND COMPLETION**

*Add the following paragraphs:*

- 8.2.4 Should the Contractor fail to complete the Work under this Contract on or before the date stipulated for Substantial Completion, or such later date as may result from extensions in the Contract time granted by the Owner, they agree that the Owner is entitled to, and shall pay the Owner as Liquidated Damages, the sum of \$1,000.00 for each consecutive calendar day until such time as Substantial Completion is provided and accepted by the Owner.

**ARTICLE 9 - PAYMENTS AND COMPLETION**

**9.3 APPLICATIONS FOR PAYMENT**

*Add the following sub-paragraphs to paragraph 9.3.1:*

- 9.3.1.4 All contractor payment requests shall be prepared by the Contractor using AIA Document G-702 and G-703 and submitted in digital format. Applications for payment shall be sent to Studio Kremer Architects, via email to Cate Noble Ward, [cate@studiokremer.com](mailto:cate@studiokremer.com)

*Add the following paragraphs:*

- 9.3.5 The Owner and the Contractor each bind themselves, their partners, successors, assigns, and legal representatives of such other party in respect to all covenants, agreements and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract or sublet it as a whole without written consent of the other, nor shall the Contractor assign any monies due or to become due to them hereunder, without the previous written consent of the Owner.
- 9.3.6 Retainage amount as stipulated in AIA A201 – 2007 – KDE Version, subparagraph 9.3.4 shall be applied to the Contractor's Application for Payment and shall include retainage for material invoices for direct purchases materials, where applicable. Retainage shall be retained from Contractor's Pay Application and not retained on invoiced materials. Retainage for invoiced materials shall be held from Contractor's Application for Payment.

## 9.8 SUBSTANTIAL COMPLETION

*Add the following to the end of paragraph 9.8.1:*

Refer to Article 3 of the Standard Form of Agreement Between the Owner and Contractor for the Date of Substantial Completion.

*Paragraph 9.8.2, replace with the following paragraph:*

- 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Architect so that the Architect, Engineer, and Owner can accompany the Contractor in the preparation of the punch list. This list identifies items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

## 9.10 FINAL COMPLETION AND FINAL PAYMENT

*Add the following to sub-paragraph 9.10.1:*

- .2 Final Completion of the Work shall mean when all “punch list” items are completed, when “waiver of lien” is submitted, the manufacturer’s warranties are submitted and the Contractor has delivered to the Architect all required certificates of inspection. Final Completion shall include final clean-up of the building and premises.

*Paragraph 9.10.2, add the following to the paragraphs:*

- .1 Retainage will not be reduced below five percent (5%) until all items have been worked off of the punch list.

The following items must be submitted to the Owner before approval of the final payment: The dollar amounts reflect the security funds that will be withheld for each item until it is received by the Owner.

- .1 Affidavit of payment as required under this Paragraph shall be in the form of AIA Document G-706 - Contractor’s Affidavit of Payment of Debt and Claims. (\$300.00)
- .2 Release of liens as required under this Paragraph shall be in the form of AIA Document G-706A - Contractor’s Affidavit of Release of Liens. (\$300.00)
- .3 Consent of Surety as required under this Paragraph shall be in the form of AIA Document G-707 - Consent of Surety Company to Final Payment. (\$300.00)
- .4 As-Built Drawings (\$7,500.00)
- .5 Operation and Maintenance Manuals (\$5,000.00)

Submit releases and final unconditional waivers of lien from major subcontractors and suppliers.

- .1 Warranties
- .2 Letter Confirming no Asbestos Used (\$100.00)
- .3 Certification that all punch list items have been completed.
- .4 Attic stock materials (\$2,500.00)

- .5 Other closeout documents required by other portions of the Specifications. (\$300.00)

## ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY

### 10.2 SAFETY OF PERSONS AND PROPERTY

*Add the following paragraph:*

- 10.2.9 CONSTRUCTION AND SAFETY DEVICES: The contractor shall provide safety controls for protection of the life and health of employees. They will utilize precautionary methods for the prevention of damage to property, materials, equipment, and supplies, and for avoidance of work interruptions in the performance of this Contract. In order to provide such safety controls, the Contractor shall comply with all pertinent provisions of the Kentucky Safety Standards of the Division of the Occupational Safety Standards of the Division of Occupational Safety, Department of labor and Federal Occupational Safety and Health Construction Standards (OSHA), that are effect at the time of this Contract is entered into and during the period in which the Contract is to be performed. The Contractor shall also take, or cause to be taken, such additional measures as the Division of Occupational Safety may determine to be reasonably necessary for the purpose.
- .1 The Contractor shall maintain an accurate account of and shall report to the Division of Occupational Safety in the manner, and on the forms prescribed by Division, exposure date and all accidents resulting in death, traumatic injury, occupational diseases, and/or damage to property, materials, supplies, and equipment incident to work performed under this Contract.
  - .2 The Division of Occupational Safety will notify the Contractor, through the Owner, of any non-compliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately correct conditions. Such notice, when delivered to the Contractor or their representatives at the site of work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Owner may issue and order stopping all or part of the Work until unsatisfactory or corrective action has been taken. Failure or refusal to comply with the order will be grounds for stopping all payments due under the Contract of the Contractor. No part of the time lost due to any such stop order shall be made the subject of claim, or extension of the time, or for excess cost, or damages to the Contractor.
  - .3 Compliance with the provisions of the foregoing sections by subcontractors will be the responsibility of the Prime Contractor.
  - .4 Nothing on these provisions shall prohibit the US Department of Occupational Health and Safety from enforcing pertinent occupational safety and health standards as authorized under Federal or State occupational safety and health law.
  - .5 In any emergency affecting the safety of persons or property, the Contractor shall act, at their discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined, as provided in Article 7 "Changes in Work".

*Add the following paragraphs:*

**10.3.7 ASBESTOS NOTIFICATION**

- 10.3.7.1 NEW CONSTRUCTION: Materials utilized in the new work shall **NOT** contain any asbestos. Contractor shall submit, with closeout documents, a statement on company letterhead verifying that no materials used in the project contained asbestos.

*The following is provided for informational purposes only to the Contractor:*

**10.3.9 WORKER PROTECTION**

The OSHA Construction Industry Standard (1926.62) applies to “all construction work where an employee may be exposed to lead.” Construction work is defined as “work for construction, alteration and/or repair.” It includes:

- (1) Demolition or salvage of structures where materials containing lead are present.
- (2) New construction, renovation of structures, or portion thereof where materials containing lead are present.
- (3) Maintenance operations associated with construction activities.

The rule requires “each employer who has a workplace or operation covered by the standard to initially determine if any employee may be exposed to lead at or above the action level.” This is to be determined by personal exposure monitoring. The rule further states that “until the employer performs an employee exposure assessment as required, the employer shall treat the employee as if the employee were exposed above the PEL, and not in excess of ten times the PEL, and shall implement appropriate employee protective measures. **The tasks covered by these requirements include manual demolition of structures (e.g., dry wall), manual scraping, manual sanding, heat gun applications and power tool cleaning with dust collection systems.**”

The employee must collect at least one sample for each job classification.

Until an employer performs an initial employee exposure assessment, the employer must provide to the employees:

- (1) Appropriate respiratory protection and respirator physicals
- (2) Appropriate personal protective equipment
- (3) Change areas
- (4) Hand washing facilities
- (5) Biological monitoring
- (6) Proper training

However, “where the employer has previously monitored for lead exposure, and the data were obtained within the past 12 months during work operations closely resembling the process, type of material, work practices and environmental conditions used and prevailing in the employer’s



current operations, the employer may rely on this existing data to satisfy the initial monitoring requirements.”

If the initial monitoring data indicates that workers are not exposed to lead concentrations at or above the 30 ug/m3 action level, no additional control or worker protection measures are required. Should data indicate that employees may be exposed to elevated lead concentrations exceeding the action level, the other aspects of 1926.62 concerning worker protection shall apply.

## **ARTICLE 11 - INSURANCE & BONDS**

### **11.3 PROPERTY INSURANCE**

*Paragraph 11.3.1, change with the following in the first sentence:*

“Owner” to “Contractor”

*Paragraph 11.3.1.2, replace with the following paragraph:*

- 11.3.1.2 The Owner will maintain Property Insurance on the Property but will not be purchasing Builder’s Risk Insurance for the Contractor. The Contractor shall, as a requirement of the contract, obtain insurance that will protect the interests of the Contactor, Sub Contractors and Subcontractors in the Work. Purchase of Builder’s Risk insurance is not considered Optional under this Agreement. If the Owner is damaged by the failure or neglect of the Contractor to purchase or maintain insurance as described above, then the Contractor shall bear all reasonable costs properly attributable thereto. The Owner shall be listed as additional insured on the Contractor’s policy.

*Paragraph 11.3.1.3, change and add the following:*

Change the word “Owner” to “Contractor”.

Add: The amount of the deductible is \$5,000.00 per claim.

### **11.4 PERFORMANCE BOND AND PAYMENT BOND**

*Add the following paragraphs:*

- 11.4.3 Performance and payment bonds shall be executed only by a Surety Company possessing an A.M. Best Co. rating of “A-”or better and which holds a certificate of Authority issued by the Department of Treasury and shall be listed as an acceptable surety in the Circular, published annually as of July 1, by the Department of the Treasury, Financial Management Service in the Federal Register. The amount of the performance and payment bonds shall be within the underwriting limitations set forth for the Surety Company in the Circular of the Department of the Treasury referenced above. Any Co-Surety of the Surety Company shall also possess a Best’s rating of “A-”or better and shall hold a Certificate of Authority issued by the Department of Treasury and shall be listed in the Circular issued by the Department of the Treasury referenced above. The contract instrument of Bonds must be counter signed by a duly appointed and licensed agent resident of Kentucky.
- 11.4.4 If the surety on any Bond furnished by the Contractor is declared bankrupt, or becomes insolvent, or its right to do business is terminated in the State of the point of delivery, or the surety ceases

to meet the requirements stated in the above paragraph, the Contractor shall, within five days thereafter, substitute another Bond and surety, both of which must be acceptable to the Owner at no additional cost to the Owner.

- 11.4.5 Performance and Payment Bond amounts are to include both contract sum and purchase order amounts as included in the bid sum.

## **ARTICLE 13 – MISCELLANEOUS PROVISIONS**

### **13.1 GOVERNING LAW**

*Add the following paragraphs:*

- 13.1.2 The Kentucky Fairness in Construction Act, KRS 371.400 to 371.990, applies to this construction contract, and where there is a conflict between the terms and conditions of these documents and the provisions of the Kentucky Fairness in Construction Act, the latter shall prevail.
- 13.1.3 Within 10-days after the award of contract, and as required by KRS 45A.343, Section (2)(a), each contractor and all subcontractors performing work under this contract shall, in writing to the Owner, reveal any final determination of a violation by the contractor or subcontractor within the previous 5-year period, pursuant to KRS chapters 136, 139, 141, 337, 338, 341 and 342 that apply to the Contractor or Subcontractor. As required by KRS 45A.343, Section (2)(b), contractors and subcontractors performing work under the contract shall be in continuous compliance with the provisions of KRS chapters 136, 139, 141, 337, 338, 341 and 342 that apply to the Contractor or Subcontractor for the duration of the Contract.

### **13.5 TESTS AND INSPECTIONS**

*Add the following paragraphs:*

- 13.5.7 Testing of materials and systems are specified in their particular sections of the Project Manual.
- 13.8 Full compliance by the Contractor and Subcontractors as to their duties prescribed by the “Act Relating to Contracts for Public Works”, KRS 337.505 to 337.550 is required in the performance of work under this contract.

### **13.9 NON-DISCRIMINATION**

- 13.9.1 During the performance of this Contract, the Contractor agrees to the following:
- .1 The Contractor and Subcontractors shall not discriminate against employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

- .2 The Contractor and Subcontractors shall, in solicitations or advertisements for employees placed by them or on their behalf, state that qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.
- .3 The Contractor will send each labor union, or representative of workers with which they have a collective bargaining agreement, or other contract, or understanding, a notice advising said labor union or workers' representatives of the Contractor commitments under this section and shall post copies of the notice in places conspicuous to employees and applicants for employment. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency sanctions for non-compliance.

**13.10 AFFIDAVIT OF ASSURANCES**

- 13.10.1 Prior to the execution of the Contract, the Owner will require of the Contractor a completed and notarized AFFIDAVIT OF ASSURANCES, PURSUANT TO KRS 198B.060(10).

- .1 A copy of the affidavit for DOH-BCE-04 (7/90) is attached at the end of this Section.

**ARTICLE 15 – CLAIMS AND DISPUTES**

**15.1.5 CLAIMS FOR ADDITIONAL TIME**

*Add the following paragraph:*

- 15.1.5.3 The reference to “adverse weather” shall be clarified to mean weather conditions which are in excess of the 20-year norm, as recorded by the National Oceanographic Association.

**END OF SECTION 00 70 00**

*(Form attached)*

[illegible]

---

Architect's Signature
Date

# FACPAC Purchase Order Form

Form Status: Saved

Project:

BG Number:

Status: Active

District: Bullitt County (071)

Phase: No Data

Con

Type

Proposed

District PO Number

Ky Sales Tax Exempt Number

Date of Order

Specification Section

Material Description / Category

Requested By

Vendor Name

Vendor Address

Vendor Phone

Vendor Email

Bill To

Bill To Address

Ship To

Ship To Address

Attention Of

## Contacts

The following project contacts must be notified 48 hours in advance of delivery to jobsite.

Contact Name

Contact Phone

## Materials

Furnish the necessary materials to complete the following bid package(s) / specification section(s) in its entirety. All materials shall be in accordance with the requirements of the Contract.

Item Description

Item  
Number

Quantity

Unit Price

Total

Purchase Order Total:

## Authorization

Owner Authorization Date

Vendor Authorization Date

## Purchase Order Signature Page (Online Form Ref# 48284)

---

Vendor

Date

---

Owner

Date

### Terms and Conditions

1. Drawings, catalogs, cut sheets, or samples shall be submitted for approval.
2. All invoices shall be sent to the contractor/subcontractor designated on the purchase order for approval. No invoices shall be sent directly to the Board of Education (Owner) for payment.
3. All invoices shall reference the purchase order number.
4. No change in, modification of, or revision of this order shall be valid unless in writing and signed by the Owner.
5. Vendor agrees to observe and comply with all applicable federal, state and local laws, rules, ordinances and regulations in performance of this order.
6. Vendor shall not assign this order or any right hereunder without first having obtained the written consent of the Owner.
7. Deliveries are to be made in accordance with the Owner's schedule, as directed by the General Contractor (GC), Construction Manager (CM) or Qualified Provider (QP).
8. The Owner may cancel this purchase order in whole or in part in the event that the vendor fails or refuses to deliver any of the items purchased, within the time provided, or otherwise violates any of the conditions of this purchase order, or if it becomes evident that the vendor is not providing materials in accordance with the specifications or with such diligence as to permit delivery on or before the delivery date.
9. The vendor agrees to deliver the items to the supplied hereunder free and clear of all liens, encumbrances and claims.
10. If any of the goods covered under this purchase order are found to be defective in material or workmanship, or otherwise not in conformity with the requirements of this order, the Owner, in addition to the other rights which it may have under warranty or otherwise, shall have the right to reject the same or require that such articles or materials be corrected or replaced promptly with satisfactory materials or workmanship.
11. By acknowledging receipt of this order, by performing the designated work or any portion thereof, or by shipping the designated goods, the vendor agrees to the terms and conditions outlined.
12. This purchase order shall be governed in all respects by the laws of the Commonwealth of Kentucky.
13. In the event the quantities of materials supplied via this purchase order are insufficient to complete the work, the GC, CM or QP shall, at no expense to the Owner, provide such materials as necessary to complete the work.
14. In the event that at the completion of the work the vendor has not submitted invoices totaling the value of this purchase order, this purchase order shall be considered complete and closed.



# Kentucky Department of Education Version of AIA Document A312™ – 2010

## Performance Bond

**CONTRACTOR:**

(Name, legal status and address)

T B D

**SURETY:**

(Name, legal status and principal place of business)

T B D

**OWNER:**

(Name, legal status and address)

**Bullitt County Public Schools**  
1040 Highway 44 East  
Shepherdsville, Kentucky

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

(Name and location)

**BOND**

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: ☐ None ☐ See Section 16

**CONTRACTOR AS PRINCIPAL**

Company: \_\_\_\_\_  
(Corporate Seal)

**SURETY**

Company: \_\_\_\_\_  
(Corporate Seal)

Signature: \_\_\_\_\_

Name  
and Title:

(Any additional signatures appear on the last page of this Performance Bond.)

Signature: \_\_\_\_\_

Name  
and Title:

(FOR INFORMATION ONLY — Name, address and telephone)

**AGENT or BROKER:**

**OWNER'S REPRESENTATIVE:**

(Architect, Engineer or other party.)



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This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

§ 2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Section 3.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after

- .1 the Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Section 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
- .2 the Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
- .3 the Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

§ 4 Failure on the part of the Owner to comply with the notice requirement in Section 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

§ 5 When the Owner has satisfied the conditions of Section 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

§ 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

§ 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

§ 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Section 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

§ 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

- .1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
- .2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

§ 6 If the Surety does not proceed as provided in Section 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Section 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

§ 7 If the Surety elects to act under Section 5.1, 5.2 or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication, for

- .1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
- .2 additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Section 5; and
- .3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

§ 8 If the Surety elects to act under Section 5.1, 5.3 or 5.4, the Surety's liability is limited to the amount of this Bond.

§ 9 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors and assigns.

§ 10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

§ 11 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

§ 12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

§ 13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### § 14 Definitions

§ 14.1 **Balance of the Contract Price.** The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Contractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

§ 14.2 **Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

§ 14.3 **Contractor Default.** Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

§ 14.4 **Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

§ 14.5 **Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.

§ 15 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 16 Modifications to this bond are as follows:

§ 16.1 Surety Company shall be licensed to conduct business in the Commonwealth of Kentucky.

§ 16.2 Insurance Agency and Agents issuing bond shall be registered and licensed to conduct business in the Commonwealth of Kentucky with the appropriate Power of Attorney included.

§ 16.3 Bond shall comply with all statutory requirements of the Commonwealth of Kentucky including the Kentucky Unemployment Insurance Law.

**§ 16.4** No suit, action or proceeding by reason or any default whatever shall be brought on this bond after two (2) years from the date on which final payment of the contract fall due and provided further that if any alterations or additions which may be made under the contract or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal shall not, in any way, release the Principal and Surety, or either of them, their heirs, executors, administrators, successors, or assigns for their liability hereunder. Notice to the Surety of any such alterations, extensions, or forbearance being expressly waived.

This obligation shall remain in force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company:

*(Corporate Seal)*

Company:

*(Corporate Seal)*

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

Signature: \_\_\_\_\_  
Name and Title: \_\_\_\_\_  
Address \_\_\_\_\_

# Kentucky Department of Education Version of AIA Document A312™ – 2010

## Payment Bond

**CONTRACTOR:**

(Name, legal status and address)

T B D

**SURETY:**

(Name, legal status and principal place  
of business)

T B D

**OWNER:**

(Name, legal status and address)

**Bullitt County Public Schools**  
1040 Highway 44 East  
Shepherdsville, Kentucky

**CONSTRUCTION CONTRACT**

Date:

Amount:

Description:

(Name and location)

**BOND**

Date:

(Not earlier than Construction Contract Date)

Amount:

Modifications to this Bond: ☐ None ☐ See Section 18

**CONTRACTOR AS PRINCIPAL**

Company: (Corporate Seal)

**SURETY**

Company: (Corporate Seal)

Signature: \_\_\_\_\_

Name

and Title:

(Any additional signatures appear on the last page of this Payment Bond.)

Signature: \_\_\_\_\_

Name

and Title:

(FOR INFORMATION ONLY — Name, address and telephone)

**AGENT or BROKER:**

**OWNER'S REPRESENTATIVE:**

(Architect, Engineer or other party:)



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This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

AIA Document A312–2010 combines two separate bonds, a Performance Bond and a Payment Bond, into one form. This is not a single combined Performance and Payment Bond.

§ 1 The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

§ 2 If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

§ 3 If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Section 13) of claims, demands, liens or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials or equipment furnished for use in the performance of the Construction Contract and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety.

§ 4 When the Owner has satisfied the conditions in Section 3, the Surety shall promptly and at the Surety's expense defend, indemnify and hold harmless the Owner against a duly tendered claim, demand, lien or suit.

§ 5 The Surety's obligations to a Claimant under this Bond shall arise after the following:

§ 5.1 Claimants, who do not have a direct contract with the Contractor,

- .1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
- .2 have sent a Claim to the Surety (at the address described in Section 13).

§ 5.2 Claimants, who are employed by or have a direct contract with the Contractor, have sent a Claim to the Surety (at the address described in Section 13).

§ 6 If a notice of non-payment required by Section 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Section 5.1.1.

§ 7 When a Claimant has satisfied the conditions of Sections 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

§ 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

§ 7.2 Pay or arrange for payment of any undisputed amounts.

§ 7.3 The Surety's failure to discharge its obligations under Section 7.1 or Section 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Section 7.1 or Section 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

§ 8 The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Section 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

§ 9 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

§ 10 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any



Claimant under this Bond, and shall have under this Bond no obligation to make payments to, or give notice on behalf of, Claimants or otherwise have any obligations to Claimants under this Bond.

**§ 11** The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

**§ 12** No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Section 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

**§ 13** Notice and Claims to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.

**§ 14** When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

**§ 15** Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

#### **§ 16 Definitions**

**§ 16.1 Claim.** A written statement by the Claimant including at a minimum

- .1 the name of the Claimant;
- .2 the name of the person for whom the labor was done, or materials or equipment furnished;
- .3 a copy of the agreement or purchase order pursuant to which labor, materials or equipment was furnished for use in the performance of the Construction Contract;
- .4 a brief description of the labor, materials or equipment furnished;
- .5 the date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
- .6 the total amount earned by the Claimant for labor, materials or equipment furnished as of the date of the Claim;
- .7 the total amount of previous payments received by the Claimant; and
- .8 the total amount due and unpaid to the Claimant for labor, materials or equipment furnished as of the date of the Claim.

**§ 16.2 Claimant.** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

**§ 16.3 Construction Contract.** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

**§ 16.4 Owner Default.** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

**§ 16.5 Contract Documents.** All the documents that comprise the agreement between the Owner and Contractor.



§ 17 If this Bond is issued for an agreement between a Contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

§ 18 Modifications to this bond are as follows:

§ 18.1 Surety Company shall be licensed to conduct business in the Commonwealth of Kentucky.

§ 18.2 Insurance Agency and Agents issuing bond shall be registered and licensed to conduct business in the Commonwealth of Kentucky with the appropriate Power of Attorney included.

§ 18.3 Bond shall comply with all statutory requirements of the Commonwealth of Kentucky including the Kentucky Unemployment Insurance Law.

§ 18.4 No suit, action or proceeding by reason or any default whatever shall be brought on this bond after two (2) years from the date on which final payment of the contract fall due and provided further that if any alterations or additions which may be made under the contract or in the work to be done under it, or the giving by the Owner of any extension of time for the performance of the contract or any other forbearance on the part of either the Owner or the Principal shall not, in any way, release the Principal and Surety, or either of them, their heirs, executors, administrators, successors, or assigns for their liability hereunder. Notice to the Surety of any such alterations, extensions, or forbearance being expressly waived.

This obligation shall remain in force and effect until the performance of all covenants, terms and conditions herein stipulated and after such performance, it shall become null and void.

*(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)*

**CONTRACTOR AS PRINCIPAL**

**SURETY**

Company:

*(Corporate Seal)*

Company:

*(Corporate Seal)*

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

Signature: \_\_\_\_\_

Name and Title: \_\_\_\_\_

Address \_\_\_\_\_

**SECTION 00 80 00 – INFLATION REDUCTION ACT DOCUMENTATION**

**PART 1 GENERAL:**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications, apply to this Section.
- B. Each Contractor's attention is also directed to the Specification Sections within Division 20, 23, 25, and 26.

**1.2 SCOPE**

- A. This project is eligible to pursue Investment Tax Credits (ITC) as specified in the relevant U.S. code sections and subsequent notices commonly known as the Inflation Reduction Act of 2022 (IRA).
- B. The following Investment Tax Credits apply to this project:
  - a. Energy Credits ([26 U.S. Code 48\(a\)](#)) related to Energy Property ([26 CFR 1.48-9](#))
    - i. Alternative energy property (1-48-9(c))
      - 1. Geothermal Equipment (1-48-9(c)10)
  - b. Domestic Content Bonus Credit Amount ((26 U.S. Code 48(a)(9))
  - c. Increase in Credit Rate for Energy Communities ((26 U.S. Code 48(a)(11))
- C. Cost Segregation Study
  - a. To properly apply for all ITC credits being pursued, a cost segregation study must be produced by a third-party accounting firm. The study requirements are indicated by the 1603 Program, as part of the American Recovery and Reinvestment Act of 2009.
  - b. An Accountant Certification and AUP report are required as part of the study.
  - c. The third-party accountant is to be provided by the Owner.
- D. Cost Tracking
  - a. The contact holder is responsible for the overall documentation required to be submitted for the Cost Segregation Study.
  - b. The contractor is responsible for tracking costs for all labor, equipment, transportation, excavation, backfill, supplies, material, appurtenances, and services necessary for the

satisfactory installation of the complete and operating Systems that are to be included within the Investment Tax Credits

- c. All manufacturers, suppliers, fabricators, contractors, etc. submitting proposals for any part of the work, services, materials, or equipment to be used on or applied to this project are hereby directed to provide the documentation to track costs for items that qualify for the Investment Tax Credits.
- d. Any materials, labor, equipment, or services not mentioned specifically herein which may be necessary to complete any part of the qualifying Systems in a substantial manner, in compliance with the requirements stated, implied, or intended in the Plans and/or Specifications, costs shall be documented.

### 1.3 GEOTHERMAL EQUIPMENT

- A. Refer to M series as well as all Division 23/25 specifications for mechanical scope.
  - a. Heating and cooling is accomplished by unitary water-source geothermal heat pumps. Each heat pump is connected to a geothermal wellfield via supply and return water piping. A roof-mounted Dedicated Outside Air System provides de-coupled ventilation, and is also connected to the geothermal wellfield.
  - b. Buildings contains its own unitary geothermal wellfield and distribution equipment, and represent independent energy properties (Notice 2018.59, Section 7).
  - c. The thermal energy that is provided by the geothermal system accounts for at least 75% of total heating and cooling loads for Buildings 1 thru 4. (1-48-9(c)10(iv))
  - d. None of these (4) systems exceed 1 MW (284 Tons) of total energy (Notice 2018.59, Section 7).
  - e. Equipment costs included in the cost segregation study are to be separated by building.
  - f. All equipment, piping, piping accessories, valves, hangers, pumps, pipe insulation, duct, duct insulation, accessories, controls, excavation, backfill, and all associated labor qualify for the geothermal credit.
  - g. See example tracking forms appended at end of this section.
- B. Refer to E series as well as Division 26 specifications for electrical scope that relates to geothermal equipment.
  - a. All conduit, wiring, panels, junction boxes, disconnects, switchgear, and all labor that is required to power geothermal HVAC/domestic HW equipment qualifies for the geothermal credit.
  - b. See example tracking forms appended at end of this section.

#### 1.4 INCREASE IN CREDIT RATE FOR ENERGY COMMUNITIES

- A. It is anticipated that the project site is located within an Energy Community based on current EPA and third-party map data. It is anticipated that the IRS will release subsequent information on determining energy community status.

#### 1.5 DEFINITIONS

- A. Geothermal equipment - [Alternative energy property](#) includes equipment (geothermal equipment) that produces, distributes, or uses energy derived from a geothermal deposit (as [defined](#) in [§ 1.44C-2\(h\)](#)).
  - a. In general, production equipment includes equipment necessary to bring geothermal energy from the subterranean deposit to the surface, including well-head and downhole equipment (such as screening or slotting liners, tubing, downhole pumps, and associated equipment). Reinjection wells required for production also may qualify. Production does not include exploration and development.
  - b. [Distribution](#) equipment includes equipment that transports geothermal steam or hot water from a geothermal deposit to the site of ultimate use. If geothermal energy is used to generate electricity, [distribution](#) equipment includes equipment that transports hot water from the geothermal deposit to a power plant. [Distribution](#) equipment also includes [components](#) of a heating system, such as pipes and ductwork that distribute within a [building](#) the energy derived from the geothermal deposit.
  - c. [Geothermal equipment](#) includes equipment that uses energy derived both from a geothermal deposit and from sources other than a geothermal deposit (dual use equipment). Such equipment, however, is [geothermal equipment \(A\)](#) only if its use of energy from sources other than a geothermal deposit does not exceed 25 percent of its total energy input in an annual [measuring period](#) and [\(B\)](#) only to the extent of its basis or [cost](#) allocable to its use of energy from a geothermal deposit during an annual [measuring period](#). An “annual measuring period” for an item of dual use equipment is the 365 day period beginning with the day it is [placed in service](#) or a 365 day period beginning the day after the last day of the immediately preceding annual [measuring period](#). The [allocation](#) of energy use required for [purposes](#) of paragraph (c)(10)(iv) [\(A\)](#) and [\(B\)](#) of this section may be made by comparing, on a Btu basis, energy input to dual use equipment from the geothermal deposit with energy input from other sources. However, the Commissioner may accept any other method that, in his opinion, accurately establishes the relative annual use by dual use equipment of energy derived from a geothermal deposit and energy derived from other sources.
  - d. The existence of a backup system designed for use only in the event of a failure in the system providing energy derived from a geothermal deposit will not disqualify any other equipment. If geothermal energy is used to generate electricity, equipment using geothermal energy includes the electrical generating equipment, such as turbines and generators. However, [geothermal equipment](#) does not include any electrical transmission equipment, such as transmission lines and towers, or any equipment beyond the electrical transmission stage, such as transformers and [distribution](#) lines.

**PART 2 PRODUCTS (NOT APPLICABLE)**

**PART 3 EXECUTION**

**3.1 TRACKING FORM:**

- A. A tracking form shall be utilized to track each applicable ITC energy property, per building. Columns shall be included that identify the system that qualifies, costs of the labor and material, and whether it is manufactured in the U.S. See example form below.

Building 1	Labor Cost	Material Cost	US MFG
<b>GEOTHERMAL CONTRACTOR</b>			
Geothermal: Wellfield Driller, Excavation and Backfill			
Geothermal: Exterior HDPE Piping			
Geothermal: Exterior Grout			
Geothermal: Well Casings			
Geothermal: Purging, Flushing, Cleaning			
<b>HVAC CONTRACTOR</b>			
Geothermal: Air Separator			
Geothermal: Expansion Tank			
Geothermal: Distribution Pumps			
Geothermal: Piping Accessories			
Geothermal: Isolation Valves			
Geothermal: VFDs			
Geothermal: Ground Source HP HDPE Piping Mains			
Geothermal: Ground Source HP Piping Runouts			
Geothermal: Ground Source HP Piping Accessories			
Geothermal: Ground Source HP Isolation Valves			
Geothermal: Ground Source HP Condensate Piping			
Geothermal: Ground Source HP Condensate Piping Insulation			
Geothermal: Ground Source HP Water Treatment and System Flushing			
Geothermal: Ground Source HP Water-side TAB			
Geothermal: Ground Source HP Unit			
Geothermal: Ground Source HP Sheet Metal			
Geothermal: Ground Source HP Sheet Metal Accessories			
Geothermal: Ground Source HP Sheet Metal Supply Air Insulation			
Geothermal: Ground Source HP Filter Boxes			
Geothermal: Ground Source HP Filters			
Geothermal: Ground Source HP Airside TAB			

Geothermal: Ground Source HP Sheet Metal Accessories			
<b>ELECTRICAL CONTRACTOR</b>			
Geothermal: Electrical Distribution Panelboards Serving Ground Source HP			
Geothermal: Electrical Distribution Panelboard Wiring to Ground Source HP			
Geothermal: Electrical Distribution Panelboard Conduit to Ground Source HP			
Geothermal: Ground Source HP Disconnects			
Geothermal: IT connections to BAS Control Panels			
Geothermal: 120V power wiring to BAS Control Panels			
Geothermal: 120V power Conduit to BAS Control Panels			
<b>TEMPERATURE CONTROL CONTRACTOR</b>			
Geothermal: Network Controller			
Geothermal: User Interface Programming for Ground Source Equipment			
Geothermal: Graphics for Ground Source Water Equipment (HP, DOAS, DHW HP)			
Geothermal: Ground Source Water Distribution BAS Controller			
Geothermal: Ground Source HP BAS Controllers			
Geothermal: Ground Source Equipment Control Wiring			
Geothermal: Ground Source Equipment Control Valves			
Geothermal: Ground Source Equipment Control Temperature Sensors			
Geothermal: Ground Source Equipment Control Pressure Sensors			
Geothermal: Ground Source Equipment Control Current Sensors			
Geothermal: Ground Source Equipment Control Relays			
Geothermal: Ground Source Equipment Space Sensors			
Geothermal: Ground Source Equipment Devices			
<b>GENERAL CONTRACTOR</b>			
Geothermal: Ground Source HP DOAS rooftop structural supports			

**END OF SECTION 00 08 00**

**SECTION 01 01 10 – SUMMARY OF WORK (BID PACKAGE #1)**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification sections, apply to work of this section.
- B. Contractor shall provide all items, articles, materials, operations, or methods listed, mentioned, or scheduled on Drawings and/or herein, including all labor, materials, equipment, and incidentals necessary and required for their completion.

**1.02 DEFINITIONS**

- A. The term “OWNER” used throughout the Contract Documents refers to:  
Bullitt County Public Schools, 1040 Highway 44 East, Shepherdsville, Kentucky, 40165.
- B. The term “ARCHITECT” used throughout the Contract Documents refer to:  
Studio Kremer Architects, 1231 S. Shelby Street, Louisville, Kentucky, 40203.
- C. The term “ENGINEER” or “CONSULTANT” used throughout the Contract Documents refers to the one of the following:
  - 1. Civil Engineer: Buzick Construction, Inc., 702 Beechwood Avenue, Bardstown, Kentucky, 40004.
  - 2. Structural Engineer: Brown + Kubican Structural Engineers, 8900 Greenway Commons
  - 3. MEP Engineer: CMTA Consulting Engineers, 10411 Meeting Street, Prospect, Kentucky, 40059.

**1.03 PROJECT / WORK IDENTIFICATION**

- A. General: Project name is “Bid Package 1 - Phase III Athletics – Bullitt Central Physical Science Center | General Construction”, as shown on Contract Documents prepared by Studio Kremer Architects and their consultants.
- B. Work Included: Work under this Contract shall include ALL materials, labor and equipment necessary for the Construction of the Physical Science Center at Bullitt Central High School in Bullitt County, Kentucky, indicated or hereinafter specified.
- C. Contract Documents: Indicates the work of the Contract and related requirements and conditions that have an impact on the Project. Related requirements and conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:
  - 1. Work which may be performed concurrently by separate Contractors.
  - 2. Work to be performed subsequent to Work under this Contract, by others.
  - 3. Allowances.



- D. Summary by References: Work of the Contract can be summarized by references to the Contract, General Conditions, Supplementary Conditions, Specifications Sections, Drawings, addenda, and modifications to the Contract Documents issued subsequent to the initial printing of this project manual and including but not necessarily limited to printed material referenced by any of these. It is recognized that work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions and other forces outside the Contract Documents.
- E. Abbreviated Written Summary: Briefly and without force and effect upon the Contract Documents, the Work of the Contract can be summarized as follows:
1. Project involves the new construction of three (3) 50,000 S.F. field houses adjacent to the Football Stadiums that were constructed in 2023.
  2. Work will run concurrent with two (2) other Bid Packages:
    - a. Bid Package 2 - Phase III Athletics – Bullitt Central Physical Science Center – BUILDING AUTOMATION AND TEMPERATURE CONTROLS
    - b. Bid Package 3 - Phase III Athletics – Bullitt Central Physical Science Center – TECHNOLOGY
  3. In addition to the Bid Packages listed above, there will be one active (1) COOP Agreement at the site that supports work performed under Bid Package No. 1 Phase III Athletics – Physical Science Center – GENERAL CONSTRUCTION:
    - a. Intercom and Life Safety COOP Agreement No. 1: Audio Enhancement
  4. Primary facility construction is structural steel frame, steel bar joists, and CMU bearing and partition walls. The field houses are two levels with an Annex Building that supports the covered “Gateway” that will serve at the new entrance into each Football Stadium.
  5. Roof construction is rigid insulation on bar joists at low slope areas, with modified bituminous roofing. At higher slope areas the roof construction is of rigid insulation with a standing seam metal roof.
  6. Openings include aluminum windows, storefront, and curtainwall. Doors are primarily hollow metal doors in hollow metal frames.
  6. Work involves HVAC systems, electrical systems (including lighting), plumbing, fire protection, communications, and electronic safety and security systems.
  7. Finishes include sealed concrete, resinous flooring, tile, painting, wall graphics, and acoustical/grid ceilings.
  8. New parking and drives will be constructed or modified to serve the facility, as will multiple outdoor paved areas. Above and below grade detention facilities will be constructed to mitigate runoff.
  9. Other site development includes clearing, grasses, plantings, and signage.

**See specifications index for all elements of work included in project.**

#### **1.04**

#### **PLANS AND SPECIFICATIONS**

- A. The terms “PLANS” and “DRAWINGS” are used interchangeably and are understood to have the same meaning.

- B. Drawings provided show areas of work and details of construction. Do not scale drawings for measurements.
- C. The Work under this Contract does not include any items marked N.I.C. (not in contract) on the Drawings.
- D. In case of conflicts between the Drawings and Specifications, the more stringent requirement shall apply.
- E. It is the Contractor's responsibility to notify the Architect if they discover discrepancies or inaccuracies in the dimensioned drawings before making any changes to the Work. Changes to dimensioned drawings shall only be made with the approval of the Architect.
- F. Contractor shall be responsible for obtaining all field measurements and verification of on-site conditions which may affect the Work. Should the Contractor discover any error or discrepancy between drawings and actual on-site conditions, they shall notify the Architect immediately for clarification.
- G. Should any error or inconsistency appear in the Drawings or Specifications, the Contractor, before proceeding with the Work, must make mention of the same to the Architect for proper adjustment and in no case proceed with the Work in uncertainty or with insufficient drawings. Refer to the Supplemental Instruction to Bidders for written request requirements.

#### **1.05 ADMINISTRATION OF THE CONTRACT**

- A. The Architect will perform certain administrative functions of the Construction Contract. Nothing contained in the Contract Documents, any verbal or written agreements, or written correspondence shall imply any contractual relationship between the Architect – or their consultants – and the General Contractor.
- B. The Architect, or their consultants, will make periodic visits to the Project Site in accordance with the conditions of their contract with the Owner. The purpose of these visits and observations is an effort to guard against defects and deficiencies, not to supervise the Contractor's work.
- C. The Architect, or their consultants, make no express or implied representations of guaranteeing the Contractor's work.
- D. The Architect, or their consultants, do not assume responsibility for construction operations and safety programs / requirements.

#### **1.06 COORDINATION**

- A. The Work of this Contract includes coordination of the entire work of the project, including preparation of general coordination drawings, diagrams and schedules, and control of site

- utilization, from beginning of construction activity through project close-out and warranty periods.
- B. Contractors and Subcontractors shall coordinate their work with adjacent work and cooperate with other trades so as to facilitate general progress of the Work. Each trade shall afford other trades every reasonable opportunity for installation of their work and for storage of their materials.
  - C. Coordinate scheduling, submittals, and work of the various Specification Sections to ensure efficient and orderly sequence of installation of interdependent construction elements.
  - D. Work will be performed by a separate contractor for the installation of the Safety and Security components. Work shall be coordinated with this project for a simultaneous completion date.
  - E. Verify that all utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate work with other trades. All Contractors are required to coordinate and have mutual responsibilities for installing, connecting to, and placing in service, such equipment.
  - F. Coordinate space requirements and installation of mechanical and electrical work, which are indicated diagrammatically on the Drawings. Follow routing shown for pipes, ducts and conduit, as closely as practicable place runs parallel with lines of the building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs, by holding all installation as high as possible. Each Contractor shall coordinate their work with all other trades, existing and anticipated conditions, as necessary to maximize the use of the space. If in doubt about the acceptability of a proposed installation, contact the Architect / Engineer for instructions.
  - G. In finished areas, except as otherwise indicated, conceal pipes, ducts and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
  - H. Coordinate completion and clean-up of work requirements of all Specification Sections in preparation for Substantial Completion.
  - I. After Owner occupancy of the premises, coordinate access to site for correction of defective work and work not in accordance with the Contract Documents, to minimize disruption of Owner's activities.
  - J. Coordinate parking, material storage, work schedules with the BCPS Director of Facilities, Danny Clemens.
  - K. Contractor shall maintain a foreman or supervisor on-site during all construction activities. The individual in charge shall be introduced to the building principal and plant operator and be responsible for coordination and act as the liaison with the school administration.

- L. All subcontractors shall communicate any questions or requests through the General Contractor.
- M. Contractor shall not modify, add, or delete any scope of work requested by school personnel. Changes to the Contract must be properly authorized by the project Architect and Owner.

#### 1.07 PERMITS AND APPROVALS

- A. The Contractor shall be responsible for obtaining and paying for any required permits, local plan review fees, or approvals that may be required by any city, county, or state agency, any utility company, or any other agency which may have authority over any aspect of the Work being done. The HBC State plan review fee will be paid by the Owner.
  - 1. Contractor is required to submit plans to local Fire Department and County Building Department and pay all required fees.

#### 1.08 CONTRACTOR USE OF PREMISES

- A. General: The Contractor shall limit their use of the premises to the Work indicated.
- B. Use of the Site: Confine operations to the areas permitted under the Contract. Portions of the site beyond areas on which work is indicated are not to be disturbed.
  - 1. Refer to Division 01 section "Temporary Facilities" for construction fencing requirements.
  - 2. Refer to Division 01 section "Temporary Facilities" for other allowable use of the site.
  - 3. Do not load the structure with weight that will endanger the structure.
  - 4. Confine operations in each phase to areas indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
    - a. Protect, do not damage portion of areas that are to remain and are outside the project area. Restoration of damaged areas will be required.
  - 5. Keep required means of egress open, accessible, and free from construction debris.
  - 6. Keep existing driveways and entrances, serving areas outside the areas of work, clear and available to the Owner at all times, unless specifically identified as available for Contractor use. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.
  - 7. Do not unreasonably encumber the site with materials or equipment. Confine stockpiling of materials and location of storage sheds to the areas agreed with Owner / Architect. If additional storage is necessary, obtain and pay for such storage off site.
  - 8. Assume full responsibility for protection and safekeeping of products stored on site.
    - a. It is the responsibility of the General Contractor to protect the following items during all construction activities by wrapping (and securing) plastic wrap around them. If required, the Contractor shall move the said items to install new work and then move or reinstall in the designated location.

1) Miscellaneous Equipment

9. Use of gasoline / diesel powered equipment will not be allowed in the building. Any equipment used shall be electrically or propane powered. Provide the necessary ventilation needed to meet OSHA requirements.
10. Lock automotive type vehicles, such as passenger cars and trucks and other mechanized or motorized construction equipment, when parked and unattended, so as to prevent unauthorized use. Do not leave such vehicles or equipment unattended with the motor running or the ignition key in place.

C. Work Sequence:

1. From the **Notice to Proceed** until **Substantial Completion**, all work shall be done at during the hours agreed to during the Pre-Construction Conference. The Contractor is responsible for establishing work hours and obtaining the Owner's approval.
2. If the Contractor finds that double or even triple shifts of work crews are necessary for performance of work within designated Contract Time, this factor is to be included in the Contract Sum.

**1.09 OWNER OCCUPANCY AND COORDINATION OF ANY REQUIRED OUTAGES**

A. Full Owner Occupancy:

1. Substantial Completion of the Work shall be as follows:
  - a. **December 1, 2026.**
  - b. Note that Liquidated Damages will apply if school does not start because of construction. Liquidated damages have been set at \$1,000.00 per calendar day.
  - c. **Starting on August 1, 2026**, the Owner will require the use of the 10-stall ganged restrooms, exterior Gateway and Annex Building for field access during Football and Soccer Games and the Football Locker Room Suite of Rooms. Additionally, Owner will need access to the adjacent Football Field during the course of the entire Contract. 2. Obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.
3. Prior to Owner occupancy, mechanical and electrical systems shall be fully functional. Required inspections and tests shall have been successfully completed.

- B. In all cases, the Owner shall be notified a minimum of 48-hours prior to any anticipated interruption of utilities.

**1.10 SALVAGE ITEMS**

- A. All salvageable and / or reusable site stone material shall remain the property of the Owner unless, after inspection, the Owner determines they do not want the salvageable items.

- B. If the Owner does not want to reuse site stone, it shall then be disposed of in accordance with these Specifications by the Contractor at no additional cost to the Owner.
- C. All topsoil suitable for planting shall remain on the property of the Owner and redistributed following provisions of drawings and specifications.

#### **1.11 PROTECTION OF PROPERTY**

- A. The Contractor shall protect all property at the site and adjacent thereto, including landscaping, lawns, walks, structures, roof, utilities, equipment, and all interior finishes.
- B. The Contractor shall clean, repair, or replace all damaged parts as required, bringing them to their original condition.
- C. The Contractor shall take all necessary steps to protect the work of others and their own work during the process of construction.
- D. Construction materials and equipment are to be maintained in a safe and secure manner when the Contractor is not on site.

#### **1.12 MAINTENANCE AND WORKMANSHIP**

- A. The Contractor shall maintain the Work and repair same where necessary until the Work has been finally accepted.
- B. Work shall be performed by mechanics skilled in their respective trades and present an appearance typical of best trade practice. Work not installed in this manner shall be repaired, removed, and replaced or otherwise remedied as directed by the Architect, Engineer, or other inspecting authority. Contractor should ensure that the Work is done correctly the first time so as not to get the opportunity to do the Work over again.

#### **1.13 CLEANING**

- A. The Contractor shall proceed to complete their Work in a neat and orderly fashion and keep the building and site free from undue amounts of debris and miscellaneous material that will cause the area to become unsightly. The Contractor is responsible for the removal from the site and legal disposal of all removed materials and debris.
- B. Upon completion of the Work and before acceptance and final payment will be made; the Contractor shall remove and dispose of legally from the site all machinery, equipment, surplus and discarded materials, rubbish, and temporary facilities.
- C. The Contractor shall perform final cleaning, as specified in Division 01 section "Cleaning".

- D. During construction, the facility shall be left in a clean, neat, and presentable condition acceptable to the Owner.

#### **1.14 ACCEPTANCE OF WORK**

- A. Contractor shall comply with all conditions as stated per the Contract Documents. Upon the completion of their Work, clean the applicable area, remove all debris, tools, equipment, etc., from the site and shall leave the Work site in a first-class condition, suitable for immediate use by the Owner.
- B. Contractor shall notify the Architect of their substantial completion, whereupon the Architect and Owner will make an inspection of the Work.
- C. Contractor shall correct any and all deficiencies in the Work (as covered in these Specifications) and upon correction of the deficiencies notify the Architect for re-inspection. Payment shall be made upon Architect's and Owner's satisfaction of the Work in accordance with these Specifications.

#### **1.15 PROJECT CLOSEOUT**

- A. Provide all written guarantees and certificates required by these Specifications, in accordance with the General Conditions and Division 01 Sections.

#### **1.16 CORRECTION PERIOD**

- A. The Contractor shall repair or replace any material and/or Work installed under this Contract found to be defective for a period of one-year from the Date of Substantial Completion unless other sections of the Specifications require greater than one-year. Any defects developing during that time period shall be remedied by the Contractor at no additional cost to the Owner, in accordance with the General Conditions of the Contract. The one-year correction period shall not be construed to establish a period of limitation per Article 12.2 of the General Conditions.
- B. All items identified shall be corrected within 90 days of the General Contractor being notified. Note that a penalty of \$1,000.00 per calendar day will be applied for work is not corrected in this time frame.

#### **1.17 SECURITY AND PROTECTION**

- A. Provide all necessary barricades, warning signs, lights, roadway traffic plates, and fencing required to protect the health, safety, and welfare of the public. Building shall be secured at the end of each workday.
- B. Construction materials and equipment are to be maintained in a safe and secure manner when the Contractor is not on site.



- C. General: All work shall be performed in compliance with all applicable and governing safety regulations. All safety lights, guards, signs, and other safety materials and provisions required for the performance of the work shall be provided by and operated by the Contractor.
- D. OSHA: It shall be the duty and responsibility of the Contractor and all subcontractors to be familiar and comply with all requirements of the Occupational Safety and Health Act of 1970, (OSHA) and all amendments thereto, and to enforce and comply with all provisions of this Act.
- E. Emergencies: In any emergency affecting the safety of persons or property, the Contractor shall act, at its direction, to prevent threatened damage, injury, or loss.
- F. Refer to "Contractor Safety" (green pages) for additional requirements.

#### 1.18 CONDUCT OF WORKERS

- A. The Contractor shall be responsible for the conduct of all workers under their supervision. Misconduct on the part of any worker to the extent of creating a safety hazard, endangering the lives and/or property of others, shall result in the prompt removal of the worker. The consumption of alcoholic beverages, narcotics, or any debilitating drugs, where the worker's judgment is impaired is **strictly forbidden** on the Project Site.
- B. Firearms are **prohibited** on school property including vehicles parked on school property.
- C. Workers shall not fraternize with students or staff. Conflicts between workers and students shall be immediately reported to the School's Administrative Staff.
- D. Smoking, any tobacco products, vapor pipes and the use of e-cigarettes are **prohibited** on school property, including vehicles parked on school property.
- E. Appropriate language shall be used at all times.
- F. Proper attire, including shoes, shirts, pants, and necessary safety equipment shall be worn at all times.
- G. No worker on the project site shall be a registered sex offender. The Contractor is required to verify through The National Sex Offender (NSOPW.gov) web site that none of the workers on the site are registered sex offenders. Provide the Owner a list of names of the workers to be on site and verification of their status.
- H. Background checks and drug tests for all workers on the site are to be presented to the Owner. Badges will be provided for all workers on site and must be visible at all times. The Contractor is responsible for providing a USB flash drive to BCPS Facilities /Technology for each subcontractor which contains the following information:
  - a. Worker's Driver License
    - i. If Worker does not have a Driver's License a legible photo must be provided digitally in JPEG format.

- b. Worker's Drug Test Results
  - c. Worker's Criminal Background Check
- I. If a Contractor already has submitted this information to BCPS via another construction contract, the information already submitted, along with photo badges, may be used in lieu of resubmitting the background check information listed above.

#### **1.19 BUILDING TECHNOLOGY**

- A. While some building technology and communications elements are in the project, the Owner will have a separate contract for furnishings and equipment and a separate contract for instructional technology. It is the responsibility of the General Contractor to coordinate ongoing construction work with the work of these separate contractors, assuring sequencing is conducive to the successful installation of the Work of all contracts.

#### **1.20 WEATHER-RELATED EXCUSABLE DELAYS**

- A. Completion time will not be extended for normal bad weather or any weather that is reasonably foreseeable at the time of entering into the contract. The time for completion as stated in the contract documents includes due allowance for calendar days on which Work cannot be performed out of doors. The Contractor acknowledges that it may lose days due to weather conditions. Contract time may be extended at no cost to the Owner if all of the following are met which must be established by the Contractor:
  - 1. That the weather prevented Work from occurring that is on the critical path for the project based upon a critical path schedule previously submitted to the Architect and to the extent accepted by the Architect and Owner.
  - 2. There are no concurrent delays attributed to the Contractor.
  - 3. The Contractor took all reasonable steps to alleviate the impact of the weather and took reasonable attempts to prevent the delay and despite such reasonable actions of Contractor, the weather impacted the critical path as described above; and
  - 4. One of the following occurred:
    - a. The weather was catastrophic, such as a tornado, hurricane, severe windstorm, severe hailstorm; or
    - b. Refer to the following precipitation chart.
      - i. Information and data furnished or referred to below is furnished for the Contractor's information. It is to be expressly understood, however, that the Owner will not be responsible for any interpretation or conclusion drawn there from the Contractor.
      - ii. Weather Conditions: Information in the tables below was compiled from the records of the National Weather Service at Louisville, Kentucky.
      - iii. For the purpose of this Contract, "Unusual Inclement Weather" will be interpreted as those days in excess of the number of days shown in the final column under PRECIPITATION on which rainfall exceeded 0.1 inch.
  - 5. Request for additional days in construction due to "Unusual Inclement Weather" shall be communicated to the Owner and Owner representative no less than 48 hours after such

event occurs. If approved by the Owner, the additional days will be incorporated via Change Order to original contract.

<b>PRECIPITATION</b>					
<b>Month</b>	<b>Normal (Inch)</b>	<b>Maximum of Record (IN)</b>	<b>Minimum of Record (IN)</b>	<b>24 Hour Maximum (IN)</b>	<b>Average No. of Days .1" or More</b>
<b>JAN</b>	3.66	19.17	0.45	3.68	6
<b>FEB</b>	3.10	9.02	0.40	3.66	6
<b>MAR</b>	4.62	17.52	0.76	10.48	8
<b>APR</b>	4.16	13.97	0.64	5.64	8
<b>MAY</b>	4.55	11.57	0.63	4.60	8
<b>JUN</b>	3.89	10.11	0.35	5.12	7
<b>JUL</b>	3.81	10.05	0.25	5.09	6
<b>AUG</b>	3.28	8.79	0.23	4.53	6
<b>SEP</b>	3.06	10.49	0.12	4.30	5
<b>OCT</b>	2.88	9.94	0.10	5.91	5
<b>NOV</b>	3.41	9.12	0.72	3.58	6
<b>DEC</b>	3.74	8.86	0.65	3.63	7

## 1.21 SEPARATE CONTRACTS

- A. The Owner will have separate contracts running concurrently with general construction, these contracts include the following:
  - a. Bid Package 2 - Phase II Athletics - Field Houses – BUILDING AUTOMATION AND TEMPERATURE CONTROLS
  - b. Bid Package 3 - Phase II Athletics - Field Houses – TECHNOLOGY
- B. The Owner will have COOP Agreements running concurrently that supports work performed under Bid Package No. 1 – Baseball and Softball Improvements, these COOP Agreements include the following:
  - a. Intercom Life Safety COOP Agreement No. 1: Audio Enhancement
- C. It is the responsibility of the Contractor to coordinate with contractors under the Owner's separate contracts.

**END OF SECTION 01 01 10**

## **SECTION 01 02 10 – ALLOWANCES**

### **PART 1 GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.02 DESCRIPTION**

- A. Related requirements specified elsewhere include, but not limited to:
1. General Conditions, Article 3.8, Allowances
  2. Division 01 Section "Measurement and Payment"
  3. Division 01 Section "Submittals"
- B. Designate in Schedule of Values separate item for cost allowances of the Work.
- C. Designate in Construction Schedule for delivery dates of Products.

#### **1.03 SCHEDULE OF ALLOWANCES**

- A. Purchase product / material under allowance only as directed by Architect / Engineer.
- B. Include the following amounts in Base Bid for inclusion in Contract Sum.
1. **Site Electrical and Communication Utility Connections:** Allow **\$70,000** for tap and easement fees as required by the local utilities. Refer to Site Utilities Plan UE1.0 and utilize amount for existing electrical connection fees.
  2. **Unsuitable Soils– Site Work:**
    - a. **Allow the following at the Bullitt Central Site:**
      - **Unsuitable Soils Removal under paved areas:** Allow **###** cubic yards for mass undercut of unsuitable soils and backfill with engineered soil fill. Allowances shall be paid for using Unit Prices 2 and 4a and 4b.
  3. **Fill Removal Allowance – Physical Science Center**
    - a. Allow the following at the **Bullitt Central Field House:**
      - **Unsuitable Soils Removal under slab on grade:** Allow **540** cubic yards for mass undercut of unsuitable soils and backfill with engineered soil fill. Allowances shall be paid for using Unit Prices 2 and 4a and 4b.

4. **Fencing and Gate Allowance:**

a. Allow the following at the **Bullitt Central Physical Science Center**

- 6'-0" High Chain Link Fence:
  - Allow **200** L.F. Allowance shall be adjusted by Unit Price 14.
  - Provide (2) 4'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
  - Provide (2) 8'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
  - Provide (2) 13'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
- 4'-0" High Chain Link Fence:
  - Allow **100** L.F. Allowance shall be adjusted by Unit Price 14.
  - Provide (2) 4'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
  - Provide (2) 8'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
  - Provide (2) 13'-0 Wide Gates. Allowance shall be adjusted by Unit Price 15.
- 8'-0" Decorative Steel Fence:
  - Allow **100** L.F. Allowance shall be adjusted by Unit Price 16.
  - Provide (2) 4'-0 Wide Gates. Allowance shall be adjusted by Unit Price 17.
  - Provide (2) 8'-0 Wide Gates. Allowance shall be adjusted by Unit Price 17.

C. Amount of allowance includes:

1. Net cost of product.
2. Delivery to the Project Site.
3. All applicable taxes.

D. Unless otherwise noted, include in the Allowance amount the Contractors cost for the following:

1. Handling at Project Site, including unloading, uncrating, and storage.
2. Protection from elements from damage, including any packaging.
3. Labor, installation, and finishing.
4. Other expenses (i.e., testing, adjusting, and balancing) are required to complete installation.
5. Overhead and profit.

E. The use of Allowance money must be approved by the Bullitt County Public Schools Leadership and Architect before work can proceed.

**1.04 DELIVERY**

- A. Contractor shall be responsible to arrange for delivery, unloading, and prompt inspection of product for damage for defects and submission of claims for transportation damage.

**1.05      INSTALLATION**

- A. Comply with referenced Specification Section requirements.

**1.06      ADJUSTMENT OF CASH ALLOWANCE**

- A. Adjustments shall only be by Change Order in accordance with the General Conditions, Article 3.8, subparagraph 3.8.2.3.

**PART 2      PRODUCTS (not applicable)**

**PART 3      EXECUTION (not applicable)**

**END OF SECTION 01 02 10**

**SECTION 01 02 50 – MEASUREMENT AND PAYMENT**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 RELATED WORK SPECIFIED ELSEWHERE**

- A. Basic Requirements for Applications for Payment and Change Orders: GENERAL CONDITIONS.

**PART 2 SCHEDULE OF VALUES**

**2.01 GENERAL**

- A. Submit to the Architect the Schedule of Values for review, at least (10-days prior to submitting the first Application for Payment.
- B. Upon request by the Architect, support values given with data that will substantiate their correctness.
- C. Submit quantities of designated materials.
- D. Use the Schedule of Values only as a basis for Contractor's Application for Payment.

**2.02 FORM OF SUBMITTAL**

- A. Submit the Schedule of Values prepared on AIA Document G702 and G703.
- B. Use the Index of these Specifications as a basis for format for listing cost codes of work for each Section.

**2.03 PREPARING SCHEDULE OF VALUES**

- A. Itemize separate line-item cost for each of the following general cost items:
  - 1. Performance and Payment Bonds
  - 2. Field Supervision and layout
  - 3. Construction Facilities and Temporary Controls
  - 4. General Conditions (i.e., Supervision, Shop Drawings, etc.)
  - 5. Close-Out Documents
- B. Itemize separate line-item cost for work required by each section of this Specification.



- C. Breakdown installed costs into:
  - 1. Materials costs, including delivery, with taxes paid.
  - 2. Labor cost, with overhead and profit.
- D. For each line item which has installed value of more than \$1,000.00, breakdown costs to list major products or operation under each item.
- E. Round off figures to the nearest dollar.
- F. Make sum of total costs of all items listed in schedule equal to the total Contract Sum.

### **PART 3 PAYMENTS**

#### **3.01 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. At a time consistent with the requirements of this section, the GENERAL CONDITIONS, and the Owner - Contractor Agreement, and for each calendar month during the progress of the Work submit one (1) digital copy of a properly notarized, Itemized Application for Payment prepared in a manner consistent with the Schedule of Values.
- B. The amount shown on the Application for Payment shall be established by the value of the Work completed in accordance with the Contract Documents, and that all amounts have been paid by the Contractor for work for which previous payments were issued by the Owner.
- C. Payments made on account of materials not incorporated in the Work may be made as a convenience to the Contractor. However, until incorporated in the Work, such stored materials are the responsibility of the Contractor, and they shall carry suitable insurance to cover their loss in the event of theft, fire, or other damage. When application for payment includes material or equipment off-site, the application shall be accompanied with a statement giving description of item and location of storage, and certifying that item is covered by all contractual requirements, including liability and fire insurance, and that item or any part thereof will not be installed in any construction other than Work under this Contract. Provide photographic evidence and Certificate of Insurance for the off-site stored material amounts being requested for payment.
- D. The form of application for payment shall be based on the 1992 edition of AIA Document G702, "Application and Certificate of Payment", supported by AIA Document G703, Continuation Sheet, 1992 edition.
- E. Provide following itemized data on Continuation Sheet:
  - 1. Format, schedules, line items, and values shall be from the schedule of values accepted by Architect. Indicate materials and labor separately.
  - 2. Include names, trades, and amounts for Subcontractors.

**F. Preparation of Application for Each Progress Payment:**

**1. Application Form:**

- a. Fill in required information, including that for Change Orders executed prior to the date of submittal application.
- b. Fill in a summary of dollar values to agree with the respective totals indicated on the continuation sheet.
- c. Execute certification with the signature of a responsible officer of the Contractor's firm.

**2. Continuation Sheets:**

- a. Fill in a total list of all scheduled component items of Work, with item number and the scheduled dollar value for each item. Break down each item, indicating values for labor and material separately.
- b. Fill in the dollar value in each column for each scheduled line item when Work has been performed or products stored. Round off valued to nearest dollar, or as specified for the Schedule of Values.
- c. List each Change Order executed prior to the date of submission, at the end of the continuation sheets. List by the Change Order number, description, and breakdown of costs as per original component item of Work.

**G. Substantiating Data for Progress Payments:**

**1. When substantiating data is requested submit suitable information as necessary to substantiate payment request accuracy. Include a cover letter identifying:**

- a. Project.
- b. Application number and date.
- c. Detailed list of enclosures.
- d. For stored products: Item number and identification as shown on application, and description of specific material.

**2. Submit one copy of data and cover letter for each copy of application.**

**H. Applications for Payment shall be accompanied by cost breakdowns from Subcontractors and Sub-subcontractors and shall also be accompanied by the previous billing month's waivers of lien from Subcontractors, Sub-subcontractors, and material suppliers, as applicable.**

**I. Application of Payment requesting reduction in retainage before final payment shall be accompanied by a properly executed "Consent of Surety to Reduction in or Partial Release of Retainage", AIA Document G707A, 1994 edition.**

**J. When the Architect finds the application properly completed and correct, it will be transmitted to the Owner.**

### **3.02 PROGRESS PAYMENTS**

- A. The stipulated rates of payment and retainage will be in effect in accordance with Article 5 of the Agreement between Owner and Contractor.
- B. The full contract retainage may be reinstated if the manner of completion of the Work and its progress do not remain satisfactory to the Owner, or if the Surety withholds consent, or for other good and sufficient reasons.
- C. Following a Subcontractor's satisfactory completion of his portion of the Work, and the Contractor including same in an Application for Payment, accompanied by applicable release of liens and written consent of surety, and the Architect's issuance of the Certificate of Payment, the Owner may elect to add a progress payment to amount equal to that required for the Contractor to make final payment, including full retainage, to such Subcontractor.

### **3.03 APPLICATION FOR FINAL PAYMENTS**

- A. Submit final Application for Payment using AIA Documents and following the procedures specified above for progress payments.
- B. Before submitting final Application for Payment, forward to the Architect, for the Owner, the bonds (if required), written warranties and guarantees, Record "As-Built" Drawings, Record and Maintenance Manuals and other documents required by the Contract Documents, and place properly, in approved storage at the site, the extra stock and spare parts specified.
- C. Properly executed releases or waivers of lien in duplicate on AIA Document, Form G706, "Contractor's Affidavit of Payment of Debts and Claims", 1994 edition, and Form G706A "Contractor's Affidavit of Release of Liens", 1994 edition, shall be submitted to Architect digitally, prior to final payment.
- D. Application for Final Payment shall be accompanied by four (4) copies, by a properly executed "Consent of Surety Company to Final Payment: AIA Document G707, 1994 edition".
- E. Contractor shall submit, with the close-out documents, a statement on company letterhead verifying that no materials used in this project contained asbestos.
- F. Refer to Division 01 Section "Contract Closeout" for further information.

### **3.04 FINAL PAYMENT**

- A. Final payment will be made in accordance with the Agreement after final satisfactory completion of the Work, as certified by the Owner and Architect, and receipt of all close-out documents by the Owner.

- B. The retained amount will be paid by the Owner, after approval of the BG-4 Form by the Kentucky Department of Education, providing there are no undischarged or unsecured liens, attachments or claims in connection with the Work.

## **PART 4 CHANGE ORDERS**

### **4.01 GENERAL**

- A. **All Change Orders must have Bullitt County Public Schools Board Approval before the work may proceed.**
- B. Regardless of method used to determine value of changes, the estimated or actual cost shall be submitted in detailed breakdown form, giving quantity and unit costs by each trade of each item, labor cost with hourly rates, allowable overhead, and profit. No additional amount will be paid for submittal in this form or for resubmittal should the breakdown be considered inadequate by the Architect. Back-up data submitted with applications for payment may be used as basis for approving or reflecting costs submitted in Change Orders.
- C. Where unit prices are not quoted and value of changes resulting in reductions in the Work is determined by estimate and acceptance in a lump sum, by cost and percentages, or by cost and a fixed fee, **the percentage for overhead and profit or commission that shall be refunded to the Owner shall be not less than 3% of the net reduction.**
- D. In Change Orders involving both increases and decreases and resulting in a net increase, the overhead, profit, and commission added shall be required only on the net increases.
- E. In Change Orders involving both increases and decreases and resulting in a net decrease, the overhead, profit, and commission refund shall be required only on the net decrease.
- F. In cases of rearrangements, quantities of materials omitted shall be deducted from quantities added. Labor computations shall be made in the same manner.
- G. Estimates for materials shall be based on reasonable current prices at which materials are available to the Contractor and Subcontractor. Upon request, submit satisfactory evidence of such costs.
- H. The Contractor shall maintain an accurate account of labor and material involved in each change. Such time and material records are subject to verification. Notify Architect when work on each change is to start and when it has been completed. To receive full recognition, labor assigned to Contract changes must, insofar as possible, work continuously on the change, rather than interchanging between Contract Work and the change.
  - 1. Unit of measurement in calculating areas, quantities, volumes shall be understood to mean **actual in place measurements of materials or volumes.**

- I. In order that proposed changes in Work, if they should occur, can be processed without undue delay, indicate in each separate proposal requesting a change in the Contract supporting information in detailed breakdown form, including the exact location of the change requested, the reason for the change, and the square feet, square yards, cubic yards, linear measure or any other unit of measure applicable to the Work involved, together with the unit cost of labor by trades and materials. Labor unit costs shall include associated insurance. Other types of protection are assumed to be covered by overall job insurance with no additional charges assigned to unit costs.

## **PART 5 UNIT PRICES**

### **5.01 GENERAL**

- A. A unit price is the amount stated in the agreement or subsequently agreed upon by the Owner and the Contractor as a price per unit of in place measurement for addition or deduction of materials or services as described in the Contract Documents. Unit prices shall include costs of labor, materials, services, overhead and profit, bonds, insurance, and other costs to cover the completed work. Additions or deductions in the work authorized to be carried out and paid for or deducted from payment and omitted from the work shall be executed in accordance with the applicable sections of the Specifications.

**END OF SECTION 01 02 50**

**SECTION 01 04 00 – PROJECT COORDINATION**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:
  - 1. Coordination.
  - 2. Administrative and supervisory personnel.
  - 3. General installation provisions.
- B. Field Engineering is included in Division 01 Section, "Field Engineering".
- C. Progress meetings, coordination meeting and pre-installation conferences are included in Division 01 Section "Project Meetings."
- D. Requirements for the Contractor's Construction Schedule are included in Division 01 Section "Submittals".
- E. Requirements for Cleaning are included in Division 01 Section "Cleaning".

**1.03 COORDINATION**

- A. Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.
  - 1. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.
  - 2. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  - 4. The Drawings indicate the general arrangement and spacing of the roof structure, anticipated duct, and pipe routings, etc., however the Contractor is expected to field verify the installation prior to fabrication of the ductwork.
  - 5. The Contractor shall develop their own fabrication installation drawings for the Project. Prior to purchase/shipment of the ductwork, manufacturer shall provide as a part of the

submittal process scaled, field coordinated AutoCAD drawings of the complete system to be furnished. Drawings will indicate all system components including fittings, ductwork, and manifolds. Drawings shall be available in an electronic format. The Engineer will not be approving the Contractor prepared drawings and will review for general intent only.

6. The Contractor shall finally coordinate the fabrication and installation of the mechanical services with the limitations of the proposed building structure. The anticipated conditions have been designed by the Engineer as much as possible, however the Contractor shall make the necessary provisions in the Bid for any and all differences. **Change Orders shall not be considered for any differences due to lack of field investigation and coordination.**
- B. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.
  1. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  1. Preparation of schedules.
  2. Installation and removal of temporary facilities.
  3. Delivery and processing of submittals.
  4. Progress meetings.
  5. Project Close-out activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.
  1. Salvage materials and equipment involved in the performance of, but not actually incorporated in, the Work. Refer to Division 01 Section "Summary of Work" for disposition of salvaged materials that are designated as Owner's property.

#### 1.04 SUBMITTALS

- A. Coordination Drawings: Prepare and submit coordination drawings where close and careful coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space availability necessitates maximum utilization of space for efficient installation of different components.
  1. Show the interrelationship of components shown on separate Shop Drawings.
  2. Indicate required installation sequences.
  3. Comply with requirements contained in Division 01 Section "Submittals."
  4. Refer to Division 20 Sections for specific coordination requirements for mechanical installations.



5. Refer to Division 26 Sections for specific coordination requirements for electrical installations.
- B. Staff Names: Within 15-days of Notice to Proceed, submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties, and responsibilities; list their addresses and telephone numbers.
  1. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

**PART 2 PRODUCTS (not applicable)**

**PART 3 EXECUTION**

**3.01 GENERAL INSTALLATION PROVISIONS**

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Continuity of Material Availability: If it is known by the General Contractor, a supplier, or a subcontractor that a product described for use on this project is discontinued, going out of production, or scheduled to be discontinued, a substitute compliant with the requirements of the relevant specification shall be provided. Discontinued or soon-to-be discontinued products shall not knowingly be used on this project.
- C. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- D. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- E. Provide attachment and connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.
  1. No contractor shall drill through, cut through, or connect through structural members or their components without express approval by the architect or structural engineer. Attachments shall be made with clamps, clips, or other non-penetrating fasteners.
  2. Anchors shall not be shot into exposed concrete or any precast concrete assemblies. At precast assemblies, attachment points shall be made by drilling and anchoring.
- F. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

- G. Recheck measurements and dimensions before starting each installation.
- H. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- I. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- J. Mounting Heights: Where mounting heights are not indicated, refer mounting height decision to the Architect.

**END OF SECTION 01 04 00**

**SECTION 01 05 00 – FIELD ENGINEERING**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SCOPE OF WORK**

- A. Provide field engineering work as shown, specified, or both shown and specified, and as required to complete the Work.

**PART 2 PRODUCTS (not applicable)**

**PART 3 EXECUTION**

**3.01 GENERAL FIELD ENGINEERING REQUIREMENTS**

- A. Employ licensed civil engineers and / or surveyors to perform field engineering services required, including:
  - 1. Layout building as indicated, informing Architect of any discrepancies. **The licensed engineer / surveyor shall layout all new building foundations and columns lines.**
  - 2. Review and verify locations and figures shown before undertaking construction. General Contractor is responsible for accuracy of finished work.
  - 3. Before beginning work, locate general reference points and benchmarks, and take action to preserve or replace them and prevent their destruction. Record the location and elevation of each benchmark and make no changes in location without the written approval of the Owner.
  - 4. Locate and lay-out site work, utility slopes and inverts, using surveying instrument and techniques.
  - 5. Plumb, level and align concrete forms and structural elements.
  - 6. Set stakes for grading, fill, backfill and paving.
  - 7. Locate and level screeds. Lay-out formwork.
  - 8. Measure and record changes or variations from Contract Documents throughout construction for transfer to permanent Record Drawings.

- B. Establish vertical and horizontal control points remote from the Work, before starting excavation, or trenching. Control points shall be, or shall be related to, benchmarks or other indices that are sufficiently secure and remove from the Work that construction operations and traffic do not affect reliability. Take readings of benchmarks, control points and reference points, and record them. Make a copy of this initial record for the Owner.
- C. All new underground utilities (primary and secondary) installed will be surveyed by a licensed Kentucky Surveyor, i.e., water lines, waste lines, electrical lines, telephone service, etc., any line / pipe installed below grade outside of the building footprint. The Contractor will be responsible for employing a Surveyor to document underground utilities as described in Division 01 Section "Quality Control". The Contractor is responsible for coordinating when surveyor is needed on site. Surveyors shall be contacted 48-hours in advance of backfilling underground utilities / piping / conduits, etc.
- D. Expose tracer wires at ends, valves, junction boxes, etc., for Owner's future use. Contractor shall verify / prove to Owner that all tracer wires are installed and continuous without breaks, utilizing tracer equipment at the end of the project.

**END OF SECTION 01 05 00**

**SECTION 01 17 00 – STORAGE, PROTECTION AND SAFETY**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Comply with the requirements of the Conditions of the Contract relating to protection of persons and property and with the requirements specified herein.
- B. Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in the Section.
- C. Related Work:
  - 1. Documents affecting work in the Section include, but are not necessarily limited to, the General Conditions, Supplementary General Conditions and Division 01 Sections of this Project Manual.
  - 2. Additional procedures also may be described in other Sections of this Project Manual.

**1.03 QUALITY ASSURANCE**

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.
- B. **Coordinate all construction activities with separate Contractors responsible for Bid Package #2, Building Automation Temperature Control and Bid Package #3, Technology.**

**1.04 MANUFACTURER'S RECOMMENDATIONS**

- A. Except as otherwise approved by the Architect, determine, and comply with manufacturer's recommendation on product handling, storage, and protection.

**1.05 PACKAGING**

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
  - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
  - 2. Promptly remove damaged material and unsuitable items for the job site, and promptly replace it with material meeting the specified requirements, at no additional cost to the Owner.

- B. The Architect may reject, as non-complying, such material and products that do not bear identification satisfactory to Architect as to manufacturer, grade, quality, and other pertinent information. In addition, the Architect may reject any materials or products damaged due to inadequate packaging.

#### **1.06 STORAGE**

- A. Store materials in a manner acceptable to the manufacturer to not damage the materials prior to installation. Provide coverings, pallets, dunnage and / or storage facilities necessary to protect stored materials.

#### **1.07 REPAIRS AND REPLACEMENTS**

- A. In the event of damage, promptly make replacements and repairs to the approval of the Architect, with no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Architect to justify the extension of the Contract Time of Completion.

#### **1.08 FIRE PROTECTION**

- A. Always maintain good housekeeping practices to reduce the risk of fire damage. All scrap materials, rubbish and trash shall be removed daily from the site and shall not be permitted to be scattered on adjacent property. Use of the Owner's dumpster shall not be permitted.
- B. Comply with all applicable fire protection requirements of the local fire district.

#### **1.09 SPECIAL NOTICE CONCERNING UTILITIES**

- A. Contractor shall, before starting any work, locate all underground lines / piping including electrical power and lighting, telephone, gas, water, sewers, or other as necessary, to ascertain if there are any underground installations that could be damaged due to this contract work. Contractor shall take every precaution necessary so as not to damage any of these underground services. Contractor will be held entirely responsible for any damage whatsoever to these underground installations and shall pay for remedial work as required at no cost to the Owner.
- B. **All utilities shown on the Drawings are approximate. Individual service lines are not shown. The General Contractor, or subcontractor, shall notify the Kentucky Dig Safely toll-free hotline (1.800.752.6077, or 811) 48-hours in advance of any construction on this Project. This number was established to provide accurate location of existing below ground utilizes (i.e., cables, electric wires, gas, and water lines). The General Contractor shall be responsible for becoming familiar with all utility requirements set forth in the Contract Documents and making special provisions. The General Contractor shall employ the services of a qualified underground utility locator to identify and mark any underground utilities that may be encountered in the work area not specifically located by the utility services locator (i.e., secondary houses lines etc.).**

**1.10 PROTECTION OF THE WORK**

- A. It shall be the Contractor's responsibility to prevent uplift and movement of structures in any direction, until receipt of written acceptance of completed work of this contract. Ground water surrounding the structure shall be maintained at safe levels.
- B. Take all necessary measure to protect the Work from damage by moisture, freezing and other causes, both before and after installation, until receipt of written acceptance of the completed work.

**1.11 SAFEGUARDS**

- A. Provide barricades and temporary signage for the protection of persons and property and the control of vehicular and pedestrian traffic as required by the governing agency.
- B. Secure the building at the end of each day. All exterior doors, windows and openings shall be locked or secured to prevent unauthorized entry into the building. Building alarm system shall be activated.
- C. Adhere to OSHA 1926 construction manual for work in confined spaces.

**1.12 PROTECTION OF PERSONS AND PROPERTY**

- A. Comply with applicable laws, ordinances, rules, regulations, and orders of public authorities having jurisdiction for the safety of persons and property to protect them from damage, injury, or loss.
- B. Throughout the Owner's property, protect permanent improvements to remain, curbs, pavements, fences, planting, buildings, and other improvements subject to damage due to Contractor's operations.
- C. Erect and maintain, as required by conditions and progress of the work, necessary safeguards, for safety and protection, including temporary fences, guards, railings, barricades, canopies, lighting, shoring, directional and danger signs, signals, and other warnings against hazards.
- D. Protect and secure the site, materials and equipment from theft and damage, by whatever reasonable means are effective. Methods such as the following may be employed, singularly or together: Locks, fences, signs, patrols, radio, alarms, locked storage on-site and off- site warehousing.
- E. Do not permit trenches to remain open, without adequate board or fencing, barricade, or other means of identifying an open trench.
- F. Repair and restore all damaged items to the condition existing at the beginning of construction, or better. Existing site improvements: such as pavements, curbs, buildings, fences, lawns,



- plantings, and lighting which are not to be removed under this Contract, but are damaged or defaced by Contractor's operations, they be repaired or replaced.
- G. Fire Extinguishers: Provide types, sizes, numbers, and locations as would be reasonably effective in extinguishing fires during early stages of construction, by personnel at the Project Site. Provide Type A extinguishers at locations of low potential for either electrical or grease-oil-flammable liquid fires; provide ABC dry chemical extinguishers at other locations; comply with recommendations of NFPA No.10. Post warning and quick instructions at each extinguisher location and instruct personnel at the Project Site, at time of their first arrival, on proper use of extinguishers and other available facilities at the Project Site. Post local fire department call number on each telephone instrument at the Project Site.
1. Permanent Fire Protection: Complete each fire protection facility at the earliest reasonable date and make ready for emergency use and instruct personnel at site on availability and proper use.
- H. Building Enclosure and Lockup: Secure building against unauthorized entrance at times when personnel are not working. Provide secure temporary enclosures on the ground floor and other locations of possible entry, with locked entrances.
- I. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
1. Excessive static or dynamic loading
  2. Excessive internal or external pressures
  3. Excessively high or low temperatures
  4. Thermal shock
  5. Excessively high or low humidity
  6. Air contamination or pollution
  7. Water or ice
  8. Solvents
  9. Chemicals
  10. Light
  11. Radiation
  12. Puncture
  13. Abrasion
  14. Heavy traffic
  15. Soiling, staining and corrosion
  16. Bacteria
  17. Rodent and insect infestation
  18. Combustion
  19. Electrical current
  20. High speed operation
  21. Improper lubrication

22. Unusual wear or other misuse
  23. Contact between incompatible materials
  24. Destructive testing
  25. Misalignment
  26. Excessive weathering
  27. Unprotected storage
  28. Improper shipping or handling
  29. Theft
  30. Vandalism
- J. Fire and Windstorm Protection: Take the following precautions to protect the Project against fire and windstorm damage during construction.
1. Set up an effective fire brigade and arrange for response to the building site by the community fire department in the event of an emergency.
  2. Provide adequate portable fire extinguisher equipment for all areas of storage, construction, temporary enclosures, and construction offices.
  3. All temporary contractor's offices, storage sheds, workmen's shanties, etc., shall be located outside of, and well detached from, the building under construction.
  4. The installation of water supplies, sprinklers, standpipes, and fire hose shall closely follow completion of floors and areas.
  5. Storage of combustible and flammable materials shall be maintained outside of, and well detached from, the building under construction. Storage of combustibles shall not be located inside the building under construction.
  6. Only flame-proofed tarpaulins shall be used.
  7. The supply of flammable paints, solvents, oils, gas cylinders, etc., inside the building under construction shall be limited to that required for one day's use.
  8. Cutting and welding operations present a severe hazard, and such work should be done outside of the building under construction whenever possible.
  9. Insulation materials required for the curing of concrete shall be non-combustible.
  10. Temporary electric wiring should be kept to a minimum. Flood lights are preferable to individual unprotected lamps. All temporary electric circuits should be properly installed to prevent physical damage, and they should be provided with overload protection as specified in the national Electric Code.
  11. All roofing kettles (or any similar equipment) shall be located outside the building under construction, with as much detachment as possible.
  12. Smoking, any tobacco products, vapor pipes and the use of e-cigarettes are **prohibited** on school property, including vehicles parked on school property.
  13. All combustible waste and scrap materials shall be removed from the building under construction on a daily basis. No on-site incineration shall be permitted.
  14. Ready access for the public fire department shall be maintained to all areas at all times.
  15. All structural steel shall be properly secured and braced at the end of each working day.
  16. All masonry walls should follow the erection of the permanent structural members, so that adequate lateral stability is improved. Brace wall as required until permanent lateral bracing is installed.
  17. All concrete forms shall be adequately fastened in place.

18. All roof decking shall be permanently secured as it is laid in place.
  19. All vapor barriers, insulation and roofing materials shall be permanently fastened to the roof deck as it is applied.
  20. All construction materials shall be adequately protected against wind damage during storage.
  21. All tarpaulins or any other temporary enclosure materials shall be securely fastened.
- K. Protect installed work and provide special protection where specified in individual specification sections.
1. Protect finished surfaces, including walls, projections, jambs, sills, and soffits of openings used as passageways, through which equipment and materials are handled.
  2. Protect finished floors and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects by protecting them with durable sheet materials.
    - a. Lay Down / Work Areas: The Contractor shall protect any floors where toolboxes, pipe bending, gang boxes, etc. are placed. Provide 3/4" plywood with plastic sheeting. Contractor is responsible for repairing / replacing any damaged floors.
  3. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.
  4. Protect all roof surfaces from traffic or storage. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
  5. Prohibit traffic from landscaped areas.

#### 1.13 SAFETY MEETINGS

- A. The Contractor shall conduct meetings to discuss safe working methods with all employees under his control on a regularly scheduled basis, but not less than weekly.
- B. Contractor shall be held entirely responsible for safety regulations, procedures, and policies.
- C. Coordinate safety meetings with separate Contractors responsible for Bid Package #3, Building Automation Temperature Control and Bid Package #4, Technology.

#### PART 2 PRODUCTS (not applicable)

#### PART 3 EXECUTION (not applicable)

END OF SECTION 01 17 00

**SECTION 01 20 00 – PROJECT MEETINGS**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 DESCRIPTION**

- A. Attending Pre-Construction Conference and Progress Meetings as specified.
- B. Progress Meetings will be held to include Contractors responsible for Bid Packages 1, 2 and 3.

**1.03 PRE-CONSTRUCTION CONFERENCE**

- A. As soon as possible after issuance of Notice to Proceed and prior to start of construction, Architect will arrange an on-site meeting with the Contractor. The meeting agenda will include the following:
  - 1. Correspondence procedures
  - 2. Designation of responsible personnel
  - 3. Changes
  - 4. Payments to Contractor
  - 5. Subcontractors
  - 6. Construction Schedule
  - 7. Submittals
  - 8. Restrictions on access to and use of site
  - 9. Security
  - 10. Review of existing mechanical, electrical, communication, or other systems in the areas for new Work. The method to document the existing conditions of these systems will be reviewed and scheduled with the Owner.

**1.04 PROGRESS MEETINGS**

- A. Attend progress meetings every two (2) weeks at the site during the construction period, at a time suitable to Owner and Architect. Also organize other site meetings as requested by Owner or Architect.
  - 1. Agenda:
    - a. Review of work progress to date and work to be completed in the time frame before the next progress meeting.
    - b. Review of field observations, problems, and decisions.
    - c. Identification of problems which may impede planned progress.
    - d. Corrective measures to regain projected schedules.

- e. Effect of proposed changes on progress schedule and coordination.
  - f. Other business relating to work.
- B. Each interested Subcontractor shall be present at meetings to report the condition of their work and to receive instructions.
- C. Architect shall record the minutes of each meeting, including names of principal participants, significant proceedings, and decisions, and distribute copies of minutes within seven (7) days after meetings.
- D. Progress of work shall be reported, in writing, in detail with reference to construction schedule and submit copies to Owner and Architect at each progress meeting.
- E. When attendance is requested, attendance shall be mandatory.

**1.06 FOCUS MEETINGS**

- A. Prior to the start of any major activities (i.e., masonry, roofing, paving) a focus / coordination meeting shall be held to ensure the Work is properly coordinated and performed as specified.

**PART 2 PRODUCTS (not applicable)**

**PART 3 EXECUTION (not applicable)**

**END OF SECTION 01 20 00**

**SECTION 01 22 00 – UNIT PRICES**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes administrative and procedural requirements for unit prices.
- B. Related Requirements:
  - 1. Division 01 Section “Quality Control” for general testing and inspecting requirements

**1.03 DEFINITIONS**

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

**1.04 PROCEDURES**

- A. Indicate unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all necessary labor and materials, plus cost for delivery, installation, insurance, bonds, applicable taxes, overhead and profit for the Contractor, as well as any Subcontractor involved. These unit prices shall be listed in units of work.
- B. Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections, or in the description of the Unit Price itself.
  - 1. **Unit of measurement in calculating areas, quantities, volumes shall be understood to mean actual in place measurements of materials or volumes.**
- C. Owner reserves the right to reject Contractor’s measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner’s expense, by an independent surveyor acceptable to Contractor.

**PART 2     PRODUCTS** (not applicable)

**PART 3     EXECUTION**

**3.01       LIST OF UNIT PRICES**

- A. Refer to the Kentucky Department of Education's Form of Proposal for a schedule of Unit Prices to be included.

**END OF SECTION 01 22 00**



**SECTION 01 23 00 – ALTERNATES**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This section includes administrative and procedural requirements governing Alternates.
- B. This section identifies each Alternate by number and describes the change(s) to be incorporated into the Work.
- C. It is the responsibility of each Contractor to review the Contract Documents to determine if an Alternate(s) affects their Contract Package at time of Bidding.
- D. Materials and workmanship not otherwise described in the Alternate(s) shall match similar items specified under the Base Bid.

**1.03 DEFINITIONS**

- A. An Alternate is an amount proposed by Bidders and stated on the Form of Proposal for certain work defined herein that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. The cost or credit for each Alternate is the net addition to or deduction from the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.

**1.04 PROCEDURES**

- A. Coordination: Modify or adjust affected adjacent Work as necessary to, completely and fully, integrate the Alternate scope into the Project.
  - 1. Include as part of each Alternate any miscellaneous devices, accessory objects, materials, and similar items incidental to or required for a complete job whether or not mentioned as part of the Alternate.
- B. Notification: Immediately following the award of the Contract, notify each party involved, in writing, of the status of each Alternate. Indicate whether Alternate(s) have been accepted, rejected, or deferred for later consideration.

- C. Note: If any Alternate bid results in a change to a listed subcontractor or vendor, then such subcontractor or vendor changes are to be identified with the Alternate bid and in the List of Proposed Subcontractors (as applicable) as part of the Form of Proposal.
- D. Execute accepted Alternates under the same conditions as the other Work of this Contract.
- E. Schedule: The "Schedule of Alternates" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the work described under each Alternate.
- F. If there is no change to the Base Bid when including an Alternate, insert zero-dollar amount on the Form of Proposal so that alternate amount is not left blank.

#### **1.04 USE OF ALTERNATES**

- A. The successful Contractor shall be determined by the combination of Base Bid and Alternate(s) selected by the Owner.
- B. The Owner reserves the right to use an Alternate(s) in whatever combination that best serves their interest.

#### **PART 2 PRODUCTS (not applicable)**

#### **PART 3 EXECUTION**

##### **3.01 SCHEDULE OF ALTERNATES**

###### **A. Alternate No.1: Door Hardware**

- 1. Use Owner's Preferred Hardware, as described in Division 08 Section "Door Hardware", 1.2, A.
  - a. If any alternate bid results in a change to a listed subcontractor or vendor, then such subcontractor or vendor changes are to be identified with the alternate bid.

###### **B. Alternate No.2: Fire Alarm System**

- 1. Base Bid: Provide any approved system listed in Specification Section 28 31 00.
- 2. Alternate: Provide the specified fire alarm system manufactured by EST/Edwards.

C. **Alternate No.3:** Plumbing Equipment

1. Base Bid: Provide any approved plumbing fixture manufacturer and model as specified in Specification Section 22 02 00 – Plumbing Fixtures, Fitting and Trim.
2. Alternate: Provide the following manufacturer and model of plumbing fixtures as listed below:
  - P-2A – Lavatory Self-Metering Faucet: Delta Model 86T1153
  - P-2B – Lavatory Self-Metering Faucet: Delta Model 86T1153
  - P-6A – Electric Water Cooler: Elkay Model #VRCTL8S
  - P-6B – Electric Water Cooler w/ Bottle Filler: Elkay Model #VRCTL8WSK

E. **Alternate No.4:** Preferred AV Systems

1. Base Bid: Any manufacturer allowed per specification 270800 meeting basis of design requirements.
2. Alternate: Speakers and Amplifiers shall be as manufactured by Danley Sound Labs.

F. **Alternate No.5:** Preferred Indoor Turf Manufacturer

1. Base Bid: Any listed manufacturer allowed per spec section 11 68 30 – Indoor Turf
2. Alternate: Indoor Turf to be provided and installed by The Motz Group.

G. **Alternate No.6:** Entry Façade RGBW Lighting

1. Base Bid: No Scope.
2. Alternate: Entry and Façade RGBW lighting shall be provided. Refer to electrical drawings

H. **Alternate No.7:** Road Entrance Modifications in Right of Way

1. Base Bid: No change to the Right-of-Way for Ky Highway 44.
2. Alternate: Provide extension of private drives into Ky Highway 44 Right-of-Way, as described on Civil Drawings.

**END OF SECTION 01 23 00**

## **SECTION 01 30 00 - SUBMITTALS**

### **PART 1 GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. This Section specifies administrative and procedural requirements for Submittals required for performance of the Work, including:
  - 1. Contractor's Construction Schedule
  - 2. Submittal Schedule
  - 3. Daily Construction Reports
- B. Administrative Submittals: Refer to other Division 01 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:
  - 1. Permits
  - 2. List of Subcontractors
- C. The Schedule of Values, included on Division 01 Section "Measurement and Payment".
- D. Inspection and test reports, included in Division 01 Section "Quality Control".

#### **1.03 SUBMITTAL PROCEDURES**

- A. Coordination: Coordinate preparation and processing of submittal with performance of construction activities. Transmit each submittal in advance of performance of related construction activities to avoid delay.
- B. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to Architect using a transmittal form. Submittals received from sources other than Contractor will be returned without action.

#### **1.04 CONTRACTORS CONSTRUCTION SCHEDULE**

- A. Bar-Chart Schedule: Prepare a fully developed, horizontal, bar-chart type Contractor's schedule. Submit within (15) days of the date of the Notice to Proceed.
  - 1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the Work as indicated in the "Schedule of Values".

2. Within each time bar, indicate estimated completion percentage in 10% increments. As the Work progresses, place a contrasting mark in each bar to indicate Actual Completion.
  3. Prepare the schedule on a sheet, or series of sheets, on reproducible media, and sufficient width to show data for the entire construction period.
  4. Secure time commitments for performing critical elements of the Work from parties involved. Coordinate each element on the schedule with other construction activities; include minor elements involved in the sequence of the Work. Show each activity in proper sequence. Indicate graphically sequences necessary for completion of related portions of the Work.
  5. Coordinate the Contractor's construction schedule with the Schedule of Values, list of subcontracts, submittal schedule, progress reports, payment requests and other schedules.
  6. Indicate completion in advance of the date established for Substantial Completion. Indicate Substantial Completion on the schedule to allow time for the Architect's procedures necessary for Certification of Substantial Completion.
- B. Work Stages: Indicate important stages in construction for each major portion of the Work, including testing and installation.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, Subcontractors, and other parties required to comply with scheduled dates. Post copies in the Project meeting room and temporary field office.
1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- D. Schedule Updating: Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

#### **1.05 DAILY CONSTRUCTION REPORTS**

- A. Project Superintendent shall prepare a daily construction report recording the following information:
1. List of Subcontractors on site, including number of workers.
  2. Equipment on site.
  3. Material deliveries.
  4. Temperature and weather conditions.
  5. Accidents.
  6. Stoppages, shortages, or delays.
  7. Inspections.
  8. Visitors on site.
- B. Reports shall be forwarded to the Architect and Owner on a weekly basis.

**PART 2     PRODUCTS** (not applicable)

**PART 3     EXECUTION** (not applicable)

**END OF SECTION 01 30 00**

**SECTION 01 34 00 – SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 GENERAL**

- A. Submit, with such promptness as to cause no delay in construction, shop drawings, product data and samples required by Specifications Sections. The completion time of the Project will NOT be extended for delays caused by tardiness of delivery.

**1.03 SHOP DRAWINGS**

- A. Original drawings, prepared by the Contractor, Subcontractor, supplier, or distributor, which illustrate some portion of the Work, showing fabrication, layout, setting or erection details.
- B. Prepared by qualified detailer.

**1.04 PRODUCT DATA**

- A. Manufacturer's standard schematic drawings:
  - 1. Modify drawings to delete information which is not applicable to the Project.
  - 2. Supplement standard information to provide additional information applicable to the Project.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedule, performance charts, illustrations, and other standard descriptive data:
  - 1. Clearly mark each copy to identify pertinent materials, products, or models.
  - 2. Shop dimensions and clearance required.
  - 3. Shop performance characteristics and capacities.
  - 4. Show wiring diagrams and controls.

**1.05 SAMPLES**

- A. Physical examples to illustrate materials, equipment, or workmanship, and to establish standards by which completed work is judged.
- B. Office Samples of sufficient size and quality to clearly illustrate:



1. Functional characteristics of product or material, with integrally related parts and attachment devices.
2. The definition of full range is ALL available colors, regardless of price range.

#### 1.06 CONTRACTOR RESPONSIBILITIES

- A. Review Shop Drawings, Product Data and Samples prior to submission. Indicate on each submittal and sign showing review and date.
- B. Verify:
  1. Field measurements.
  2. Field construction criteria.
  3. Catalog numbers and similar data.
  4. Quantities.
- C. Coordinate each submittal with requirements of the Work and of the Contract Documents.
- D. Contractor's responsibility for errors and omissions in submittal is not relieved by Architect / Engineer's review of submittals.
- E. Contractor's responsibility for deviations in submittals from requirement of Contract Documents is not relieved by Architect / Engineer's review of submittals unless Architect / Engineer gives written acceptance of specific deviations.
- F. Notify Architect / Engineer, in writing at time of submission, of deviations in submittals from requirements of Contract Documents.
- G. Begin no work which requires submittals until return of submittals with Architect / Engineer stamp and initials or signature indicating review.
- H. After Architect / Engineer's review, distribute copies.

#### 1.07 SUBMISSION REQUIREMENTS

- A. All Shop Drawings and Product Data shall be reviewed and stamped by the General Contractor.
  1. Submission of shop drawings and products shall be as follows:
    - a. **OWNER:** All shop drawings and product data (*with transmittal*) to be sent digitally to Bullitt County Public Schools via Danny Clemens at the same time of submittal to Architect / Engineer.
    - b. **CIVIL:** All shop drawings and product data (*with transmittal*) to be sent digitally. Send directly to the Civil Engineer/ Landscape Architect and copy the Architect.

- c. **LANDSCAPE:** All shop drawings and product data (*with transmittal*) to be sent digitally. Send directly to the Landscape Architect and copy the Architect.
  - d. **STRUCTURAL:** All shop drawings and product data (*with transmittal*) to be sent digitally. Send directly to the Structural Engineer and copy the Architect.
  - e. **ARCHITECTURAL:** All shop drawings and product data (*with transmittal*) to be sent digitally.
  - f. **MEP:** All shop drawings and product data (*with transmittal*) to be sent digitally. Send directly to the MEP Engineer and copy the Architect.
  - g. **COMMISSIONING AGENT:** All shop drawings and product data (*with transmittal*) to be sent digitally. Send directly to the Commissioning Agent and copy the Architect.
- 2. Provide separate transmittal for each submittal indicated with Specification Section.
  - 3. Email addresses / contacts will be provided at the Pre-Construction Meeting.
- B. Samples: Submit as indicated in the Specification of the product.
- C. After development and acceptance of the Contractor's construction schedule, prepare and submit a complete schedule of submittals.
- 1. Coordinate submittal schedule with the subcontractors, Schedule of Values, and the list of products as well as the Contractor's construction schedule.
  - 2. Provide the following information:
    - a. Related Specification Section number.
    - b. Name of Subcontractor.
    - c. Description of the Work covered.

#### 1.08 ARCHITECT / ENGINEER DUTIES

- A. Review submittals with reasonable promptness.
- B. Review for:
  - 1. Design concept of Project.
  - 2. Information given in Contract Documents.
- C. Review of separate items does not constitute review of an assembly in which item functions.
- D. Affix stamp and initials or signature certifying review of submittal.
- E. Return submittals to Contractor for distribution.

**PART 2     PRODUCTS** (not applicable)

**PART 3     EXECUTION** (not applicable)

**END OF SECTION 01 34 00**

**SECTION 01 40 00 – QUALITY CONTROL**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SCOPE OF WORK**

- A. This section includes requirements for testing and special inspection services and for published standards and specifications.

**1.03 RELATED WORK SPECIFIED ELSEWHERE**

- A. Types and Quantities of Field Tests required are identified in the Technical Specifications Sections.
- B. Tests Required of Manufacturer in Factory or Plant for Quality Assurance are identified in the Technical Specifications sections.
- C. Refer to Structural Drawings and Division 01 Section “Special Inspections” for Structural Special Inspection requirements.

**1.04 TESTING AND INSPECTION SERVICES**

- A. The Owner will employ and pay for the following testing and inspection services:
  - 1. Soils / Geotechnical Services
  - 2. Concrete
  - 3. Reinforcement placement
  - 4. Mortar and grout
  - 5. Masonry inspections
  - 6. Welding quality control
  - 7. Structural Steel, including connections
  - 8. Metal deck fastening / attachment
  - 9. Fire rated construction
  - 10. Testing and Balance
  - 11. Commissioning.
- B. Except where specifically specified above, Contractor shall employ testing and inspection laboratories or agencies to perform inspecting and testing required by the various Specification Sections and pay all costs for such services. Contractor shall coordinate with Owner’s testing agency to arrange required inspections at appropriate times.

- C. Testing or inspection of the Work or both shall not relieve the Contractor of their responsibility for conforming to the requirements of the Contract Documents.
- D. Certification that Work conforms to the requirements of the Contract Documents remains the responsibility of the Contractor.

## **1.05 PROCEDURE FOR TESTING LABORATORY AND INSPECTION SERVICES**

- A. Testing laboratory and inspection services, including such services as sample taking, sample curing and preparation, testing, and reporting, shall be performed by an agency or agencies, referred to hereafter as the Inspection Agency or Testing Laboratory, approved by the Owner and Architect.
- B. The Contractor shall provide access and incidental equipment and shall schedule operations in such a way that inspections may be made freely by the Testing Agency or Inspection Agency or, when requested, make arrangements with manufacturers for inspection of materials and equipment during manufacture.
- C. Reports of tests shall be submitted by the Agency or Laboratory, by email, directly to the Architect and Owner for interpretation at the same time forwarded to the Contractor, for their distribution. The Architect will transmit copies to their consultants.
- D. Retest Responsibility: Where results of required inspections, tests or similar services are unsatisfactory (not in compliance with the Contract Documents), retesting will be the responsibility of the Contractor at their expense.
- E. Notify the Owner's testing agencies a minimum of 24-hours in advance of work requiring their on-site presence. It is the General Contractor's responsibility to coordinate with the Owner's testing service. Contractor will be back charged for the time expended by the testing company due to the lack of notification for cancellation of work regarding testing.

## **PART 2 PUBLISHED STANDARDS AND SPECIFICATIONS**

### **2.01 USE OF PUBLISHED STANDARDS AND SPECIFICATION STANDARDS**

- A. Work specified by reference to the published standard or specifications of a government agency, technical associations, trade association, professional society, testing agency, or other organization shall comply with or exceed the minimum standards of quality for materials and workmanship established by the listed standard or specifications. References used in the project specifications are to be the latest edition adopted and published prior to the publication date of these specifications unless the specific date of the standard is listed in the project specification.
- B. In case of conflict between the referenced standard or specification and the Building Code or other legal requirement having jurisdiction, comply with the one establishing the more stringent requirements.

- C. In case of conflict between the referenced standard or specification and the project specifications, the project specifications shall govern.
- D. In case of conflict between the referenced standards or specifications when more than one standard or specification is cited, the priority of interpretation shall be as follows:
  - 1. First priority: UL, NFPA, or FML.
  - 2. Second priority: ASTM or ANSI Standard or Federal Specifications.
  - 3. Third priority: Other listed standard or specification.

## 2.02 ABBREVIATIONS FOR PUBLISHED STANDARDS AND SPECIFICATIONS

- A. Following is a list of organizations publishing specifications and standards to which references may be made in the project specifications, with abbreviations used. The addresses from which published standards can be obtained will be furnished by the Architect upon request.

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
ABPA	Acoustical and Board Products Association
ACI	American Concrete Institute
AGA	American Gas Association
AI	Asphalt Institute
AIA	American Institute of Architects
AIaA	American Insurance Association (formerly NBFU)
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
ANA	American Nurseryman's Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPB	American Wood Preservers Bureau
AWSAWS	American Welding Society
BIA	Brick Institute of America (formerly SCPI)
CRA	California Redwood Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards of the U. S. Department of Commerce
FGMA	Flat Glass Marketing Association
FED.Spec.	Federal Specifications
FML	Factory Mutual Laboratories
FTI	Facing Tile Institute
GA	Gypsum Association

IEEE	Institute of Electrical and Electronic Engineers
MFMA	Maple Flooring Manufacturer's Association
MIA	Marble Institute of America
MLSFA	Metal Lath/Steel Framing Association
MIL	Military Specifications
NAAMM	National Association of Architectural Metal Manufacturers
NBGQA	National Building Granite Quarries Association
NBS	National Bureau of Standards of the U. S. Department of Commerce
NCMA	National Concrete Masonry Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NOFMA	National Oak Flooring Manufacturer's Association
NSF	National Sanitation Foundation
NTMA	National Terrazzo and Mosaic Association, Inc.
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
PI	Perlite Institute, Inc.
PS	Product Standard, National Bureau of Standards
RTI	Resilient Tile Institute
SBI	Steel Boiler Institute
SDI	Steel Deck Institute
SDI	Steel Door Institute
SJI	Steel Joist Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Inc.
SFPA	Southern Forest Products Association
SSPC	Steel Structures Painting Council
TCA	Tile Council of America
UL or U.L.I.	Underwriters' Laboratories, Inc.
WWPA	Western Wood Products Association

**PART 3     EXECUTION** (not applicable)

**END OF SECTION 01 40 00**

## **SECTION 01 41 10 – STRUCTURAL SPECIAL INSPECTION, & CONTRACTOR RESPONSIBILITY**

### **PART 1 – GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. General Conditions of the Construction Contract Inspection of Work / Defective or Incomplete Work / Special Inspections shall apply in its entirety to this project. Where any conflict exists between this Specification Section and the General Conditions, the General Conditions provisions shall supersede in all aspects.

#### **1.2 SUMMARY**

- A. Special Inspections as defined in Section 1704 of The Kentucky Building Code are required.
- B. The Risk Category, Seismic Design Category, and Basic Wind Speed for the structure are shown in the General Notes section of the structural drawings.
- C. Special inspections per Kentucky Building Code Sections 1704 and 1705 are required for the following materials and work:
  - 1. Inspection of Fabricators per Section 1704.2.5 of the Kentucky Building Code.
  - 2. Steel Construction per Section 1705.2 of the Kentucky Building Code.
  - 3. Concrete Construction per Section 1705.3 of the Kentucky Building Code.
  - 4. Masonry Construction per Section 1705.4 of the Kentucky Building Code.
  - 5. Prepared Fill per Section 1705.6 of the Kentucky Building Code.
  - 6. Additional materials and work as/if indicated on the Construction Drawings.
- D. The structural special inspections required on this project are further defined in the Special Inspections section of the structural drawings. Other, non-structural special inspections may be required and are specified elsewhere if applicable.

#### **1.3 SCOPE**

- A. The scope of the construction work to be inspected / tested / observed is that structural and foundation work shown on the structural construction drawings (S- sheets) as well as the following:
  - 1. Geotechnical fill immediately below and within the footprint of the building and retaining wall foundations shown on the structural drawings.
  - 2. Structural framing of stationary bleachers interior and exterior.



- B. All inspections and tests performed shall be documented by report including, but not limited to, inspections for grout and concrete placement, reinforcing inspection, curing, fabricators, deck attachment, etc.

#### 1.4 DEFINITIONS

- A. In accordance with the intent of the Building Code, inspection work specified to be “continuous” shall be inspected the full, uninterrupted time that the Contractor is performing said construction work. Work specified to be “periodic” may be inspected as convenient to the Inspector, except that all work must be inspected prior to being covered by other work, during the working hours of the Contractor, and in a fashion that does not delay the Contractor. Regardless as to whether inspections are performed in “continuous” or “periodic” fashion, 100% of the construction work shall be inspected, unless noted otherwise.
- B. In “continuous” or “periodic” fashion, 100% of the construction work shall be inspected, unless noted otherwise.

#### 1.5 SELECTION AND PAYMENT

- A. The Inspection Agency shall be retained by the Owner. Costs for reinspection and retesting, should discrepancies be found, will be paid for by the Owner, except where rework is due to negligence or omission deemed excessive by the Owner.
  - 1. In case of excessive rework, such retesting and reinspection shall be paid for by the Owner as an additional service of the Inspection Agency, but will be backcharged by deductive change order to the Contractor’s contract.
  - 2. In case of excessive waste/lost time of the Special Inspector due to inadequate scheduling by the General Contractor, such time shall be paid for by the Owner as an additional service of the Inspection Agency but will be backcharged by deductive change order to the Contractor’s contract.
- B. Special Inspections are additional to testing and inspection requirements shown elsewhere in the specifications and on the drawings, which are to be paid for by the Contractor. The Contractor shall also pay for additional structural testing and inspection required for their convenience. Inspection work not part of the Structural Special Inspections may be performed by an Inspection Agency of the Contractor’s choosing, unless noted otherwise.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. General: Furnish submittals in quantity, format, and other Conditions of the Contract and as specified in Division 1 of the Project Manual.
- B. Fabricator certificate of current good standing with Qualified Certification Program.
- C. Fabricators exempt from special inspection shall submit a *Certificate of Compliance* to the structural engineer of record at the completion of fabrication stating that all work was completed in accordance with the approved construction documents.

## **1.7 QUALITY ASSURANCE**

- A. Qualified Certification Authorities: Subject to compliance with Kentucky Building Code Requirements, Qualified Certification Authorities providing certification which may be applicable to Project include:
  - 1. American Concrete Institute (ACI).
  - 2. American Institute of Steel Construction (AISC).
  - 3. American Society of Nondestructive Testing (ASNT).
  - 4. American Welding Society (AWS).
  - 5. Cold Formed Steel Engineers Institute (CFSEI).
  - 6. International Accreditation Service (IAS).
  - 7. International Code Council (ICC).
  - 8. National Institute of Certified Engineering Technology (NICET).
  - 9. Prestressed Concrete Institute (PCI).
  - 10. Steel Joist Institute (SJI).

## **PART 2 – EXECUTION**

### **2.1 PROGRESS MEETINGS**

- A. The Special Inspector's designated Project Manager is to attend any pre-construction meetings which may be conducted at the construction site by the Structural Engineer to discuss quality issues.
- B. The Special Inspector's designated Project Manager is to attend construction progress meetings which will be held at the construction site by the Architect, Engineer, and General Contractor.

### **2.2 CONTRACTOR'S RESPONSIBILITIES**

- A. Provide a complete copy of all structural shop drawings to the Structural Testing/Inspection Agency.
- B. Coordinate with the Project Manager, Design Professional, and Using Agency to initiate a Pre-Installation Meeting, typically held at the construction site. Arrange and require relevant project managers and site foremen from the Subcontractors to attend the meeting to discuss quality issues.
- C. Notify the Structural Testing/Inspection Agency sufficiently in advance of operations to allow assignment of personnel and scheduling of tests.
- D. Cooperate with Structural Testing/Inspection Agency and provide access, including equipment with operator, to work. Access equipment includes, but is not limited to, man lifts, excavation equipment, etc.
- E. Provide samples of materials to be tested in required quantities.

- F. Provide storage space for Structural Testing/Inspection Agency's exclusive use, such as for storing and curing concrete testing samples. If required by Special Inspector, General Contractor shall provide cure box with electricity, water, and blankets for curing concrete specimens.
- G. Provide labor to assist the Structural Testing/Inspection Agency in performing tests/inspections. Labor includes, but is not limited to, construction of masonry prisms, etc.
- H. Construction and work for which Special Inspection is required shall remain accessible and exposed for special inspection purposes until the completion of the inspections and tests.
- I. All parties who are to receive inspection and testing reports shall maintain an active email account to receive reports by.
- J. General Contractor shall create and maintain a discrepancy log on site. Log shall list each discrepancy documented by the Special Inspector; state the date of discovery and Special Inspector's report number; and provide room for the Special Inspector to sign and date when said discrepancy is corrected. No work containing a discrepancy shall be covered prior to having reinspection and approval by the Special Inspector.
- K. Neither the observation of the Architect/Structural Engineer in the administration of the contract, nor tests/inspections by the Testing/Inspection Agency, nor approvals by any other person(s) shall relieve the Contractor from their obligation to perform the work in accordance with the Contract Documents.

### **2.3 SPECIAL INSPECTOR'S RESPONSIBILITIES**

- A. Cooperate with the Contractor and provide timely service.
- B. Notify Contractor of minimum advance notice for each type of inspection/test.
- C. Upon arriving at the construction site, sign in and notify the Contractor of presence.
- D. Select the representative samples that are to be tested/inspected.
- E. Perform tests/inspections as outlined in the Contract Documents, the applicable codes, and as directed by the Structural Engineer.
- F. Keep records of all inspections.
- G. Furnish inspection reports to the Architect, Structural Engineer, and General Contractor weekly as construction progresses.
  - 1. Each report shall include photographs of the project status and the typical work inspected and documented in that subject report. These general photographs are in addition to the required photograph at discrepancies.
  - 2. Format of report deliverables shall be Special Inspection Report (PDF), Project Photographs (JPG), and Related Supporting Documentation (PDF).

- H. Inform General Contractor and / or Fabricator of all discrepancies immediately for correction.
  - 1. Document in writing correction of discrepancies.
  - 2. Highlight discrepancies within the report.
    - a. The report shall include a text description of each discrepancy. Description shall convey the discrepancy location on the project and the issue.
    - b. The report shall include a photograph of each discrepancy observed in the field and/or in the shop. Photograph shall be labeled to convey location on project and the issue shown. (Photographs of material strength tests for concrete and/or masonry are not required, unless otherwise instructed.)
    - c. The report shall document the date that each discrepancy was initially discovered.
    - d. Inspection-related discrepancies shall be reinspected by the Special Inspector along the course of the project and prior to concealment by other work. Subsequent reports shall document the date that prior discrepancy was confirmed to be corrected.
  - 3. If discrepancies are not corrected, the discrepancies shall be brought to the attention of the Code Official and the Structural Engineer prior to the completion of that phase of the work.
- I. Leave copies of field notes with the Contractor prior to leaving the construction site. Field notes shall include the message given to the Contractor, date, time of message, name of Contractor's representative informed, type and location of work or materials tested/inspected, whether the work or materials complies with Contract Documents and name of the Structural Testing/Inspection Agency's representative.
- J. Contract Documents and name of the Structural Testing/Inspection Agency's representative.
- K. Immediately notify General Contractor, Architect, and Structural Engineer by separate letter if work yet to be inspected is found on site that is either being covered by other work or was to receive continuous inspection.
- L. Structural Testing/Inspection Agency shall not alter requirements of Contract Documents, approve or reject any portion of the work, or perform duties of the Contractor.
- M. Submit a final report of inspections documenting completion of **all** required Special Inspections and correction of any discrepancies noted in inspections to the Structural Engineer. Final report shall be prepared by, sealed, and signed by the Special Inspector and shall include a complete list of materials and work inspected during the course of the project. One copy of said report is to be provided to the Contractor for their records.

**END OF SECTION 01 41 10**

**SECTION 01 50 00 – TEMPORARY FACILITIES**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 GENERAL**

- A. Contractor shall provide and maintain temporary facilities as specified and as required for the progress and completion of the Work under contract.
- B. Contractor shall be responsible for coordinating and scheduling among all trades and subcontractors the furnishing and use of all temporary facilities required for the Work.

**1.03 REQUIREMENT OF REGULATORY AGENCIES**

- A. Contractor shall provide and maintain all temporary facilities in compliance with governing rules, regulations, codes, ordinances and laws of agencies and utility companies having jurisdiction over work involved in project.
- B. Contractor shall be responsible for all temporary work provided and obtain any necessary permits and inspections for such work.
- C. Do not interfere with normal use of streets in vicinity of project site except as indicated on the Drawings and/or as absolutely necessary to execute required work, and then only after proper arrangements have been made with applicable authorities, including traffic control as applicable.

**1.04 TEMPORARY FIELD OFFICES**

- A. Contractor shall provide a 12' X 60' field office in a suitable temporary, waterproof, heated and cooled, structure at the site and provide the following:
  - 1. The field office should be internally subdivided to provide two enclosed offices at each end of the unit. Each office should be a minimum of 12' x 12' with the center area left open for construction meetings, one office will be for the Owner's use during construction.
  - 2. Copies of the Drawings, Specifications, shop drawings, samples, and other data pertinent to the work shall be kept on-site at all times for reference.
  - 3. Space is to be complete with a plan rack, reference table and chairs (for approximately 20 people) and file cabinet.
  - 4. Construction Superintendent shall be in possession of a portable cellular phone, and the number shall be provided to Owner and Architect.

5. Provide and maintain computer station with email for construction correspondence with the Construction Superintendent.
  6. Provide and maintain a copy machine for use by Contractor and persons connected with the Work.
- B. Contractor to pay the cost of providing and maintaining any temporary office facilities.
- C. Location of temporary office shall be coordinated with the Owner.

#### **1.05 WATER FOR CONSTRUCTION**

- A. The Contractor must provide and pay for all temporary water service during construction. All effort must be used to conserve these services.
1. Any temporary extension of utilities or services required for the completion of the Work under this contract shall be borne by the Contractor.
- B. Contractor to provide sufficient branch lines and suitable fixtures at termination of line of adequate size to serve the needs of all trades. Locate water supply at convenient locations on site.
- C. Provide insulated housing for temporary service lines to protect against freezing when applicable.
- D. Remove temporary water lines and fixtures upon completion of work.

#### **1.06 NATURAL GAS FOR CONSTRUCTION**

- A. The use of natural gas is not available to the General Contractor during construction.

#### **1.07 TEMPORARY ELECTRICAL ENERGY AND LIGHT**

- A. The Contractor is responsible for providing (and paying for) all temporary electrical services during construction, or for service needed but not available on site. All effort must be used to conserve these services.
1. The Contractor is responsible for providing (and paying for) temporary electrical generation for either power not available at the site that is necessary for the Project at their expense or during power outages necessary during the course of the Project (i.e., electrical service change over).
  2. Any temporary extension of utilities or services required for the completion of the Work under this contract shall be borne by the Contractor.
- B. If Owner's service is interrupted for any reason, Owner is not responsible for temporary power. Contractor shall provide source of power as necessary to complete the Work.

1. If temporary service is necessary, provide main service disconnect and overcurrent protection at a convenient location.
  2. Provide temporary electrical service lines at the start of project and as work progresses.
  3. Provide portable electrical energy sources if necessary.
- C. Provide adequate power sources at convenient central locations required, with each source terminating in suitable load centers with circuit breakers or fuses. Provide distribution of all electrical power outlets to accommodate all trades and proper execution of work.
- D. Provide all temporary lights and wiring, including lamps, as required for adequate illumination to perform work and for the safety of people.
- E. Contractor to be responsible for a safe and satisfactory installation. Keep circuits properly fused at all times and remove temporary provisions when the permanent system is ready for use. No temporary wiring, devices, etc., shall be incorporated into permanent construction.
1. All temporary wiring and lighting shall comply with the requirements of the National Electric Code.
- F. Remove temporary wiring and equipment upon completion of the Work.

#### **1.08 TEMPORARY HEAT AND VENTILATION**

- A. Provide and pay for necessary temporary covering, enclosures, ventilation and / or heating to protect workers and work under contract against injury or damage by weather elements.
1. Provide and pay for heating devices and heat as required to maintain specified conditions for construction operations.
- B. Use safe effective means of heating, ventilation and / or other protection required at all times. Maintain temperatures and ventilation required for proper installation and completion of work by all trades.
- C. If the permanent heating and / or ventilation equipment is used for temporary service during construction period, it is understood that this use in no way affects the required guarantees which become effective the same time of acceptance of building by Owner. Also, if permanent equipment is used, have all used filters replaced at the end of the construction period. Refer to Division 23 Sections for further direction regarding filters and use of permanent HVAC equipment.
- D. Prior to operation of permanent equipment for temporary heating purposes, verify that installation is approved for operation, equipment is lubricated, and filters are in place. Provide and pay for operation, maintenance, and regular replacement of filters and worn or consumed parts.

- E. Maintain minimum ambient temperature of 50-degrees F in areas where construction is in progress.
- F. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

#### **1.09 HEALTH AND SANITATION**

- A. The operations of the Contractor shall be in full conformity with all the rules and regulations of boards and bodies having jurisdiction with respect to health and sanitation. Supply safe and sufficient drinking water and toilet facilities to all employees, obey and enforce all sanitary and health regulations and orders, and take precautions against the spread of infectious diseases.
- B. Provide and pay for temporary toilet facilities, while school is in session, of type acceptable to public health authorities, in quantity to meet the needs of all workmen and agents present on the project site. Locate in convenient locations and relocate as necessary as work progresses.
  - 1. Provide temporary facilities necessary due to project conditions as required.
  - 2. Facilities shall be kept clean by the Contractor.
  - 3. Remove temporary sanitary facilities upon completion of the Work.

#### **1.10 TEMPORARY STORAGE**

- A. Provide suitable storage facilities for materials delivered to site and protect materials from weather and damage.
- B. Any temporary storage of materials at site shall not interfere with or damage work of any contractor at work or the property of the Owner. If necessary, or as directed by the Architect, stored materials shall be relocated or removed.
- C. Use of a public way for storage of materials shall be permitted only if the Contractor receives approval from the applicable governing authorities.

#### **1.11 VEHICLE ACCESS**

- A. Provide and maintain temporary access into contract work areas as necessary for vehicles and equipment of all trades requiring such access. Repair any damage to the existing residential development pavement or other construction when damage results from operations under this contract.
  - 1. Owner and Contractor shall survey existing residential development paving for damage.
  - 2. Contractor to repair any damage caused during construction.
- B. Contractor shall be responsible for all traffic control at streets adjacent to project site as required when vehicles enter and leave the site. Comply with all governing City / State regulations for traffic control and access.



- C. Roads and Paved Areas: Maintain existing roads and paved areas during construction operations. Repair residential development roads and paved areas within construction limits that become damaged from construction operations.
  - 1. Grass areas beyond the area of Work shall not be used for parking. Damaged areas shall be returned to its original condition once construction is complete.
- D. Paved driveways on Owner's property and public streets and thoroughfares shall be kept clean, by cleaning daily or more often, if necessary, of earth and debris spillage from trucking involved in all construction operations. Provide heavy metal plates to cover utility trenches in driving areas as necessary.
- E. Keep mud and dirt off of surrounding roadways. Provide sweepers and water trucks as necessary to keep roadways clean.
- F. Keep dust knocked down by watering as necessary.
- G. Sweep all paved areas and run magnetic catcher to eliminate nails, screws or other metal items that can puncture tires, daily if necessary.

#### **1.12 TEMPORARY PARKING**

- A. Temporary parking facilities for construction personnel and equipment shall be confined to areas designated by the Owner. Do not park on playfields or grass areas.
- B. Parking vehicles and equipment which may be necessary outside Owner's site shall be legally provided by Contractor. The Owner assumes no responsibility for temporary parking.

#### **1.13 SIGNS**

- A. Allow no signs to be erected on the Project site or on the building structure by any subcontractor, fabricator, or material supplier, except for contract identification signs as specified and those which are required for safety, traffic control, and protection of persons and property during construction.

#### **1.14 CONSTRUCTION FENCING AND GATES**

- A. Provide temporary construction fencing to prevent public entry to the project site or contractor's storage area during construction and to protect adjacent properties from damage, and the general public from injury, by construction operations.
- B. Provide a 6'-0" high chain link fence around storage and staging areas to enclose material and operations. Equip fencing with appropriate number of personnel gates and vehicular gates of widths as required for construction vehicle passage. Gates shall be provided with locks for securing the site at the end of each day's work. Material and method of construction shall be

sufficient as to withstand daily construction operations, be highly visible and be maintained until construction has reached the point of no hazard to persons or property.

- C. Prior to start of construction, submit fencing layout to Architect for review and approval.

#### **1.15 SCAFFOLDING, LADDERS AND HOISTING FACILITIES**

- A. Contractor is responsible to provide all temporary scaffolding, ladders and hoists required during construction.
- B. If Contractor's temporary hoisting equipment is to be anchored to or supported by building structure and/or related building construction, submit layout of equipment, loads involved, anchorage proposed and other pertinent data for review by Architect and their Structural Engineer Consultant prior to installation.
- C. Remove ladders each day located on the exterior of the building to prevent access to elevated areas.

#### **1.16 RESPONSIBILITIES OF CONTRACTOR**

- A. The General Contractor shall be responsible for and shall include all costs attendant to, the provision of the following temporary facilities:
  - 1. Contractors Office.
  - 2. Sanitary facilities.
  - 3. Warning Signs (as indicated in Article 1.13 above).
  - 4. Normal use of hoisting equipment by Mechanical and Electrical Contractors. The use of hoisting equipment shall be at General Construction Contractor's discretion and subject to their approval and regulation.
  - 5. Construction fence and walkways.
- B. The Mechanical Contractor shall be responsible for, and shall include all costs attendant to, the provision of the following temporary facilities:
  - 1. Temporary office, if deemed necessary, and storage for their exclusive use. Locate as directed by General Contractor and approved by the Owner. At the end of construction, all Contractors' equipment and debris will be removed and the area will be restored to its original condition.
  - 2. Temporary water service and distribution system and maintenance thereof.
  - 3. Operation and maintenance of permanent heating system if used for temporary heat.
  - 4. Hoisting equipment for special lifts which cannot be accommodated by General Contractor's on-site equipment.
- C. The Electrical Contractor shall be responsible for, and shall include all costs attendant to, the provision of the following temporary facilities:

1. Temporary office, if deemed necessary, and storage for their exclusive use. Locate as directed by General Contractor and approved by the Owner. At the end of construction, all Contractors' equipment and debris will be removed and the area will be restored to its original condition.
  2. Temporary electrical service, lighting and distribution system and maintenance thereof. The General Contractor shall pay for the cost of any temporary electrical service (either by the electric utility or portable generator).
  3. Hoisting equipment for special lifts which cannot be accommodated by General Contractor's on-site equipment.
- D. All Contractors shall be mutually responsible for, and shall include all costs attendant to, the provision of temporary facilities specified but not specifically assigned hereinabove.

#### **1.17 WINTER CONSTRUCTION AND WEATHER PROTECTION**

- A. Protect the interior of building from water entering and seal all holes or gaps in the building envelope that will allow air to enter.
- B. Take special precautions against damage to materials stored and work installed in freezing weather.
- C. The use of anti-freeze compounds in concrete and in masonry mortars is prohibited.
- D. Throughout the progress of work maintain a daily weather record at job site, recording temperatures and precipitation.

#### **1.18 EXTERIOR ENCLOSURES**

- A. Provide temporary weather tight closure of exterior openings to accommodate acceptable working conditions and protection for products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual Specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

#### **1.19 DEBRIS CONTROL**

- A. Provide means of removing rubbish from all parts of the site and other contract areas as work progresses. Remove rubbish from site at frequent intervals to avoid large accumulation and dispose of in a legal manner.
- B. Do not burn or bury rubbish on site.
- B. Excess material, including demolished materials, excavated rock and excess building materials shall be removed from the site and disposed of legally. Owner must review excavated rock for salvage prior to removal from site.

**1.20 WATER CONTROL**

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment as required.
- B. Protect site from puddling or running water. Control all runoff and pollution in accordance with prevailing codes or regulations.
- C. Interior and exterior drains shall be kept free of clogs caused by debris from construction and shall be swept free of leaves, dirt, trash, etc., on a daily basis during construction.

**1.21 MOWING**

- A. The Owner will mow and maintain all lawn areas that are accessible outside of the construction fence (around the building).
- B. The Contractor is responsible for mowing adjacent to the building and the remaining areas not covered in Paragraph A above. Grass / weeds shall not exceed 6" in height at any time. Contractor shall do final mowing / trimming prior to Substantial Completion.

**1.22 RECYCLING**

- A. All Contractors on-site are required to recycle the following materials:
  - 1. Cardboard (boxes are to be broken down, stacked, and banded on a pallet for pickup).
  - 2. Pallets.
  - 3. Metal items.
  - 4. Concrete and masonry materials.

**PART 2 PRODUCTS (not applicable)**

**PART 3 EXECUTION**

**3.01 PROJECT COMPLETION**

- A. Contractor shall remove all temporary facilities complete upon completion of the Work.

**END OF SECTION 01 50 00**

## **SECTION 01 63 00 – SUBSTITUTIONS**

### **PART 1 GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. This Section includes administrative and procedural requirements for handling requests for substitutions made before the award of the Contract.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 01 Section "Quality Control" specifies the applicability of industry standards to products specified.
  - 2. Division 01 Section "Shop Drawings, Product Data and Samples" specifies requirements for submitting the Contractor's Construction Schedule and the Submittal Schedule.

#### **1.03 DEFINITIONS**

- A. Definitions in this Article do not change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction required by the Contract Documents proposed by the Contractor before award of the Contract are considered to be requests for substitutions.
  - 1. The following are not considered to be requests for substitutions:
    - a. Substitutions requested after award of the Contract, unless products, materials, or equipment are no longer available. Upon notice that availability is an issue, the Architect will provide direction.
    - b. Revisions to the Contract Documents requested by the Owner or Architect.
    - c. Specified options of products and construction methods included in the Contract Documents.
    - d. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

#### **1.04 SUBMITTALS**

- A. Substitution Request Submittal: Substitutions are only allowed during the bidding process.
  - 1. Submit (1) digital copy of each request for substitution for consideration.

2. Identify the product, the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers.
3. Provide complete documentation showing compliance with the requirements for substitutions, and the following information, as appropriate:
  - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate contractors that will be necessary to accommodate the proposed substitution.
  - b. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
  - c. Product Data, including Drawings and descriptions of products and fabrication and installation procedures.
  - d. Samples, where applicable or requested.
  - e. A statement indicating the substitution's effect on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
  - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
  - g. The Contractor's certification that the proposed substitution conforms to requirements in the Contract Documents in every respect and is appropriate for the applications indicated.
  - h. The Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
4. Architect's Action: If necessary, the Architect will request additional information or documentation for evaluation within one week of receipt of a request for substitution. The Architect will notify the Bidders of acceptance of the substitution via addendum.

## **PART 2 PRODUCTS**

### **2.01 SUBSTITUTIONS**

- A. Conditions: The Owner and Architect will receive and consider the Contractor's request for substitution when one or more of the following conditions are satisfied, as determined by the Architect. If the following conditions are not satisfied, the Architect will return the requests without action except to record noncompliance with these requirements.
  1. Extensive revisions to the Contract Documents are not required.
  2. Proposed changes are in keeping with the general intent of the Contract Documents.
  3. The request is timely, fully documented, and properly submitted.
  4. The specified product or method of construction cannot be provided within the Contract Time. The Architect will not consider the request if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
  5. The request is directly related to an "or-equal" clause or similar language in the Contract Documents.

6. The requested substitution offers the Owner a substantial advantage, in cost, time, energy conservation, or other considerations, after deducting additional responsibilities the Owner must assume. The Owner's additional responsibilities may include compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner, and similar considerations.
  7. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
  8. The specified product or method of construction cannot be provided in a manner that is compatible with other materials and where the Contractor certifies that the substitution will overcome the incompatibility.
  9. The specified product or method of construction cannot be coordinated with other materials and where the Contractor certifies that the proposed substitution can be coordinated.
  10. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.
  11. Where a proposed substitution involves more than one prime contractor, each contractor shall cooperate with the other contractors involved to coordinate the Work, provide uniformity and consistency, and assure compatibility of products.
- B. The Contractor's submittal and the Architect's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with the Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

**PART 3 EXECUTION** (not applicable)

**END OF SECTION 01 63 00**  
(Substitution Form attached)

**SUBSTITUTION REQUEST FORM**

To: Studio Kremer Architects

Project: BG# 25-145 | Bullitt Central Physical Science Center  
Bid Package #1: General Construction

We hereby submit for your consideration the following product instead of the specified item for the above project.

<u>Section</u>	<u>Paragraph</u>	<u>Specified Item</u>
----------------	------------------	-----------------------

_____	_____	_____
-------	-------	-------

Proposed Substitution: \_\_\_\_\_

Attach complete technical data including laboratory tests, if applicable.

Include complete information changes to Drawings and / or Specifications which proposes substitution requires for proper installation.

**Fill in Blanks Below:**

- A. Does the substitution affect dimensions shown on Drawings? \_\_\_\_\_
- B. Will the undersigned pay for changes in building design, including engineering and detailing costs caused by substitution, if any? \_\_\_\_\_
- C. What affect does substitution have on other trades? \_\_\_\_\_
- D. Differences between proposed substitution and specified item?  
\_\_\_\_\_
- E. Manufacturer's guarantees of proposed and specified items are:  
\_\_\_\_\_ Same \_\_\_\_\_ Different (explain on attachment)

The undersigned states the function, appearance and quality are equivalent or superior to the specified item.

Submitted By:

\_\_\_\_\_

Signature

Firm \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Telephone \_\_\_\_\_

For Use by Design Consultant:

Accepted

Accepted as Noted

Not Accepted

Received too Late

By: \_\_\_\_\_

Date: \_\_\_\_\_

Remarks: \_\_\_\_\_



**SECTION 01 70 00 – CONTRACT CLOSEOUT**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Work included:

- 1. Provide an orderly and efficient transfer of the completed Work to the Owner.

- B. Related work:

- 1. Documents affecting the work of this Section include, but are not necessarily limited to, the Bidding Requirements, Contract Forms, Conditions of the Contract and Division 01 Sections of this Project Manual.
  - 2. Activities relative to Contract Closeout are described in, but not necessarily limited to, Paragraph 9.8, 9.9 and 9.10 of the General Conditions.
  - 3. "Substantial Completion" is defined in Paragraph 9.8.1 of the General Conditions.

**1.03 GUARANTEE - WARRANTY**

- A. The Contractor and each Subcontractor, in accepting a Contract for the construction of their respective portion of the construction covered by these Drawings and Specifications, do hereby agree to replace and make good, without any expense to the Owner, any work or material which may be found to be defective. Deterioration due to ordinary use and wear will be excluded from this guarantee.
- B. Such guarantees shall not relieve the Contractor from any obligation assumed under any other provision of the Contract.
- C. Refer to Article 12 of the General Conditions, Uncovering and Correction of Work, and other Specification Sections requiring longer / extended warranty requirements.

**1.04 QUALITY ASSURANCE**

- A. Prior to requesting inspection by the Architect, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested inspection.

## 1.05 PROCEDURES

### A. Substantial Completion:

1. Prepare and submit the punch list required by the first sentence of Paragraph 9.8.2 of the General Conditions.
2. Within a reasonable time after receipt of the list, the Architect will inspect to determine the status of completion.
3. Should the Owner and Architect determine that the Work is not substantially complete:
  - a. The Architect will promptly notify the Contractor, in writing, giving the reasons therefore.
  - b. The Contractor shall remedy the deficiencies and notify the Architect when ready for re-inspection.
  - c. The Architect will re-inspect the Work.
4. Certificate of Occupancy shall be obtained from the Building Official prior to request of Substantial Completion.
5. When the Owner and Architect concurs that the Work is Substantially Complete:
  - a. The Architect will prepare a "Certificate of Substantial Completion" on AIA Form G704, accompanied by the Contractor's list of items to be completed or corrected, as verified by the Architect.
  - b. The Architect will submit the Certificate to the Owner and to the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

### B. Final Completion:

1. Prepare and submit the notice required by the first sentence of Paragraph 9.10.1 of the General Conditions.
2. Verify that the Work is complete including, but not necessarily limited to, the items mentioned in Paragraph 9.10.2 of the General Conditions.
3. Certify that:
  - a. Contract Documents have been reviewed.
  - b. Work has been inspected for compliance with the Contract Documents.
  - c. Work has been completed in accordance with the Contract Documents.
  - d. Equipment and systems have been tested as required and are operational.
  - e. Work is completed and ready for final inspection.
4. The Architect will make an inspection to verify status of completion.
5. Should the Architect determine that the Work is incomplete or defective:
  - a. The Architect promptly will notify the Contractor, in writing, listing the incomplete or defective work.

- b. The Contractor shall remedy the deficiencies and notify the Architect when ready for re-inspection.
  6. When the Owner and Architect determines that the Work is acceptable under the Contract Documents, request will be made to the Contractor to make closeout submittals.
- C. Closeout submittals include, but are not necessarily limited to, the following:
  1. Project Record Documents described in Division 01 Section "Project Record Documents".
  2. Operation and Maintenance data for items so listed in pertinent other Sections of this Project Manual, and for other items when so directed by the Architect.
  3. Warranties and Bonds.  
**(Note: All warranty dates are to begin on Date of Substantial Completion regardless of the shipment, or start-up, date of the material).**
  4. Keys.
  5. Spare parts and extra stock material. Contractor shall deliver all spare parts to the Project Site, with a receipt to be signed by an authorized Owner's representative.
  6. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:
    - a. Certificates of Inspection.
    - b. Certificates of Occupancy.
  7. Certificates of Insurance for products and completed operations.
  8. AIA Form G706, Contractor's Affidavit of Payment of Debts and Claims (in triplicate).
  9. AIA Form G706A, Contractor's Affidavit of Release of Liens (in triplicate).
  10. AIA Form G707, Consent of Surety to Final Payment (in triplicate).
  11. List of Subcontractors, service organizations, and principal vendors, including names, addresses and telephone numbers where they can always be reached for emergency service, including nights, weekends, and holidays.
  12. Letter stating no asbestos was used in the construction.
- D. Final adjustment of accounts:
  1. Submit a final Application and Certificate for Payment to the Architect, showing all adjustment to the Contract Sum,
  2. If so required, the Architect will prepare a final Change order showing adjustments to the Contract Sum which were not previously made by Change Orders.

#### 1.06 OPERATION AND MAINTENANCE DATA

- A. Submit (1) copy of complete volumes in final form 15-days prior to final inspection. This copy will be returned after final inspection, with Architect / Engineer comments. Revise content of documents as required prior to final submittal.

- B. Submit (3) sets prior to final inspection, bound in 8-1/2 x 11-inch format pages, three D side ring capacity expansion binders with durable plastic covers.
- C. PREPARE binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS," title of project and subject matter of binder when multiple binders are required.
- D. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- E. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, type on 24-pound white paper.
- F. Part 1: Directory, listing names, addresses and telephone numbers of Architect / Engineer, Contractor, Subcontractors, and major equipment suppliers.
- G. Part 2: Operation and maintenance instructions arranged by system and subdivided by Specification Section. For each category, identify names, addresses and telephone numbers of Subcontractors and suppliers. Identify the following:
  - 1. Significant design criteria.
  - 2. List of equipment.
  - 3. Parts list for each component, including exploded drawings or diagrams that indicate all parts.
  - 4. Operating instructions.
  - 5. Maintenance instructions for equipment and systems.
  - 6. Maintenance instruction for finishes, including recommended cleaning methods and materials and special precautions identifying detrimental agents.
- H. Part 3: Project documents and certificates, including the following:
  - 1. Shop drawings and product data.
  - 2. Air and balance reports.
  - 3. Certificates.
  - 4. Photocopies of warranties.

**1.07 INSTRUCTION**

- A. Instruct the Owner's personnel for proper operation and maintenance of systems, equipment and similar items which were provided as part of the Work.

**1.08 PUNCH LIST AND FINAL INSPECTION**

- A. The Contractor and each Subcontractor shall carefully and regularly check their Work for conformance as the Work is underway. Unsatisfactory work shall be corrected as the work progresses and not be permitted to remain and become a part of the Punch List.

- B. If, after Substantial Completion of the Work, final completion is delayed for more than 90-days, through no fault of the Owner or Architect, the Contactor shall be responsible for the Owner's costs for additional architectural services.
1. The 90-day period will begin on the day the final Punch List is provided to the General Contractor.
  2. Note that, in addition to any costs accrued for additional consultant services, a penalty of \$1,000.00 per calendar day will be applied if the Punch List is not completed during this time frame. This penalty will be charged to the General Contractor through a deductive Change Order.
  3. During the 90-day period, the Architect will make only (2) inspections to verify completion of re-inspection of Punch List items. Any additional inspections required and related administrative services will be considered additional architectural services. The Owner's costs for additional architectural services will be charged to the Contractor through an appropriate deductive Change Order.

**PART 2     PRODUCTS** (not applicable)

**PART 3     EXECUTION** (not applicable)

**END OF SECTION 01 70 00**

**SECTION 01 71 00 – CLEANING**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 DESCRIPTION OF WORK**

- A. Special cleaning for specific units of work is specified in other Sections of the Project Manual. General cleaning during the progress of work is specified in General Conditions and as temporary services in Division 01 Section, "Temporary Facilities". Provide final cleaning of the Work, consisting of cleaning each surface or unit of work to normal "clean" condition expected for a first-class building cleaning and maintenance program. Comply with manufacturer's instruction for cleaning operations. The following are examples, but not by way of limitation, of cleaning levels required.
  - 1. Remove labels which are not required as permanent labels.
  - 2. Clean transparent materials, including mirrors and window/door glass (both interior sides and exterior sides of window and door glass), to a polished condition, removing substances which are noticeable as vision-obscuring materials. Replace broken glass and damaged transparent materials.
  - 3. Clean exposed exterior and interior hard-surface finishes to a dirt-free condition, free of dust, stains, films, and similar noticeable distracting substances. Except as otherwise indicated, avoid disturbance of natural weathering of exterior surfaces. Restore reflective surfaces to original reflective condition.
  - 4. Wipe surfaces of mechanical and electrical equipment clean; remove excess lubrication and other substances.
  - 5. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes and similar spaces.
  - 6. Clean concrete floors in non-occupied spaces, broom / vacuum clean, then mop.
  - 7. Vacuum clean carpeted surfaces and similar soft surfaces.
  - 8. Clean plumbing fixtures to a sanitary condition, free of stains including those resulting from water exposure.
  - 9. Clean light fixtures and lamps to function with full efficiency.
  - 10. Clean project site (yard and grounds), including landscape development areas, of litter and foreign substances. Sweep paved areas to a broom-clean condition; remove stains, petrochemical spills and other foreign deposits. Rake grounds which are neither planted nor paved, to a smooth, even-textured surface.
  - 11. Refer to manufacturer's recommendations for final cleaning of solid vinyl tile.
  - 12. Cleaning Products:
    - a. All-purpose Cleaner (for floor cleaning and spray applications):

- 1) To be used with manual and / or machine cleaning methods. To be a low sud, easy rinse detergent. Product to be biodegradable and make a clear, soluble solution which leaves no film or residue and not stain or discolor when used at recommended proportions and must dilute in hard or soft water. Chemical composition: Concentrated liquid blend of organic detergents, solvents, water conditioners and alkaline builders with pleasant scent. Approximate pH: 9.8 +/- .3 in solution. Must be portion-packed in easy-to-handle packaging.

13. Multipurpose Degreaser (for degreasing and spray applications):

- a. To be used for heavy-duty cleaning, degreasing of floors and other difficult-to-clean surfaces. Product to be biodegradable and must dilute in hard or soft water. Chemical composition: Blend of mixed liquid quaternary ammonium chlorides; approximate pH 7.2 +/- .3 in solution. Must be portion-packed in easy-to-handle packaging.

**1.03 PEST CONTROL**

- A. Engage an experienced exterminator to make a final inspection of the Project and to rid the project of rodents, insects, and other pests.

**PART 2 PRODUCTS**

**2.01 GENERAL**

- A. Use non-staining, non-abrasive cleaning materials and accessories.
- B. Consult with manufacturer and / or installer to determine acceptable cleaning materials and methods for various materials.

**PART 3 EXECUTION**

**3.01 GENERAL**

- A. For cleaning, employ only experienced firms or individuals specializing in building cleaning and maintenance.
- B. Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site or bury debris or excess materials on Owner's property or discharge volatile or other harmful or dangerous materials into drainage systems; remove waste materials from site and dispose of in a lawful manner.

### 3.02 REMOVAL OF PROTECTION

- A. Except as otherwise indicated or requested by Architect / Engineer, remove temporary protection devices and facilities which were installed during course of the Work to protect previously complete work during remainder of construction period.

### 3.03 CLEANING AND PROTECTION

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- C. Maintain all areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
  - 1. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
  - 2. Broom and vacuum clean interior areas prior to start of surface finishing and continue consistent cleaning to eliminate dust.
  - 3. Remove waste materials, debris, and rubbish from the site periodically as needed and dispose off-site. **School dumpster(s) shall not be used.**
- D. Cleaning shall be conducted prior to the return of students / staff anytime construction occurs during times when school is in session.

### 3.05 CLEANING ABOVE CEILING (PLENUM)

- A. Upon completion of construction activities, all above ceiling spaces shall be checked and cleared of construction debris, extra material, and tools.
  - 1. The above ceiling cleaning applies to above suspended ceilings, hard surface ceilings and exposed ceilings.
- B. The cleaning scope for the equipment platforms will be limited to construction debris.

**END OF SECTION 01 71 00**



**SECTION 01 73 29 – CUTTING AND PATCHING**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 WORK INCLUDED**

- A. Each Contractor, or appropriate Subcontractor, is responsible for cutting, fitting, and patching required to complete the Work, or to:
  - 1. Make its several parts fit together properly.
  - 2. Uncover portions of the work to provide for installation of ill-timed work.
  - 3. Remove and replace defective work.
  - 4. Remove and replace work not conforming to requirements of the Contract Documents.
  - 5. Remove samples of installed work as specified for testing.
  - 6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
- B. Each Specification Section shall include cutting, patching, digging, for that trade Section, unless otherwise specified, as required for proper accommodation of work of other trade. This does not relieve Contractor from responsibility stated in Article 3.14 of the "General Conditions". Execute work with competent workmen skilled in trade required by restoration.
- C. Submit written request to the Architect / Engineer well in advance of executing cutting or alteration which affects:
  - 1. Work of the Owner or separate Contractor.
  - 2. Structural value or integrity of any element of the Project.
  - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
  - 4. Efficiency, operational life, maintenance or safety or operational elements.
  - 5. Visual qualities of sight-exposed elements.
- D. Request pursuant to paragraph C above, shall include:
  - 1. Identification of the Project.
  - 2. Description of the affected work.
  - 3. Necessity for cutting, alteration, or excavation.
  - 4. Effect on work of the Owner or any separate Contractor, or on the structural or weather-proof integrity of the Project.
  - 5. Description of proposed work:
    - a. Scope of cutting, patching, alteration, or excavation.

- b. Trades who will execute work.
  - c. Products proposed.
  - d. Extent of re-finishing.
- 6. Alternatives to cutting and patching.
- 7. Cost proposal, when applicable.
- 8. Written permission of affected separate contractors.
- E. Submit written notice to Architect / Engineer designating date and time work will be uncovered.
- F. Comply with specifications and standards for each specific product involved.
- G. Inspect in-place conditions of the Project, including elements subject to damage or to movement during cutting and patching.
- H. After uncovering work, inspect conditions affecting installation of products, or performance of work.
- I. Report unsatisfactory or questionable conditions to the Architect / Engineer in writing. Do not proceed with work until the Architect / Engineer has provided further instructions.
- J. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the work.
- K. Provide devices and methods to protect the Owner's property and other portions of the Work from damage.
- L. Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching work and maintain free from water or air infiltration.
- M. Execute cutting and demolition by methods which will prevent damage to other work and will provide proper surfaces to review installation of repairs.
- N. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- O. Employ the original installer or fabricator to perform cutting and patching for:
  - 1. Weather-exposed or moisture-resistant elements.
  - 2. Sight-exposed finished surfaces.
  - 3. Elements of the Project which are under active warranty.
- P. Execute fitting and adjustment of products to provide finished installation to comply with specified products, functions, tolerances, and finishes.

- Q. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of the Contract Documents.
- R. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces or structural elements.
- S. Refinish entire surface as necessary to provide an even finish to match adjacent finishes:
  - 1. For continuous surfaces, refinish to nearest intersection.
  - 2. For an assembly, refinish the entire unit.
- T. Contractor shall x-ray or ultrasound-scan the affected area before cutting to identify in-place utilities and conduits. Any damaged conduit or utilities shall be repaired at the Contractor's expense.

### **1.03 ALTERATION PROCEDURES**

- A. Use materials as specified in product sections of this Project Manual; match in-place products and work for patching and extending work.
- B. Close openings in exterior surfaces to protect in-place work from weather, extreme temperatures, and humidity.
- C. Remove, cut, and patch work in a manner to minimize damage and to provide a means of restoring products and finishes to original condition.
- D. Where new work abuts or aligns with in-place work, perform a smooth and even transition. Patched work shall match adjacent in-place work in texture and appearance.
- E. When finished surfaces are cut so that a smooth transition with new work is not possible, terminate in-place surfaces along a straight line at a natural line on division.

### **PART 2 PRODUCTS (not applicable)**

### **PART 3 EXECUTION (not applicable)**

**END OF SECTION 01 73 29**

**SECTION 01 78 00 – PROJECT RECORD DOCUMENTS**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Documents affecting the work of this Section include, but are not necessarily limited to the, General Conditions, Supplementary Conditions and Division 01 Sections of this Project Manual.
- B. Other requirements affecting the Project Record Documents may appear in other pertinent Section of this Project Manual.

**1.03 WORK INCLUDED**

- A. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.01 below.
- B. Upon completion of the Work, transfer the recorded changes to a set of Record Documents, as described in Article 3.02 below.

**1.04 QUALITY ASSURANCE**

- A. Delegate the responsibility for maintenance of the Record Documents to one person on the Contractor's staff, as approved by the Architect.
- B. Accuracy of Records:
  - 1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries in each page of the Specifications and each sheet of the Drawings and other Documents where such entry is required to show the change properly.
  - 2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may reasonably rely on information obtained from the approved Project Record Documents.
- C. Make entries within 24-hours after receipt of information the change has occurred.

**1.05 SUBMITTALS**

- A. Comply with pertinent provisions of Division 01 Section "Shop Drawings, Product Data & Samples".

- B. Prior to submitting request for final payment, submit the final Project Record Documents to the Architect and secure approval.

#### **1.06 RECORD DOCUMENTS**

- A. Job Set: Promptly following the receipt of the Owner's Notice to Proceed, secure from the Architect, at no charge to the Contractor, (1) complete set of the Contract Documents.

#### **PART 2 PRODUCTS (not applicable)**

#### **PART 3 EXECUTION**

##### **3.01 MAINTENANCE OF JOB SET**

- A. Immediately upon receipt of the Job Set described in Article 1.06 above, identify each of the Documents with the title "RECORD DOCUMENTS - JOB SET".
- B. Preservation:
  - 1. Do not use the Job Set for any purpose except for entry of new data and for review by the Architect.
  - 2. Maintain the Job Set at the Project Site.
- C. Making entries on the Drawings:
  - 1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.
  - 2. Date all entries.
  - 3. Call attention to the entry by a "cloud" drawn around the area or areas affected.
  - 4. In the event of overlapping changes, use different colors for overlapping changes.
- D. Make entries in all other pertinent Documents.
- E. Conversion of Schematic layouts:
  - 1. In some cases, on the Drawings, arrangement of conduits, circuits, ducts and similar items are shown schematically and are not intended to portray precise physical layout.
    - a. Final physical arrangement is determined by the Contractor, subject to the Architect's approval.
      - 1) However, design of future modifications of the facility may require accurate information as to the final physical layout of items which are shown only schematically on the Drawings.

2. Show on the Job Set of Record Documents, by dimension, accurate within 1", the centerline of each run of said items.
  - a. Clearly identify the item by accurate note such as "cast iron drain", "copper water", and the like.
  - b. Show, by symbol or note, the vertical location of the item, such as "under slab", "in ceiling", "exposed", and the like.
  - c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.
3. The Architect may waive the requirements for conversion of schematic layouts where, in the Architect's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Architect.

### **3.02 FINAL PROJECT RECORD DOCUMENTS**

- A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation and examination.
  1. Clearly indicate at each affected detail and other Drawings a full description of changes made during construction, and actual location of items described in subparagraph 3.01, E, above.
  2. Call attention to each entry by drawing a "cloud" around the area or areas affected.
  3. Make changes neatly, consistently and with the proper media to assure longevity and clear reproduction.
- B. Review and Submittal:
  1. Submit the completed set of Project Record Documents to the Architect as described in Article 1.03 above.
  2. Participate in review meetings as required.
  3. Make required changes and promptly deliver the final Project Record Documents to the Architect.

### **3.03 CHANGES SUBSEQUENT TO ACCEPTANCE**

- A. The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

**END OF SECTION 01 78 00**

**SECTION 01 79 00 - DEMONSTRATION AND TRAINING**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
  - 1. Demonstration of operation of systems, subsystems, and equipment.
  - 2. In-Person & Video Training in operation and maintenance of systems, subsystems, and equipment.
- B. Related Sections include the following:
  - 1. Divisions 02 through 33 Sections for specific requirements for demonstration and training for products in those Sections.

**1.03 SUBMITTALS**

- A. Instruction Program: Submit **two** copies of the outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

**1.04 QUALITY ASSURANCE**

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative experienced in operation and maintenance procedures and training.

## **PART 2     PRODUCTS**

### **2.01     INSTRUCTION PROGRAM**

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
1. Equipment, including projection screens.
  2. Fire-protection systems, including fire alarm and fire-extinguishing systems.
  3. HVAC systems, including air-handling equipment, air distribution systems and terminal equipment and devices.
  4. HVAC instrumentation and controls.
  5. Electrical service and distribution, including transformers, switchboards, panelboards, uninterruptible power supplies and motor controls.
  6. Lighting equipment and controls.
  7. Communication and technology systems.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating standards.
    - d. Regulatory requirements.
    - e. Equipment function.
    - f. Operating characteristics.
    - g. Limiting conditions.
    - h. Performance curves.
  2. Documentation: Review the following items in detail:
    - a. Emergency manuals.
    - b. Operations manuals.
    - c. Maintenance manuals.
    - d. Project Record Documents.
    - e. Identification systems.
    - f. Warranties and bonds.
    - g. Maintenance service agreements and similar continuing commitments.



3. Emergencies: Include the following, as applicable:
  - a. Instructions on meaning of warnings, trouble indications, and error messages.
  - b. Instructions on stopping.
  - c. Shutdown instructions for each type of emergency.
  - d. Operating instructions for conditions outside of normal operating limits.
  - e. Sequences for electric or electronic systems.
  - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
  - a. Startup procedures.
  - b. Equipment or system break-in procedures.
  - c. Routine and normal operating instructions.
  - d. Regulation and control procedures.
  - e. Control sequences.
  - f. Safety procedures.
  - g. Instructions on stopping.
  - h. Normal shutdown instructions.
  - i. Operating procedures for emergencies.
  - j. Operating procedures for system, subsystem, or equipment failure.
  - k. Seasonal and weekend operating instructions.
  - l. Required sequences for electric or electronic systems.
  - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
  - a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning
  - e. Procedures for preventive maintenance.
  - f. Procedures for routine maintenance.
  - g. Instruction on use of special tools.

8. Repairs: Include the following:

- a. Diagnosis instructions.
- b. Repair instructions.
- c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
- d. Instructions for identifying parts and components.
- e. Review of spare parts needed for operation and maintenance.

**PART 3 EXECUTION**

**3.01 INSTRUCTION**

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
- B. Scheduling: Provide instruction at mutually agreed times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
  1. Schedule training with Owner. Duration of training shall be sufficient to impart the instruction required for operation of maintenance of the subject system(s).
    - a. Owner to be involved in establishing all appropriate parties to be trained.
  2. Trainer/offeror shall get sign-off from those instructed that training was complete and sufficient to provide introductory familiarity with systems and ability to operate.
- C. As training is conducted, the session shall be videotaped. This documentation shall be provided to the Owner as part of Closeout documentation for use in training future new personnel.

**END OF SECTION 01 79 00**