



September 30, 2009

Mr. Gary Milby
Hardin County Schools
65 W.A. Jenkins Road
Elizabethtown, Kentucky 42701

Re: North Middle School
SCB Project No. 0719

Renovation to Radcliff Middle School – Phase 1
SCB Project No. 0935

Dear Gary:

Sherman Carter Barnhart will be presenting at the board meeting on Thursday, October 15, at which time we will be reporting on the construction progress of the North Middle School project. Please also distribute to the board members a copy of the attached construction progress meeting minutes, as well as a list of construction items completed within the last 30 days and work anticipated the next 30 days.

Action Item:

- 1) SCB requests that the school board make a motion to approve the Design Development documents for the Renovation to Radcliff Middle School – Phase 1 project. Approval by the school board is necessary prior to submitting documents to KDE for their Design Development approval.
- 2) SCB requests that the school board make a motion to approve a firm for the geotechnical investigation, structural analysis, and Special Inspections for the Radcliff Middle School Renovation project (letter attached).

If you have any questions or comments about this information, please feel free to contact me.

Sincerely,

Myra Vaughn AIA, LEED[®] AP
Project Architect

c: Kenny Stanfield

September 28, 2009

PROGRESS MEETING MINUTES #15

Re: North Middle School
SCB Project No. 0719

Date: September 24, 2009

Present: See attached Sign-In Sheet

Review of previous minutes

Previous meeting minutes were reviewed; there were no comments.

Schedule

1. The current estimated completion date is the week of November 8, 2009.
2. Alliance advised of the following target dates.
 - a. Completion of all classroom wing exteriors by October 9, 2009.
 - b. Final asphalt paving to be installed the week of October 19, 2009.
 - c. Substantial Completion is scheduled for the week of November 9, 2009.

Work completed to date

Refer to Alliance Corporation's September 24, 2009, Project Summary (copy attached).

Anticipated work

Refer to Alliance Corporation's September 24, 2009, Project Summary (copy attached).

Delivery dates

None at this time.

Shop drawings

None at this time.

Change Orders/ASI

1. SCB advised that Hardin County Schools (HCS) approved Change Order No. 4 on September 17, 2009. (Refer to copy of "Itemization of Change Order No. 4" attached to these minutes.)
2. SCB referred to "ASI Itemization" (copy attached to these minutes).

Pay request

Immediately following this progress meeting, SCB processed Application and Certificate for Payment No. 16 and submitted copies to the Owner.

Record drawings

John DeBrabander of Alliance Corporation is responsible for maintaining "as-built" documents throughout this project.

Daily clean-up

SCB and Alliance advised that all affected areas must be kept secure and free of excess debris. Alliance again reminded all subcontractors to maintain a clean project site, and again advised that subcontractor debris not removed when requested will be removed by Alliance at the subcontractor's expense. Alliance previously advised that food, beverages other than water, and smoking will no longer be allowed in the building.

Safety issues

Refer to "Daily clean-up".

New business

1. Owner's comments:
 - a. Gary Milby requested clarification of the following issues.
 1. *Athletic fields grass seed.* Alliance advised that additional grass seed will be applied to the athletic fields as required.
 2. *Installation of security cameras.* Simplex will further review this issue and advise HCS of a tentative date of camera installation.
 3. *Cost estimate for Owner-requested revisions to new masonry openings in Cafeteria/Kitchen.* Alliance advised that the cost estimate will be forthcoming.
 4. *Final asphalt surface with regard to iron deposits within asphalt stone mixture.* Alliance will further review this issue with the paving subcontractor.
 5. *Aluminum storefront base.* SCB, HCS and Alliance will further review this issue following this progress meeting.
 - b. Gary advised that delivery of Owner-provided furniture will be tentatively scheduled for the week of December 7, 2009.
 - c. David Wyatt expressed concern regarding the installation of acoustical ceiling tiles and the relative humidity within the building. Temporary air conditioning units were delivered and activated Friday, August 28, 2009. These units will be utilized until the new geothermal HVAC system is brought on line. Relative humidity within the "conditioned" portions of the building has averaged 65-75%. The acoustical tile manufacturer advises that their product may be installed in up to 90% relative humidity.
 - d. David advised that all geothermal lines are to be flushed prior to activation. STW further advised

that the HVAC contractor must submit written documentation regarding the procedure for flushing of the system as well as the exact date to perform this task. STW must be present when this procedure is performed.

2. Architect's comments: None at this time.
3. Consultant's comments: None at this time.
4. Contractor's/Subcontractors' comments:
 - a. John DeBrabander advised that the HBC field inspector will require that a sprinkler head be placed at the top of the elevator shaft. STW will further review this issue.
 - b. John stated that all subcontractors are to protect all finished surfaces and casework.
 - c. John further advised that all personnel are to refrain from utilizing school restrooms once installed. Anyone found violating this directive will be removed from the project site.

Next scheduled meeting

The next progress meeting will be held Thursday, October 29, 2009, at 9:30 a.m., inside the new building, exact area TBD. All persons must access the project site through the Hwy. 333 entrance.

End of meeting minutes.

Sherman Carter Barnhart PSC
 PARTNERS IN ARCHITECTURE
 100 MALLARD CREEK ROAD, SUITE 151, LOUISVILLE, KY 40207 502-721-6100 FAX 502-721-6111

SIGN-IN SHEET

Project North Middle School (Hardin County) Project No. 0719 Date SEPT 24, 2009

(IMPORTANT: PLEASE PRINT CLEARLY!)

Name: Tom R. DeBARABANDER
 Company: _____

Phone #: _____ E-mail address: _____

<u>Brian Ashley</u>	<u>SCB</u>	<u>721-6100</u>	<u>BASHLEY@SCBARCHITECTS.COM</u>
<u>BRUCE HAGGERTY</u>	<u>HCS Technology</u>	<u>769-8896</u>	<u>BRUCE.HAGGERTY@HARDIN-KY.SCHOOLS.US</u>
<u>Steve Boone</u>	<u>HCS</u>	<u>769-8962</u>	<u>Steve.Boone@hardin.ky.schoools.us</u>
<u>David Wyatt</u>	<u>HCS</u>	<u>268 1990</u>	<u>david.wyatt@hardin.ky.schoools.us</u>
<u>Joel Jensen</u>	<u>Westham Electric</u>	<u>242-9274</u>	_____
<u>Robert Deemichan</u>	<u>"</u>	<u>"</u>	_____
<u>Daniel Pail</u>	<u>Simple Gravel</u>	<u>502 817 9592</u>	<u>dpail@simplegravel.com</u>
<u>Doreen Alvers</u>	<u>Auriance Corp.</u>	<u>606-886-8748</u>	<u>doreen@allkancorporation.com</u>
<u>Gary Milby</u>	<u>HCS</u>	<u>220 - 769-8814</u>	_____
<u>Mike M'Gaughey</u>	<u>Shrovet Tatel Wilson Eng.</u>	<u>859 - 277-8177</u>	<u>MILG@STWENG.COM</u>
<u>Phil Osborne</u>	<u>Concord Roofing</u>	<u>957-6063</u>	<u>posborne@concordroofing.net</u>
<u>Dave Riddell</u>	<u>STW Engineers</u>	<u>859-277-8177</u>	<u>dave.riddell@stwenr.com</u>
<u>Eddie Pan</u>	<u>Triple H Printing</u>	<u>859-752-6687</u>	_____

Hardin County Schools

North Middle School

Vine Grove, Kentucky

Alliance Corporation Job #08-060

Project Summary – September 24th, 2009

Work completed since August 27th, 2009 :

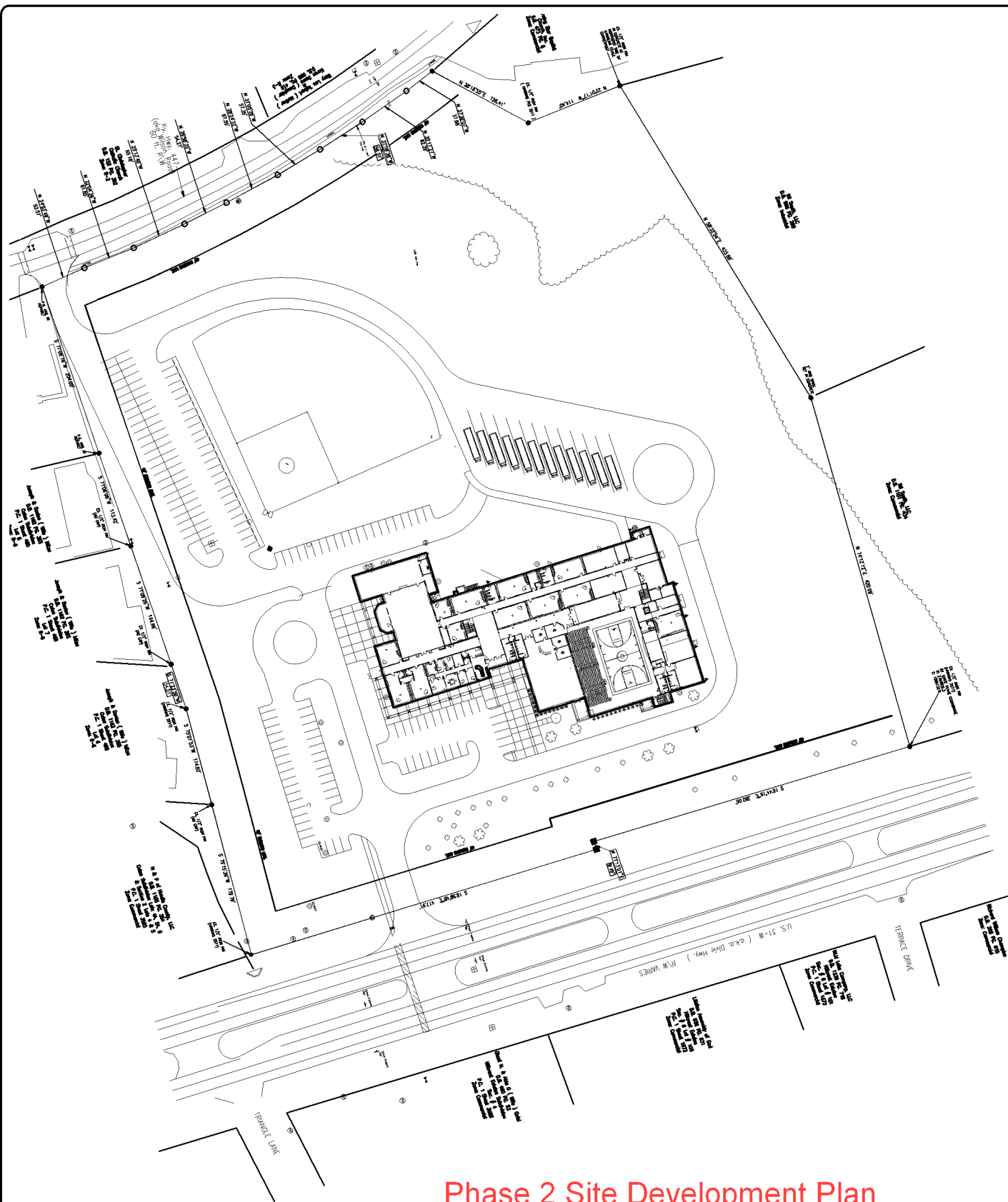
- Installed stone drive to ballfields
- Completed base course paving
- Continued hydronic water piping (90% complete)
- Continued ductwork installation(90% complete)
- Completed installation of kitchen fume hood
- Continued mechanical insulation(85% complete
- Continued installation of GRD's (40% complete)
- Continued chilled water and condensate piping(95% complete)
- Continued Geo-thermal well field (96% Complete - 151 of 157)
- Started Geo-thermal loop piping and set vault at well field (50% complete)
- Completed brick installation Area "A" (Overall brick Completion is 99 %)
- Continued setting cast stone band(99% Complete)
- Continued with metal roof installation (85% complete)
- Continued with soffit and gutter installation(75% complete)
- Continued framing metal stud framing soffits Area " A & D" (95% complete)
- Continued drywall installation – Areas "A, B, C & D" (95% complete)

- Continued acoustical ceiling grid installation – Areas “A, B, C & D” (90% complete)
- Continued with drywall tape and finish – Areas “B, C & D” (90% complete)
- Continued window installation (99% complete)
- Continued storefront installation (~~70%~~ complete) **50%**
- Continued block fill – Areas “A, B, C & D”(95% complete)
- Continued finish painting - Areas “A, B, C & D”(75% complete) – gymnasium walls and ceilings - completed
- Continued interior light installation (75% complete)
- Completed power distribution
- Completed site lighting installation
- Continued final grading (99% complete)
- Continued installation of exterior doors (85% complete)
- Completed water main and risers
- Continued installation of sprinkler heads(50% complete)
- Continued temperature controls (75% complete)
- Continued Division 17 work – direct for Owner
- Continued installation of VCT (60% complete)
- Started installation of laboratory casework (66% complete)
- Started installation of ceiling tile (50% complete)
- Started installation of toilet fixtures (10% complete)
- Started installation of lockers (75% complete)
- Started fire alarm installation(25% complete)

Anticipated work in the next 30 days:

- Complete all metal roof and soffits

- Complete brick and cast stone at Maint Bldg., seat walls, and sign
- Complete Geo-Thermal well field
- Complete finish paint Areas "A, B, C & D"
- Complete elevator inspection
- Complete duct installation
- Complete mechanical piping
- Complete installation of condensation and refrigeration lines
- Complete lights, diffusers and sprinkler heads
- Complete installation of curtain walls
- Complete final grade and installation of topsoil
- Complete installation of ceiling tile
- Continue installation of vinyl composition tile
- Install quarry tile in kitchen
- Complete installation of lab casework
- Complete installation of lockers
- Start installation of casework
- Start carpet installation
- Complete drywall all Areas
- Continue finish electrical
- Continue temperature controls
- Complete mechanical installations
- Complete balance of seeding, sod and plantings
- Complete asphalt paving



SD1.0

SHIELD

DISCUSSION

JOB NO. 0950
 DATE OCTOBER 8, 2009
 DRAWN 585
 CHECKED -
 COPYRIGHT © 2009
 SHERMAN / CARTER /
 BARNHART, PSC

Sherman Carter Barnhart PSC
ARCHITECTURE • INTERIORS • LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING
2405 HARRISBURG ROAD • LEXINGTON, KY 40504-3329 • PHONE: 858.224.1351 • FAX: 858.224.8446

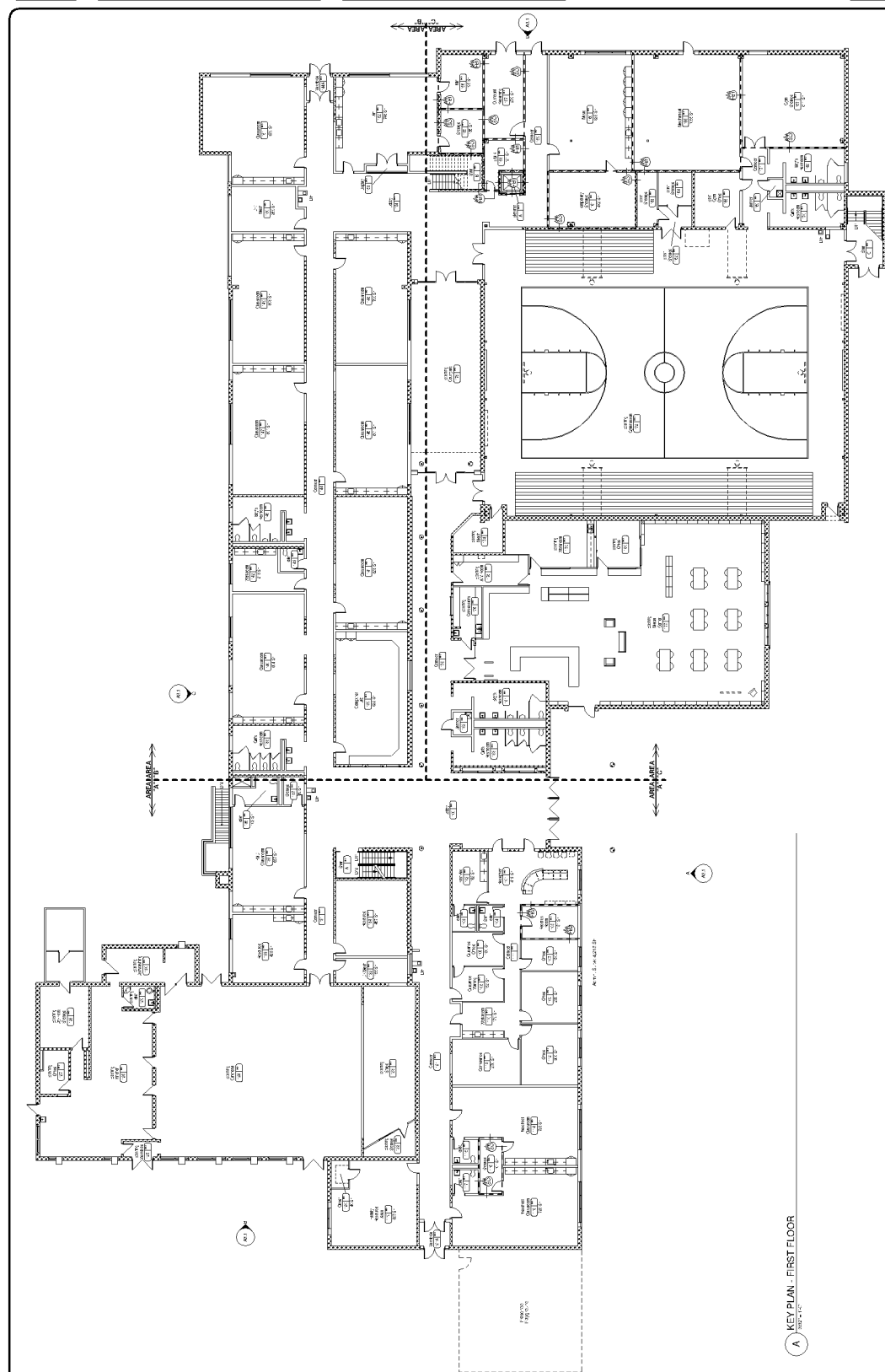
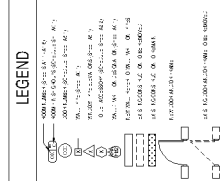
PRELIMINARY

OVERALL SITE MASTER PLAN

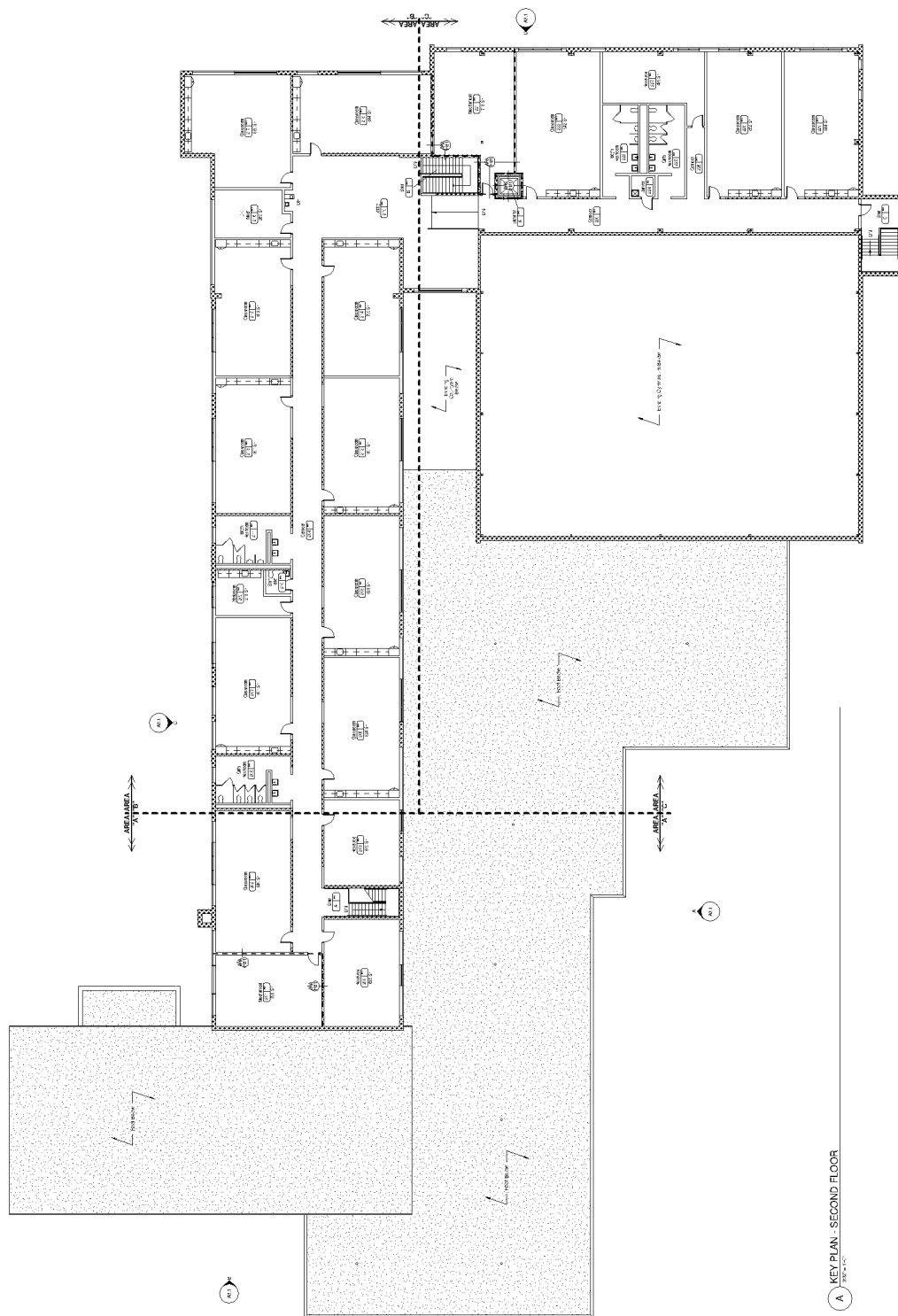
RENOVATION TO RADCLIFF MIDDLE SCHOOL - PHASE 1

HARDIN COUNTY BOARD OF EDUCATION
RADCLIFF, KENTUCKY



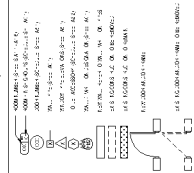


KEY PLAN - FIRST FLOOR



KEY PLAN - SECOND FLOOR
3/27/15

LEGEND





September 30, 2009

Mr. Gary Milby
Hardin County Public Schools
65 W.A. Jenkins Road
Elizabethtown, Kentucky 42701

Re: Renovation to Radcliff Middle School – Phase 1
Geotechnical Investigation, Structural Analysis, and Special Inspections
SCB Project No. 0935

Dear Gary:

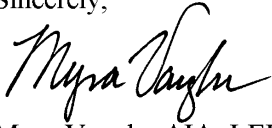
We have received proposals for the Geotechnical investigation, structural analysis, and Special Inspections testing from Qore Property Sciences, American Engineers, Asher Engineering, and Vector Engineers. The Special Inspections testing required by the Kentucky Building Code will consist of Steel Fabricators, Steel, Concrete, Masonry, and Soils. The proposed estimates are as follows:

<u>Name</u>	<u>Geotech/Structural Analysis</u>	<u>Special Inspections</u>
Qore	\$6,500.00	.42% of total construction cost
American Engineers	\$4,265.00	.2255% of total construction cost
Asher Engineering	\$3,500.00	.36% of total construction cost (+\$1,000 for lead and \$500 for asbestos)
Vector Engineers	\$10,600.00	.9153% of total construction cost
<i>Vector (Alternate)</i>	<i>\$8,700.00</i>	<i>.8837% of total construction cost</i>

Sherman Carter Barnhart has reviewed the proposals and recommends that the school board award these services to *American Engineers* since Sherman Carter Barnhart has experience with the firm and due to the lowest proposed percentage for the Special Inspections testing. Typical percentage costs for Special Inspections testing range from .5%-.8% of total construction cost. The percentage outlined in the proposal will be a lump sum “not-to-exceed” amount.

Should you have any questions, feel free to contact our office.

Sincerely,

A handwritten signature in black ink, reading "Myra Vaughn". The signature is fluid and cursive, with the first name "Myra" and last name "Vaughn" clearly distinguishable.

Myra Vaughn AIA, LEED[®] AP
Project Architect

c: Supt. Johnston, Kenny Stanfield, Ben Sorrell, Sarah Sammons



AMERICAN ENGINEERS, INC.

PROFESSIONAL ENGINEERING

65 Aberdeen Drive
Glasgow, KY 42141
Office (270) 651- 7220
Fax (270) 651- 3246

Fee form with breakout for geotechnical investigation and report

Geotechnical services, report, special inspections and
quality assurance testing services proposal
(list to 4 decimal places; ie: .0075%)

0.2255 %

I. Geotechnical Investigation and Report:

\$ 4,265

Additional cost breakout of special inspections and quality assurance testing will be required after construction project is bid, awarded and detailed construction schedule is provided by General Contractor.

ASHER, INC.

Environmental & Engineering Consulting

September 16, 2009

Hardin County Schools
C/o: Mr. Ben Sorrell, LEED AP
Sherman Carter Barnhart, PSC
2405 Harrodsburg Road
Lexington, Kentucky 40504

RE: Proposal for Geotechnical Services, Special Inspections, and Quality Assurance Testing
Radcliff Middle School Renovations
Radcliff, Kentucky

Dear Mr. Sorrell,

Asher, Inc., is pleased to present the owner with this proposal for Geotechnical Engineering Consulting, Special Inspections, and Quality Assurance Testing on the Radcliff Middle School Renovations. Our subsurface exploration will be conducted in accordance with the Request for Proposal received from SCB by email on September 15, 2009.

The geotechnical study would explore the subsurface conditions in the proposed development area in order to provide soil-related recommendations for design and construction of the proposed renovation and pavement repair and/or replacement sections.

As requested, we propose to conduct at (12) test borings within the proposed development area to a depth of 20 ft. or auger refusal. We will core 5 ft. of bedrock in up to two of the borings if encountered within the initial 10 ft. as measured from the existing ground surface. In addition, we propose to conduct (5) rock soundings in areas where shallow rock is encountered or anticipated. A geotechnical engineer would observe the subsurface exploration and would classify the soil samples.

As a contingency, we have provided the below unit rate prices in the event that field conditions dictate that rock cores, rock soundings, and/or soil borings are not necessary and/ or in the event that additional services are needed.

Rock Coring	\$25.00 per ft.
Rock Coring Setup	\$50.00 each
Soil Test Borings	\$10.00 per ft.
Rock Soundings	\$5.00 per ft.

No additional work will be performed without authorization from the owner and/or architect.

Mr. Ben Sorrell
September 16, 2009
Page Two

Laboratory tests would be conducted on select samples to determine the classification and engineering properties of the soils. A report would be prepared including the following information:

- Subsurface conditions encountered
- Recommendations for foundation system
- Allowable soil bearing capacity and anticipated settlement
- Recommendations for soil and groundwater related construction concerns

We will conduct a general reconnaissance of the existing building and pavement areas to assess the general performance of the existing foundations, slabs, and pavements. We will identify any settlement issues or other types of distress and evaluate the potential for similar problems with the proposed new construction. We will provide recommendations to avoid such problems and will evaluate the impact of the new construction on the existing foundation system. We will also investigate water infiltration in the basement area and provide potential solutions.

We propose to conduct the Geotechnical Engineering Study for the lump sum cost of **\$3,500.00**. The final report would be completed within two weeks of verbal notice to proceed.

In addition to the Geotechnical Engineering Study Asher is also submitting a proposal for providing Special Inspections Services and Quality Assurance Testing for the proposed Radcliff Middle School Renovations in Radcliff, Kentucky. Our services will be based on the 2007 Kentucky Building Code (KBC) section 1704 on this project.

Asher is currently working as the special inspector on several schools around the Commonwealth including Anderson County Middle School and High School Annex, and the Flaherty Primary Center.

Asher, Inc. is experienced in special inspections and has performed Special Inspections and Materials Testing Services on many schools, commercial facilities, and government facilities throughout the Commonwealth of Kentucky. All inspection reports will be reviewed by a Registered Engineer at no additional charge. Furthermore, Asher charges no clerical time for typing or distribution of reports. A special inspections final report letter will be submitted upon project completion.

Based on our experience with other Judicial Centers we propose a lump sum price of **\$18,000.00** for the Special Inspections and Quality Assurance Testing for the above referenced project.

Our total estimate based on a percentage fee will be **0.36%** of the Estimated Construction Value of the Total Project (\$6,020,000.00).

Mr. Ben Sorrell
September 16, 2009
Page Three

Alternatives


In addition to our above proposal, we can provide an asbestos survey of the existing building for the lump sum price of **\$500.00**.

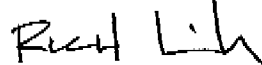
Due to the age of the existing building lead-based paint may be present. We can perform a lead-based paint survey for the lump sum price of **\$1,000.00**.

If concrete core samples are warranted inside the existing school the following unit rate prices should be implemented:

Concrete Core Technician	\$32.00 / IIR
Concrete Core Laborer	\$25.00 / HR
Concrete Core Sample	\$50.00 / SAMPLE
(Coring, Transporting, Bracking)	

Sincerely,


Jacob D. Brown, P.E.
Project Engineer



Richard A. Linker, P.E.
President



GENERAL INFORMATION

This request for proposal is for geotechnical services, special inspections and quality assurance testing for Hardin County Schools. The selected geotechnical engineer should understand that their contract will be with Hardin County Schools, not with Sherman Carter Barnhart. Hardin County Schools will be responsible for payment for any and all services that the geotechnical engineer may provide on this project.

PROJECT DESCRIPTION

The project will be separated into two phases. The existing Radcliff Middle School will be renovated into a 500 student elementary school. All common areas such as Media Center, Administrative Area, Cafeteria, Kitchen, and Gymnasium are currently or will be sized to accommodate the total future capacity of 600 students.

Phase 1 renovation will include architectural, structural, mechanical, electrical, and plumbing renovation of all classrooms, administrative area, preschool classrooms, special education classroom, art room, music room, restrooms, stairs, elevator, and mechanical rooms. The scope of work will also include limited site utilities work, partial roof replacement and new exterior windows.

Phase 2 renovation will address architectural, structural, mechanical, electrical, and plumbing renovation in the cafeteria, kitchen, media center, and gymnasium. The exterior façade/aesthetics will be addressed as well as and site work improvements.

Please see attached files for the existing building analysis.

SCOPE OF WORK

Proposal shall include the following:

Geotechnical Investigation and Report

Full geotechnical investigation including all necessary borings, test pits and report for bid preparation construction documents which shall include but not limited to earthwork recommendations, foundation design recommendations, floor slab design recommendations, allowable bearing pressure, rigid, flexible and permeable pavement design, seismic information including seismic site classification, lateral earth pressure recommendations, sinkhole repair recommendations and all other requirements indicated in this proposal. Geotechnical engineer shall attend coordination/design meetings on an as needed basis to help minimize cost impacts related to subsurface conditions. Meetings will occur in either our Lexington or Louisville office or on the project site as required. Required Geotechnical Testing, Analysis, Engineering and Reporting shall include (but may not be limited to) the following:

All work performed by the geotechnical engineer shall be in accordance with the 2007 Kentucky Building Code (KBC) as well as all other applicable codes and standards.

The proposal shall be based on a boring depth of twenty (20') for each boring. Actual boring depths shall be determined as specified herein.

The geotechnical engineer shall determine actual boring locations and depths based on the geotechnical engineer's knowledge of the local geology, conditions encountered in the field, and the anticipated building loads indicated herein. (Assume maximum column load is less than 20kips and maximum wall load is less than 5 kips per foot.)

The geotechnical engineer shall determine the rock core locations based on the project requirements, the geotechnical engineer's knowledge of the local geology, and conditions encountered in the field.

Monitor ground water (if encountered) and record the depth in each boring after 24 hours.

Classify all samples obtained during field exploration according to the Unified Soil Classification System

Provide recommendations for the appropriate foundation system for this project with an evaluation of any viable alternatives. The report shall provide all pertinent criteria and parameters for the proper design of the recommended foundation system(s) subjected to vertical and horizontal loads.

Provide design data for concrete floor slabs on grade. Include recommendations for granular slab base material and instructions for the placement and compaction of same. Include recommendations for slab sub-grade preparation.

Provide design data for flexible, rigid and permeable pavements. Include recommendations for granular base material and instructions for the placement and compaction of same. Include recommendations for pavement sub-grade preparation.

The report shall also provide information on required site preparation (including any necessary rock removal) along with recommendations for structural fill. The report shall address the suitability of on-site materials for use as structural fill, site grading, or general backfill material.

The report shall contain criteria and data for the design of earth retaining structures. Include active, passive and at-rest earth pressure design parameters. Coefficients shall be given for granular backfill and for native soil backfill (if appropriate) assuming drained and un-drained conditions.

Define the Site Classification for use in Seismic Design in accordance with the requirements of Chapter 16 of the 2007 Kentucky Building Code (reference KBC Table 1615.1.1.1).

Provide an evaluation of the overall stability of cut, fill and natural slopes if applicable.

The proposal shall include all Field and Laboratory Tests necessary to provide accurate recommendations and design parameters in the geotechnical report. The tests to be performed should include (but not be limited to) the following.

- Natural Moisture Content
- Plastic and Liquid (Atterberg) Limits

Page 3

Swell Tests (if necessary)
 Unconfined Compression Tests
 Routine Soils Classification Tests
 Standard Proctor Tests
 California Bearing Ratio (CBR)
 Infiltration Test (if necessary)

The geotechnical engineer shall conduct a general reconnaissance of the existing building to assess the general performance of existing foundations. Identify problems associated with settlement (e.g. cracks in the exterior and interior masonry, sticking doors and windows, cracks in slabs-on-grade not related to shrinkage, etc.) or other types of distress. Interview school staff to identify areas of concern not discovered during reconnaissance. Evaluate the potential for similar problems in new construction and provide recommendations to avoid such problems. Evaluate the impact of new construction on existing foundation system. Investigate water infiltration in basement and provide potential solutions. Additional services may be necessitated by actual site conditions. As a contingency, please provide unit prices for soil borings, rock coring and other associated testing.

Rock may be encountered at shallow depths. To determine the quality and character of the rock, assume that in-situ testing will include the number of rock cores listed below advanced to a depth of five feet (5') into the rock.

Minimum number of borings to rock:	12
Minimum number of rock cores (5' depth into solid rock):	2
Minimum number of rock soundings:	5

Additional services may be necessitated by actual site conditions. As a contingency, please provide unit prices for soil borings, rock coring, rock soundings, test pits and other associated testing. In the event that field conditions dictate that additional or fewer rock cores, borings, soundings or test pits are required, the fee will be adjusted based on unit prices.

Special inspections and quality assurance testing

Special inspections, quality assurance testing and observation for the entire project. Special inspections includes all testing required by Kentucky Building Code. Quality assurance includes all other testing including but not limited to concrete breaks, proofrolling for slab on grade and pavements and observation of earthwork and backfill operations for foundations and utilities installation. Amount of periodic and continuous testing will be determined based on specific project schedule, which will be developed after the project is bid.

Special Inspections and Quality Assurance General Information

Construction Type:	Load bearing masonry and steel structure
Approximate Building Square Footage:	75,000 s.f. Total
Number of stories	2 (and lower level Mech. Rm.)
Anticipated Building Loads:	Assume maximum column load is less than 20kips and maximum wall load is less than 5 kips per foot.
Approximate Schedule:	January 2010 to August 2010

Page 4

Approximate Construction Value of Total Project: \$6,020,000.00

QUALIFICATIONS

Qualified geotechnical and testing firms shall include staff on the project who hold NICET and ICC certification. A licensed Professional Engineer specializing in the field of geotechnical engineering shall supervise the investigation and report and shall be the geotechnical engineer of record for special inspections. Qualified firms shall have in house soils testing lab.

The geotechnical engineering firm for this project will follow all guidelines of the American Society of Foundation Engineers (ASFE) in performing this work.

The geotechnical engineer for this project will be familiar with local geology and soil conditions.

The geotechnical engineering firm will be required to carry professional liability insurance in the following minimum amounts:

Projects \$1,000,000, or less	\$500,000 per claim and \$1,000,000 aggregate per annum
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Projects exceeding \$1,000,000	\$1,000,000 per claim and \$2,000,000 aggregate per annum.
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A Certificate of Insurance for Errors and Omissions shall be included in the Geotechnical Report. The certificate should name Hardin County Schools as the "Certificate Holder".

PERCENTAGE BASED FEE

Proposals will be evaluated based on a not to exceed percentage of construction value fee. This fee shall include the cost of the investigation, report with design recommendations and special inspections and testing and all work defined in the scope of work above. Special project conditions or additional services shall be clearly identified by the testing agency and noted in proposal. If the geotechnical engineer recommends services not specifically requested above, please present those services as an "add/alternate" in your submittal. As included in the percentage fee, provide separate breakout value for geotechnical investigation and report. This breakout value / amount provided will represent payment amount required for completion of geotechnical investigation and report.

List percentage based fee and requested breakout on attached fee form.

Proposals shall be submitted to Sherman Carter Barnhart by 5:00 p.m 7 days from the date on this proposal. The selected firm will be notified within two weeks after the due date.

Fee form with breakout for geotechnical investigation and report

Geotechnical services, special inspections and
quality assurance testing services proposal
(list to 4 decimal places; i.e. .0075%)

0.36 %

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I. Geotechnical Investigation and Report:

\$ 3,500.00

Additional cost breakout of special inspections and quality assurance testing will be required after construction project is bid, awarded and detailed construction schedule is provided by General Contractor.

September 24, 2009

Hardin County Schools
C/O Ben Sorrell
Sherman/Carter/Barnhart Architects
2405 Harrodsburg Rd
Lexington, KY 40504

Subject: Geotechnical Site Characterization,
& Building Code Special Inspections and Materials Testing Proposal
Renovation to Radcliff Middle School
Radcliff, Kentucky
Vector Proposal 09-248 / CSI Proposal 1113

Vector Engineers, Inc., and Consulting Services Incorporated of Kentucky (CSI), both Kentucky owned and operated firms, are pleased to provide a joint venture proposal to you for providing Geotechnical engineering and Kentucky Building Code (KBC) Special Inspection and material testing services.


The team of Vector and CSI has worked together for over 13 years and is capable of helping to make your project a success by meeting your anticipated project goals. Mr. Robert Folsom, P.E. (Vector) and Mr. Darrin E. Croucher, E.I.T., S.I. (CSI) will be your project team on the project from Geotechnical and KBC Special Inspections.

Table 1 Summary of Proposed Fees

Item	Scope of Services	
	RFP	Alternative
Estimated Construction Value		\$6,020,000
Geotechnical Investigation and Report Fee	\$10,600	\$8,700
Special Inspections & Quality Assurance Testing*		\$44,500
Total Geotechnical & Testing Service (as percentage of Construction Fees)	0.9153%	0.8837%
* Additional fee breakout of special inspections and quality assurance testing will be provided after construction project is awarded and detailed construction schedule is provided by general contractor.		

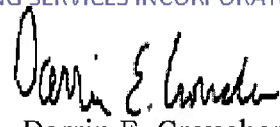
Thank you for considering the team of Vector Engineering and CSI for your project.

Sincerely,
VECTOR ENGINEER, INC.



W. Robert Folsom, PE
Senior Engineer

CONSULTING SERVICES INCORPORATED OF KENTUCKY

Darrin E. Croucher, E.I.T., S.I.
Project Engineer -- CFO

Attachments: Proposals



VECTOR ENGINEERS, INC

CIVIL ENGINEERS • GEOTECHNICAL ENGINEERS
CONSTRUCTION MANAGERS • LAND SURVEYORS

September 24, 2009

Hardin County Schools
C/O Ben Sorrell
Sherman/Carter/Barnhart Architects
2405 Harrodsburg Rd
Lexington, KY 40504
bsorrell@scb.ky

Subject: Proposal for a Geotechnical Site Characterization
Renovation to Radcliff Middle School
Radcliff, Kentucky
VEI Proposal 09-248

Vector Engineers, Inc. (Vector) is pleased to provide you with this proposal to conduct a geotechnical Site Characterization to support the renovation to the Radcliff Middle School. This proposal outlines our understanding of the project, our proposed scope of services, our schedule and fee estimate.

Project Description

Project information has been provided through the request for proposal (RFP) by Mr. Ben Sorrell with Sherman Carter Barnhart Architects. We have been supplied with the following documents with the RFP:

- Set of four drawings showing first and second floor plans
- Plat of Boundary, Topographical and Site Survey, Prepared by Engineering Design Group, Inc. July 2009
- *Radcliff Middle School – Architectural Evaluation Summary*, dated August 6, 2009
- *Radcliff Middle School – Electrical, Mechanical, and Plumbing Evaluation Summary*, dated August 6, 2009

We understand that Hardin County Schools plan to renovate/convert the existing middle school into a new elementary. Extensive interior renovations are proposed which are outlined in the attached documents. Only limited new construction is proposed. Our understanding is that the only improvements which will require geotechnical recommendations are:

- Stair replacement
- Ramp replacement
- Expand the kitchen and cafeteria
- Construct a new school entry with a new administrative area
- Construct two preschool classrooms toward front of building
- New bus canopies

The project is in the formative stages and the design information is preliminary and limited. We have based our proposed scope of exploration and fee estimate on the following structural and grading information. Structural loads will be primarily supported with load bearing masonry walls and a few steel columns. The maximum wall load is 5 kips per linear foot and the maximum column load is 20 kips. Settlement tolerances for the building are assumed to be $\frac{3}{4}$ inches differential between columns and 1 inch total.

Since the site was previously developed, we have assumed less than 1 foot of cut or fill will be required to achieve final grade. We assume cut or fill slope will be flatter than 3 horizontal to 1 vertical (3H:1V). We understand there will be no new below grade structures or retaining walls.

Vector Engineers Geotechnical Experience

Vector Engineers geotechnical group has extensive geotechnical engineering experience lead by proven engineers. The geotechnical group of Vector Engineers is led by Dr. Wayne Kareem, PE, PG. For over two decades Dr. Kareem has been consulting on a wide variety of geotechnical projects throughout Kentucky and southern Ohio. Prior to founding Vector Engineers, Dr. Kareem opened the Kentucky offices of QORE, Inc. and served as their regional manager and Vice President. Dr. Kareem has served as an adjunct professor of geotechnical engineering at the University of Kentucky and an advisor to Western Kentucky Civil Engineering Department.

Dr. Kareem is assisted by Mr. W. Robert Folsom, PE. During Mr. Folsom's 25 years of engineering consulting, he has solved a variety of engineering problems including geotechnical, materials, and structural. Mr. Folsom is skilled in shallow and deep

foundation analyses, slope stability, settlement analysis, pavement evaluations, and structural analysis. Mr. Folsom has also consulted on numerous construction related geotechnical issues.

Field Exploration Requested by the RFP

We have provided a fee estimate for the scope of services outlined in the request for proposal. We understand the RFP requested twelve soil test borings to rock which we have assumed to be less than 20 feet. Our fee estimate includes a total of 240 feet of soil drilling footage. We will core 5 feet of rock in two of the borings. In addition, we will perform 5 rock soundings.

Vector Engineers' Proposed Field Exploration

The proposed exploration and related analyses is based on our experience with subsurface conditions in central Kentucky area. We proposed to drill nine soil test borings within or rear the proposed buildings expansions to depths of 15 and 20 feet or shallower if refusal¹. One of the nine building borings will be advanced to bedrock for site seismic classification in accordance with the 2007 Kentucky Building Code (seismic boring). We have assumed bedrock will be encountered less than 25 feet deep. In addition, we propose five soil borings in proposed new pavement area to depth of 5 feet. Our fee estimate includes a total of 170 feet of soil drilling footage over twelve borings. We do not propose to sample the refusal material.

Site Reconnaissance

We propose to perform a site reconnaissance while being escorted by school's maintenance person. We will look for signs of settlements, while interviewing the maintenance personnel. We will investigate the reported water infiltration in the basement to form an opinion on the probable source of the water and possible solutions. An expansion of our proposed field exploration plan may be needed depending on our findings.

¹ Or shallower if refusal means if the drilling augers are stopped (refused) from advancing, then the boring will be terminated.

Laboratory Testing

After soil drilling exploration is completed, our geotechnical professional will examine the recovered samples and visually classify them according to the Unified Soil Classification System (USCS) (ASTM D-2488). On the basis of the anticipated conditions, we propose to perform the following laboratory tests:

- Natural moisture contents
- Atterberg Limits or Grain Size Analysis
- Unconfined Compression Tests
- Standard Proctor
- California Bearing Ratio (CBR)

Analyses

After the field exploration and laboratory testing is complete, we will perform numerical analyses for the following:

- Bearing capacity
- Site Seismic Classification
- Pavement thicknesses based on traffic loading to be provided to us

We will qualitatively evaluate cut and fill slopes and estimate settlements based on our experience. However, since the site does not appear to have any tall or steep cuts or fill slopes, we have not included a detailed slope stability analysis. At the time of this proposal, we are unaware of any new construction that includes below grade structures or retaining walls; therefore, we have not included a fee for estimating lateral earth pressures.

If poor soil conditions are encountered additional analyses may be required. We have not included the laboratory testing and analysis for a detailed settlement analysis, soil liquefaction, or detailed site seismic analysis. If conditions warrant any of these analyses, we will prepare an estimate and seek written authorization.

Deliverables

After our analyses are complete, we will issue a written report describing the exploration and outlining our recommendations. The report will include the following

- 1) A discussion of site surface conditions
- 2) A summary of our site reconnaissance and water infiltration observations. We will also include a discussion of how the past performance of the building may influence future construction and possible solutions for the water infiltration.

- 3) A discussion of subsurface conditions encountered as well as a discussion of the published geologic conditions at the site.
- 4) A summary field and laboratory testing results. Boring logs and laboratory tests will be summarized in the report and listed in the appendix.
- 5) A discussion of specific geotechnical conditions which may affect the design or construction of the project.
- 6) Recommendations for site preparation and construction of compacted fills.
- 7) Recommended general design and construction criteria for the project foundations and floor slabs.
- 8) A recommendation for seismic site class according to the 2007 Kentucky Building Code (KBC).
- 9) A brief review of our test procedures and the results of all testing conducted.

If the client elects to perform the second phase of drilling, we will issue an addendum to the previous report with our revised recommendations.

Meeting Attendance

The RFP requested that Geotechnical engineer shall attend coordination/design meeting on an as needed basis. We believe the geotechnical engineer can provide a valuable contribution to the design team at specific meetings. Often, the design team meeting together increases communications which can lead to faster solutions, minimize construction costs, and avoid potential structural damage due to geotechnical risks. We have included 12 hours for a senior geotechnical engineer to travel to and attend meetings in our fee estimate.

Schedule

Based upon our present schedule, we can begin this project within two to three working days after we receive written authorization. We expect the excavation and sampling to take four to five working days for the RFP drilling and two days for the Vector Phase I scope. We expect the entire project to take approximately four weeks to complete from the time of written authorization to proceed. We can normally provide preliminary verbal recommendations soon after the exploration has been completed.

Compensation

On the basis of the workscope described previously, we propose a **lump sum contract**:

RFP Proposed Scope of Services\$10,600.

or

Vector Proposed Scope of Services\$8,700.

Our fee estimate is based on the quantities and rates listed in the attachments. This proposal assumes the boring locations are accessible to a truck-mounted drill rig. Delay time associated with site problems or bulldozer rental for providing access to the boring locations has not been included in the cost of this proposal and will be borne by the client. Difficult moving (down) time may be charged at a rate of \$250 per hour.

Our fee reflects our anticipation that the subsurface conditions are relatively uniform and conducive to conventional shallow spread footings. If deep foundations are indicated by the conditions then we will need to modify our workscope and adjust our fee accordingly.

Authorization

To authorize us to proceed with the proposed exploration, please indicate the selected scope of services, sign the attached Proposal Acceptance Sheet and return one complete original of the proposal to us.

Qualifications

We will contact the local utility locators prior to mobilizing to the site. The utility location services will only mark public utility lines; therefore, we will need assistance in locating private lines or underground structures, and we request that the Client provide us with any drawings depicting on-site utilities. Vector Engineers, Inc. cannot be held responsible for damage to utility lines or loss of service if utility locations are not made known to us or are mislocated by others.

We assume we will have permission to work on the site with our equipment and personnel. The equipment will leave some areas disturbed. We will try to limit site disturbance, however, our fee does not include restoring the site to its original

condition. We will backfill the borings with the auger cuttings, however, some settlement of the backfilled material may occur.

Our services do not include the determination the presence, delineation or evaluation of wetlands. Our personnel have not been trained to recognize wetland areas. Thus, we accept no responsibility for damage to areas classified as wetlands that are not made known to us prior to our entry onto the site.

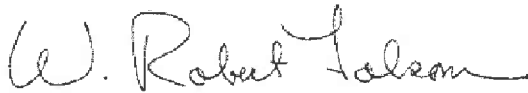
We should be informed of any possible contamination of the soil, bedrock or groundwater on the site prior to drilling to prevent spreading of the contamination. If contaminated soil, or groundwater is encountered during drilling, it is possible that the contamination may be spread to other soil zones or aquifers that were not previously contaminated. Because it is impossible to eliminate the risk of encountering existing contamination during drilling and because the geotechnical exploration is an essential aspect of the services that we are providing, our firm is not responsible for any claim which may arise as a result of contamination allegedly caused by the geotechnical exploration.

Valediction

We appreciate your consideration of Vector for this work. We look forward to working with you on this and future projects.

Yours truly,

VECTOR ENGINEERS, INC.



W. Robert Folsom, PE
Geotechnical Engineer

Attachments: Fee Estimate: Request for Proposal Scope of Services
Fee Estimate: Vector Proposed Phase I (Drilling) Scope of Services
Fee Estimate: Vector Phase II, Confirmation Test Pits after Bank
Demolition
Drilling Fee Schedule
Laboratory Fee Schedule
Staff and Expenses Fee Schedule
Terms and Conditions



**09-248 Renovations to Radcliff Middle School
Hardin County Schools**

Fee Estimate: Request for Proposal Scope of Services

Code	Description	#	@	Quantity	Unit	Unit Cost	Total
Field Exploration							
2002	Mobilization/demobilization of drilling equipment			1	per rig	\$ 500.00	\$ 500.00
2013	Soil Borings for Judicial Center	12	20	240	foot	\$ 12.00	\$ 2,880.00
2013	Soil Borings	0	0	0	foot	\$ 12.00	\$ -
2013	Soil Borings	0	0	0	foot	\$ 12.00	\$ -
	<i>Total Soil Drilling Footage</i>			240			
2041	Rock Coring	2	5	10	foot	\$ 30.00	\$ 300.00
2041		0	0	0	foot	\$ 30.00	\$ -
2041		0	0	0	foot	\$ 30.00	\$ -
	<i>Total Rock Coring Footage</i>			10			
2040	Rock coring setup charge			2	each	\$ 120.00	\$ 240.00
2080	Hauling water by drill crew			1	hour	\$ 150.00	\$ 150.00
2120	Backhoe with operator (4 hour minimum)			0	hour	\$ 90.00	\$ -
2031	Bulk bag samples			1	each	\$ 30.00	\$ 30.00
2032	Undisturbed sample, Shelby Tube			2	attempt	\$ 50.00	\$ 100.00
2202	Drill Crew, Per diem, per 2 or 3-man crew			2	day	\$ 150.00	\$ 300.00
	Field Exploration Subtotal						\$ 4,500.00

Engineering Supervision of Drilling							
Sr. Eng	Planing Exploration & Coordination of Drilling			1.5	hour	\$ 90.00	\$ 135.00
Staff	Engineering Supervision of Drilling			20.0	hour	\$ 65.00	\$ 1,300.00
Miles	Mileage (round trip)	3	90	270.0	mile	\$ 0.75	\$ 202.50
eng diem	Engineering Per Diem			0	day	\$ 110.00	\$ -
	Field Supplies			1	lump	\$ 50.00	\$ 50.00
	Engineering Supervision of Drilling Subtotal						\$ 1,687.50

Laboratory Testing							
3100	Natural soil moisture content			10	each	\$ 10.00	\$ 100.00
3003	Atterberg Limits			2	each	\$ 65.00	\$ 130.00
3404	Unconfined compressive strength, split-spoon sample			4	each	\$ 10.00	\$ 40.00
3604	California Bearing Ratio (CBR), with standard Proctor			1	each	\$ 400.00	\$ 400.00
3501	Unconfined compressive strength of intact rock core			2	each	\$ 75.00	\$ 150.00
3301	Permeability test, flexible wall			0	each	\$ 400.00	\$ -
	Laboratory Testing Subtotal						\$ 820.00

Engineering							
Sr. Eng	Project setup, project management			2.0	hour	\$ 90.00	\$ 180.00
Sr. Eng	Soil classification, laboratory and drafting assignments			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Reconnaissance of Building & Pavements			4.0	hour	\$ 90.00	\$ 360.00
Sr. Eng	Lateral Earth Pressure Coefficients			0.0	hour	\$ 90.00	\$ -
Sr. Eng	Pavement Analysis: Flexible, Rigid, & Permeable			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Bearing capacity & Seismic Site Classification			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Report			8.0	hour	\$ 90.00	\$ 720.00
Prin	Senior Engineer Review			2.0	hour	\$ 150.00	\$ 300.00
draft	CAD/Draftsperson			5.0	hour	\$ 65.00	\$ 325.00
clerical	Clerical			3.0	hour	\$ 30.00	\$ 90.00
	Miscellaneous			1.0	lump	\$ 50.00	\$ 50.00
	Engineering Subtotal						\$ 2,295.00

Attendance at Design / Coordination Meetings							
Sr. Eng	Two meetings in Lexington	2	4	8.0	hour	\$ 90.00	\$ 720.00
Miles	Mileage (round trip)	2	120	240.0	mile	\$ 0.75	\$ 180.00
Sr. Eng	Teleconferences	2	2	4.0	hour	\$ 90.00	\$ 360.00
	Attendance at Design / Coordination Meetings Subtotal						\$ 1,260.00

	Total						\$ 10,562.50
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Recommended Lump Sum Fee	\$ 10,600.00
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**09-248 Renovations to Radcliff Middle School
Hardin County Schools**

Fee Estimate: Vector Proposed Scope of Services

Code	Description	#	@	Quantity	Unit	Unit Cost	Total
Field Exploration							
2002	Mobilization/demobilization of drilling equipment			1	per rig	\$ 500.00	\$ 500.00
2013	Soil Borings for Additions	1	20	80	foot	\$ 12.00	\$ 960.00
2013	Soil Borings for Additions	5	15	75	foot	\$ 12.00	\$ 900.00
2013	Soil Borings for Pavements	3	5	15	foot	\$ 12.00	\$ 180.00
	<i>Total Soil Drilling Footage</i>			170			
2041	Rock Coring	0	10	0	foot	\$ 30.00	\$ -
2041		0	0	0	foot	\$ 30.00	\$ -
2041		0	0	0	foot	\$ 30.00	\$ -
	<i>Total Rock Coring Footage</i>			0			
2040	Rock coring setup charge			0	each	\$ 120.00	\$ -
2080	Hauling water by drill crew			0.0	hour	\$ 150.00	\$ -
2120	Backhoe with operator (1 hour minimum)			0	hour	\$ 90.00	\$ -
2031	Bulk bag samples			1	each	\$ 30.00	\$ 30.00
2032	Undisturbed sample, Shelby Tube			2	attempt	\$ 50.00	\$ 100.00
2202	Drill Crew, Per diem, per 2 or 3-man crew			2	day	\$ 150.00	\$ 300.00
	Field Exploration Subtotal						\$ 2,970.00
Engineering Supervision of Drilling							
Sr. Eng	Plan Exploration & Coordination of Drilling			1.5	hour	\$ 90.00	\$ 135.00
Staff	Engineering Supervision of Drilling			20.0	hour	\$ 65.00	\$ 1,300.00
Miles	Mileage (round trip)	3	90	270.0	mile	\$ 0.75	\$ 202.50
eng diem	Engineering Per Diem			0	day	\$ 110.00	\$ -
	Engineering Supervision of Drilling Subtotal						\$ 1,637.50
Laboratory Testing							
3100	Natural soil moisture content			10	each	\$ 10.00	\$ 100.00
3003	Aterberg Limits			2	each	\$ 65.00	\$ 130.00
3404	Unconfined compressive strength, split-spoon sample			4	each	\$ 10.00	\$ 40.00
3604	California Bearing Ratio (CBR), with standard Proctor			1	each	\$ 400.00	\$ 400.00
3501	Unconfined compressive strength of intact rock core			0	each	\$ 75.00	\$ -
3301	Permeability test, flexible wall			0	each	\$ 400.00	\$ -
	Laboratory Testing Subtotal						\$ 670.00
Engineering							
Sr. Eng	Project setup, project management			2.0	hour	\$ 90.00	\$ 180.00
Sr. Eng	Soil classification, laboratory and drafting assignments			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Reconnaissance of Building & Pavements			4.0	hour	\$ 90.00	\$ 360.00
Sr. Eng	Lateral Earth Pressure Coefficients			0.0	hour	\$ 90.00	\$ -
Sr. Eng	Pavement Analysis: Flexible, Rigid, & Permeable			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Bearing capacity & Seismic Site Classification			1.0	hour	\$ 90.00	\$ 90.00
Sr. Eng	Report			8.0	hour	\$ 90.00	\$ 720.00
Prin	Senior Engineer Review			2.0	hour	\$ 150.00	\$ 300.00
draft	CAD/Draftsperson			4.0	hour	\$ 65.00	\$ 260.00
clerical	Clerical			3.0	hour	\$ 30.00	\$ 90.00
	Engineering Subtotal						\$ 2,180.00
Attendance at Design / Coordination Meetings							
Sr. Eng	Two meetings in Lexington	2	4	8.0	hour	\$ 90.00	\$ 720.00
Miles	Mileage (round trip)	2	120	240.0	mile	\$ 0.75	\$ 180.00
Sr. Eng	Teleconferences	2	2	4.0	hour	\$ 90.00	\$ 360.00
	Attendance at Design / Coordination Meetings Subtotal						\$ 1,260.00
	Total						\$ 8,717.50
	Recommended Fee						\$ 8,700.00



VECTOR ENGINEERS, INC

DRILLING FEE SCHEDULE 09-248 Renovations to Radcliff Middle School

Item Code	Drilling Services	Unit Cost	Unit
2001	Drilling services, minimum charge, lump sum	\$1,500.00	per job
2002	Mobilization/demobilization of drilling equipment	\$650.00	per rig
2010	Soil boring minimum charge	\$60.00	boring
2011	Auger boring	\$7.00	foot
2012	Wash boring	\$8.00	foot
2013	Soil test boring, 0 to 30 feet	\$12.00	foot
2014	Soil test boring, 30 to 50 feet	\$12.00	foot
2015	Soil test boring, 50 to 70 feet	\$12.00	foot
2016	Soil test boring, 70 to 100 feet	\$12.00	foot
2020	Additional fee for wash drilling	\$2.00	foot
2021	Additional fee for drilling with casing	\$12.00	foot
2022	Additional fee for hard drilling surcharge (N>100 bpf)	\$4.00	foot
2030	Additional standard penetration samples	\$25.00	each
2031	Bulk bag samples	\$30.00	each
2032	Undisturbed sample, Shelby Tube	\$50.00	attempt
2040	Rock coring setup charge	\$120.00	each
2041	Rock coring	\$30.00	foot
2050	Piezometer installation	\$20.00	foot
2051	Grouting boreholes	\$8.00	foot
2052	Setting casing	\$10.00	foot
2053	Setting Slope Inclinator	\$25.00	foot
2053	Piezometer or Slope Inclinator Box	\$200.00	foot
2060	Time-rate drilling	\$200.00	hour
2061	Difficult moving	\$200.00	hour
2070	Standby time at client's request	\$200.00	hour
2080	Hauling water by drill crew	\$150.00	hour
2100	Weekend, holiday, or night drilling	\$250.00	hour
2110	All-terrain vehicle surcharge	\$350.00	day
2120	Backhoe with operator (4 hour minimum)	\$90.00	hour
2130	Bulldozer with operator (8 hour minimum)	\$120.00	hour
2202	Drill Crew, Per diem, per 2 or 3-man crew	\$150.00	day
Notes:	Services and fees not listed will be quoted upon request.	QUOTE	
	Drilling services may be performed by a subcontractor.		
	Supplies or rental equipment not furnished	\$0.15	cost



LABORATORY FEE SCHEDULE
09-248 Renovations to Radcliff Middle School

Item Code	Laboratory Tests	Unit Cost	Unit
Soil Classification Tests			
3001	Soils finer than #200 sieve (wash)	\$45.00	each
3002	Particle size analysis, sieve analysis with wash #200	\$65.00	each
3003	Atterberg Limits	\$65.00	each
3004	Full Partial Size Analysis (includes wash, sieve, and hydrometer)	\$145.00	each
Moisture-Density			
3100	Natural soil moisture content	\$10.00	each
3101	Soil unit weight, undisturbed sample, with moisture content	\$45.00	each
3102	Soil unit weight, undisturbed sample, with moisture content, specific gravity, and void ratio	\$75.00	each
3103	Specific gravity	\$40.00	each
3104	Organic content , loss on ignition	\$60.00	each
Consolidation and Swell Tests			
3201	Swell potential, method A or C	\$300.00	each
3202	Consolidation test, square root of time method (up to 10 loads)	\$400.00	each
3203	Consolidation test, additional load increment	\$30.00	per load
Permeability Tests			
3301	Permeability test, flexible wall	\$400.00	each
Strength Tests			
3401	Unconsolidated, undrained (UU) triaxial test	\$175.00	per point
3402	Consolidated-undrained (CU) triaxial test, with pore pressure measurement	\$875.00	per set of 3
3403	Consolidated-drained tests (CD) triaxial test	\$350.00	per point
3404	Unconfined compressive strength, split-spoon sample	\$10.00	each
3405	Unconfined compressive test, with strain measurement	\$65.00	each
3406	Direct shear test	QUOTE	each
Rock Tests			
3501	Unconfined compressive strength of intact rock core	\$75.00	each
3502	Unconfined compressive strength of intact rock core, with strain measurement	\$75.00	each
3503	Density of rock core	\$50.00	each
3504	Slake durability, 2 cycles	\$60.00	each
3505	Crushing and Grading	\$175.00	each
3506	L.A. Abrasion	\$100.00	each
3507	Sulfate Soundness	\$400.00	each
3508	Specific gravity	\$90.00	each
Compaction Tests			
3601	Compaction test, standard Proctor	\$155.00	each
3602	Compaction test, modified Proctor	\$180.00	each
3603	California Bearing Ratio (CBR), without Proctor	\$275.00	each
3604	California Bearing Ratio (CBR), with standard Proctor	\$400.00	each
3605	California Bearing Ratio (CBR), with modified Proctor	\$430.00	each
Chemical Tests			
3701	Laboratory soil resistivity	\$75.00	each
3702	Soil pH	\$15.00	each
3703	Sulfate ion content in soils	QUOTE	each
3704	Chloride ion content in soils	QUOTE	each



VECTOR ENGINEERS, INC

STAFF AND EXPENSES FEE SCHEDULE 09-248 Renovations to Radcliff Middle School

Item Code	Staff & Expenses	Unit Cost	Unit
Geotechnical & Construction Monitoring Services			
Prin	Principal, Wayne Karem, PhD, PE, PG	\$150.00	hour
Sr. Eng	Senior Engineer, W. Robert Folsom, PE	\$90.00	hour
proj	Project Engineer	\$75.00	hour
Staff	Staff Geologist	\$65.00	hour
Civil Engineering Services			
CE Prin	Principal, Mark Patterson, PE	\$150.00	hour
CE PE	Professional Engineer	\$85.00	hour
Arch	Licensed Landscape Architect	\$85.00	hour
CE Eng	Project Engineer	\$75.00	hour
CE Tech	Engineering Technician	\$55.00	hour
Surveying Services			
LS	Licensed Land Surveyor	\$100.00	hour
S Tech	Surveying Technician	\$100.00	hour
S Crew	Field Crew	\$65.00	hour
Engineering Support Staff			
draft	CAD/Draftsperson	\$65.00	hour
clerical	Clerical	\$30.00	hour
Expenses			
Miles	Mileage (round trip)	\$0.75	mile
Supply	Field Supplies	15%	cost
eng diem	Engineering Per Diem	\$110.00	day

ACCEPTANCE SHEET

VECTOR ENGINEERS's SERVICES		
<i>Services Description</i>	Geotechnical Site Characterization	
<i>Project Name</i>	Renovations to Radcliff Middle School	
Project Location	Radcliff, Hardin County, KY	
Proposal Number	09-248	Proposal Date: September 24, 2009

CLIENT – VECTOR ENGINEERS will perform the Services referenced in the Proposal for and charge the Invoice to the account of:	
Client Name	
Full Address	
Company Contact	
Telephone	Facsimile:
E-mail Address	
SITE OWNER INFORMATION (if other than Client):	
Company	
Full Address	
Company Contact	
Telephone	
E-mail Address	Facsimile:
SPECIAL INSTRUCTIONS	

PROPOSAL ACCEPTANCE & AUTHORIZATION TO PROCEED VECTOR ENGINEERS, Inc. will perform services set forth in the Proposal referenced above, incorporated herein by reference (the Proposal) (collectively, the "Services") subject to the terms listed on this page and pages 2 through 4 hereof. For purposes herein, the term "Site" shall mean Project Location listed above. Proposals (and costs therein) shall be valid for no more than 90 days. Receipt by VECTOR ENGINEERS of a signed Proposal Acceptance Sheet shall constitute the Client's Authorization to Proceed and agreement and acceptance of the terms hereunder.

PAYMENT TERMS: VECTOR ENGINEERS will be compensated for performing the Services in accordance with the Proposal referenced above. Invoices will be issued monthly. Client agrees to pay all charges not in dispute within 30 days of receipt of VECTOR ENGINEERS's invoice and recognizes that charges not paid within 30 days are subject to a late payment charge of 1.5 percent (1.5%) (but not to exceed the maximum applicable legal rate) of the balance due for each additional month or fraction thereof that undisputed charges remain unpaid. The Client shall notify VECTOR ENGINEERS within 10 days of receipt of VECTOR ENGINEERS's invoice should the invoice contain charges the Client intends to dispute. Client agrees to pay any and all collection costs on overdue invoices, including reasonable attorneys' fees. Client further agrees that VECTOR ENGINEERS has the right to suspend or terminate the Services in VECTOR ENGINEERS's sole discretion if undisputed charges are not paid within 45 days of receipt of VECTOR ENGINEERS's invoice and agrees to waive any and all claims against VECTOR ENGINEERS and to indemnify, defend and hold VECTOR ENGINEERS harmless from and against any claims arising from VECTOR ENGINEERS's suspension or termination due to Client's failure to provide timely payment. Client agrees that all documents of any nature furnished to Client or Client's agents or designees in connection with the Services, if not paid for, will be returned upon demand and will not be used by Client for any purpose whatsoever.

Accepted this _____ day of _____, 2009.

Print or type Client Name:
Signature of Authorized Representative:
Print or type name of Authorized Representative and Title:

TERMS AND CONDITIONS

1. STANDARD OF CARE. The Services will be performed in accordance with standards customarily observed by a firm rendering the same or similar services in the same geographic region during the same time period. VECTOR ENGINEERS makes no warranties, express or implied, as to the Services performed hereunder except for the preceding sentence's warranty of compliance with generally accepted standards. VECTOR ENGINEERS hereby FULLY AND EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES OF ANY NATURE WHATSOEVER, EXPRESS OR IMPLIED. During the Services, VECTOR ENGINEERS will take reasonable precautions to prevent injury or loss to persons or property at the Site and minimize damage to the Site; however, Client understands and agrees that invasive services, including, but not limited to, drilling, boring or sampling, may damage or alter the Site; Site restoration is an

out-of-scope service unless otherwise agreed in writing. The Services shall in no way be construed, designed or intended to be relied upon as legal interpretation or advice.

2. RELATIONSHIP OF PARTIES. VECTOR ENGINEERS, its employees, agents, affiliates or subcontractors shall act solely as an independent contractor in performing the Services. VECTOR ENGINEERS shall have no right or authority to act for Client and will not enter into any agreement in the name of or on behalf of Client unless otherwise agreed in writing. Nothing in these Terms & Conditions shall be construed to give any rights or benefits to any party other than Client and VECTOR ENGINEERS. Unless otherwise authorized in writing by VECTOR ENGINEERS, there are no intended third party beneficiaries to

these terms and conditions or to any work product or services by ORE; Client is the sole intended and agreed beneficiary of VECTOR ENGINEERS's services and work product. Client agrees that should VECTOR ENGINEERS elect to grant reliance to a third party lender, the third party must first sign VECTOR ENGINEERS's Reliance and Potential Conflict of Interest agreement.

3. DOCUMENTS & CONFIDENTIALITY. All documents including, but not limited to, drawings, specifications, reports, logs, field notes, lab test data, calculations, and estimates prepared by or for VECTOR ENGINEERS in connection with the Services are instruments of service and shall be the sole property of VECTOR ENGINEERS ("Work Product"); however, Client may request a copy for its exclusive use. and Client further agrees that under no circumstances shall any document produced by VECTOR ENGINEERS under this Agreement, be used at any location or for any project not expressly provided for in this Agreement without VECTOR ENGINEERS's prior written permission. Proprietary concepts, systems and ideas developed during the Services shall remain the sole property of VECTOR ENGINEERS. Work Product will not be disclosed by VECTOR ENGINEERS to a third party without prior consent of Client except to the extent required to comply with a rule or regulation, court order, governmental directive, or professional or ethical standard or when such Work Product or portion thereof becomes available to the general public or is received by VECTOR ENGINEERS from others who lawfully possess same. Client authorizes VECTOR ENGINEERS to use and publish Client's name and general description of the Services in VECTOR ENGINEERS's marketing materials. VECTOR ENGINEERS has the right in its sole discretion, to dispose of or retain the documents. If Client requests documents in an electronic format, it agrees that the electronic copy may be inaccurate or incomplete, and the document retained by VECTOR ENGINEERS remains the document of record.

Reliance upon the Services shall be limited to Client; any unauthorized release of Work Product is prohibited and CLIENT AGREES TO INDEMNIFY, DEFEND AND HOLD VECTOR ENGINEERS HARMLESS FROM ANY AND ALL CLAIMS OR DAMAGES ASSOCIATED WITH THE UNAUTHORIZED RELEASE OF WORK PRODUCT TO THIRD PARTIES. Notwithstanding the foregoing, any third party reliance expressly authorized by VECTOR ENGINEERS and Client is subject to the limitation of liability and terms and conditions stated herein except as specifically agreed to in writing by the parties.

4. VECTOR ENGINEERS REPRESENTATIONS. Findings and recommendations resulting from the Services are based upon information derived from VECTOR ENGINEERS's on-site activities and other services performed hereunder; such information is subject to change over time. Certain indicators of hazardous substances, petroleum products or other deleterious constituents may have been latent, inaccessible, unobservable or not present during the Services, and VECTOR ENGINEERS cannot represent that the Site is not affected by constituents or other latent conditions beyond those identified from the Services performed. Subsurface conditions throughout the Site may vary from data revealed from discrete borings, tests, assessments, investigations or other exploratory services; VECTOR ENGINEERS's findings, recommendations and estimates are based solely upon data available to VECTOR ENGINEERS at the time of the Services. VECTOR ENGINEERS will not be responsible for a third party's interpretations or use of the data. VECTOR ENGINEERS will be responsible for supervision and site safety measures for its own employees but shall not be responsible for the supervision or health & safety precautions or plans for any third parties, including subcontractors or other parties present at the Site. Should VECTOR ENGINEERS provide observations or monitoring services at the Site at any time, Client agrees that VECTOR ENGINEERS shall not be responsible for any working conditions or safety at the Site other than for its own staff during said observations or monitoring services. Any monitoring of a third party's or contractor's procedures does not include review of the adequacy of said contractor's safety measures in, on, adjacent to, or near the project.

5. CLIENT REPRESENTATIONS. Client understands the nature of VECTOR ENGINEERS's presence on the Site and shall ensure that VECTOR ENGINEERS's personnel and subcontractors have safe and reasonable access to the Site for the performance of the Services. Client shall furnish or cause to be furnished to VECTOR ENGINEERS an accurate Site map and all information known or available to Client, including, but not limited to, past and current Site operations, subterranean structures, utilities, and the environmental condition of the Site (such as the identity, location, quantity, nature or characteristics of any hazardous or toxic materials on or near the Site). VECTOR ENGINEERS may rely upon, but shall not be responsible for the accuracy of, any data provided by Client, Client's agent or any third party. Client shall immediately transmit new, updated or revised information as it becomes available during the Services. Client will secure all necessary approvals, permits, licenses and consents necessary to commence and complete the Services unless otherwise agreed in writing, and shall make any and all spill or release notifications that may be required by law.

6. SUBTERRANEAN STRUCTURES, UTILITIES, WETLAND ISSUES. Client is responsible for accurately providing the locations of all subterranean structures and utilities and potentially jurisdictional areas which may contain wetlands, endangered species habitat or cultural resource. VECTOR ENGINEERS will take reasonable precautions to avoid damage or injury to subterranean structures or utilities and potentially jurisdictional areas identified to us. Client agrees to hold harmless and indemnify VECTOR ENGINEERS for any claims, payments or other liability, including reasonable attorneys fees, for any damages to subterranean structures, utilities or potentially jurisdictional areas which are not (i) accurately identified by Client or others, (ii) accurately depicted on plans; or (iii) called to the attention of VECTOR ENGINEERS prior to performing the Services, except to the extent that VECTOR ENGINEERS has been contracted to locate sensitive areas on the site not identified or accurately located.

7. INDEMNITIES. VECTOR ENGINEERS SHALL INDEMNIFY AND HOLD CLIENT HARMLESS FROM AND AGAINST ANY AND ALL LAWSUITS, CLAIMS, LIABILITIES, CAUSES OF ACTION, LOSSES, DAMAGES, FORFEITURES, PENALTIES, FINES, COSTS AND EXPENSES, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND EXPENSES, TO THE EXTENT THE SAME ARISE FROM (I) A NEGLIGENT BREACH BY VECTOR ENGINEERS OF THESE TERMS & CONDITIONS; (II) VIOLATION OF LAW BY VECTOR ENGINEERS IN PERFORMING THE SERVICES OR (III) NEGLIGENT ERRORS OR OMISSIONS OF VECTOR ENGINEERS IN PERFORMING THE SERVICES. VECTOR ENGINEERS'S TOTAL MAXIMUM AGGREGATE LIABILITY (IRRESPECTIVE OF THE NUMBER OF CLAIMS OR CLAIMANTS) UNDER THIS INDEMNITY TO CLIENT OR ANY THIRD PARTY SHALL BE LIMITED BY CLIENT SUCH THAT VECTOR ENGINEERS'S MAXIMUM LIABILITY TO CLIENT OR ANY THIRD PARTY SHALL IN NO EVENT EXCEED THE AMOUNT SET OUT IN THE PARAGRAPH ENTITLED "RISK ALLOCATION AND LIABILITY LIMITATION". CLIENT AGREES TO RELEASE, DEFEND, HOLD HARMLESS AND INDEMNIFY VECTOR ENGINEERS FROM AND AGAINST ALL FURTHER LIABILITY UNDER THE ABOVE INDEMNITY INCLUDING ANY AND ALL LAWSUITS, CLAIMS, LIABILITIES, ACTIONS, CAUSES OF ACTION, DEMANDS, LOSSES, DAMAGES, FORFEITURES, PENALTIES, FINES, COSTS AND EXPENSES, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND EXPENSES, BY WHOMEVER ASSERTED, TO THE EXTENT THAT SUCH CLAIM, PROPERTY DAMAGE, INJURY OR DEATH RESULTED FROM (I) THE NEGLIGENCE OR WILLFUL MISCONDUCT OF CLIENT OR CLIENT'S AGENT; (II) VIOLATION OF LAW OR REGULATION BY CLIENT OR CLIENT'S AGENT; (III) CLIENT OR VECTOR ENGINEERS'S ALLEGED INVOLVEMENT AT THE SITE AS AN OWNER, OPERATOR, ARRANGER, GENERATOR OR TRANSPORTER OF HAZARDOUS SUBSTANCES OR WASTES; OR (IV) INACCURATE INFORMATION PROVIDED BY CLIENT TO VECTOR ENGINEERS. CLIENT UNDERSTANDS THE NATURE OF INVASIVE SERVICES WHICH MAY INVOLVE DRILLING THROUGH VARIED SOIL AND WATER SUBSTRATA WHICH MAY RESULT IN INADVERTANT AND UNAVOIDABLE CROSS-MINGLING OF SAID STRATA AND CONSTITUENTS THEREIN; CLIENT AGREES TO INDEMNIFY AND HOLD HARMLESS VECTOR ENGINEERS SHOULD THIS OCCUR TO THE EXTENT NOT CAUSED BY THE NEGLIGENCE OF VECTOR ENGINEERS, SUBJECT ALWAYS IN EVERY RESPECT TO THE LIMITATION OF LIABILITY SET OUT IN

THE PARAGRAPH BELOW ENTITLED "RISK ALLOCATION AND LIABILITY control or charge of specific means, methods, techniques, sequences, or LIMITATION" procedures of any third party or any agent of the Client.

8. RISK ALLOCATION AND LIABILITY LIMITATION. The parties hereunder are aware and understand the risks and rewards associated with the Services, as well as VECTOR ENGINEERS's fee for these Services. The Client acknowledges that without this limitation of liability VECTOR ENGINEERS would not have performed the services and that both parties had the opportunity to negotiate the terms and condition of this Agreement. THE CLIENT AND VECTOR ENGINEERS AGREE TO ALLOCATE CERTAIN OF THE RISKS SO THAT, TO THE FULLEST EXTENT PERMITTED BY LAW, VECTOR ENGINEERS'S TOTAL MAXIMUM AGGREGATE (IRRESPECTIVE OF THE NUMBER OF CLAIMS OR CLAIMANTS) LIABILITY TO CLIENT AND ANY THIRD PARTIES SHALL IN NO EVENT EXCEED \$50,000 OR THE AMOUNT OF VECTOR ENGINEERS'S FEE, WHICHEVER IS GREATER FOR ANY AND ALL INJURIES, DAMAGES, CLAIMS, LOSSES, OR EXPENSES (INCLUDING REASONABLE ATTORNEYS' FEES AND EXPERT WITNESS FEES) ARISING OUT OF THIS AGREEMENT FROM ANY CAUSE OR CAUSES. SUCH CAUSES INCLUDE, BUT ARE NOT LIMITED TO, VECTOR ENGINEERS'S NEGLIGENCE, ERRORS, OMISSIONS, STRICT LIABILITY, STATUTORY LIABILITY, BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENT MISREPRESENTATION, INDEMNITY OBLIGATIONS, OR OTHER ACTS GIVING RISE TO LIABILITY BASED UPON CONTRACT, TORT OR STATUTE EXCEPT FOR THE KNOWINGLY AND INTENTIONALLY WRONGFUL MISCONDUCT OF VECTOR ENGINEERS. THE LIMITATION AND AGGREGATE SHALL APPLY TO ALL WORK FOR CLIENT BY VECTOR ENGINEERS IRRESPECTIVE OF WHETHER SUBSEQUENT AGREEMENTS CONTAIN THIS OR A SIMILAR PROVISION. THE LIMIT OF LIABILITY SET OUT ABOVE CAN BE INCREASED TO A MAXIMUM OF \$1,000,000.00 PROVIDED CLIENT SO REQUESTS IN WRITING AT THE TIME CLIENT AUTHORIZES VECTOR ENGINEERS'S SERVICES. THAT THE CLIENT AGREES TO PAY AN ADDITIONAL CONSIDERATION OF 10 PERCENT (10%) OF THE TOTAL FEE OR \$500.00, WHICHEVER IS GREATER. The additional charge of 10% accounts for increased risk assumed and should not be construed as a charge for additional professional liability insurance. CLIENT AGREES TO INDEMNIFY AND HOLD HARMLESS VECTOR ENGINEERS FROM AND AGAINST ALL LIABILITIES IN EXCESS OF THE MONETARY LIMIT ESTABLISHED ABOVE. THE PARTIES ALSO AGREE THAT CLIENT WILL NOT SEEK DAMAGES IN EXCESS OF THE LIMITATIONS INDIRECTLY THROUGH SUITS WITH OTHER PARTIES WHO MAY JOIN VECTOR ENGINEERS AS A THIRD-PARTY DEFENDANT. For purposes of this paragraph, the term "parties" means the Client and VECTOR ENGINEERS and their officers, directors, shareholders, employees, agents, affiliates, successors, assigns, and subcontractors. Both Client and VECTOR ENGINEERS agree that they will not be liable to each other, under any circumstances, for special, indirect, consequential, or punitive damages arising out of or related to this Agreement.

9. DISPUTE RESOLUTION COSTS. In the event that VECTOR ENGINEERS and Client find themselves in adversarial positions, and in the event of litigation, arbitration, or mediation in connection therewith, the non-prevailing party shall reimburse the prevailing party for the prevailing party's documented legal costs in addition to whatever judgment or settlement sums may be due.

10. MONITORING. This paragraph applies in the event VECTOR ENGINEERS is retained by Client to provide a Site representative for the purpose of monitoring specific portions of construction work or other field activities as set forth in the Proposal. In this case, VECTOR ENGINEERS will report observations and its professional opinions to the Client. No action of VECTOR ENGINEERS or VECTOR ENGINEERS's Site representative shall be construed as altering any contract between Client and third parties. The VECTOR ENGINEERS representative has no right to reject or stop work of any Client agent; such rights are reserved solely for Client. Furthermore, VECTOR ENGINEERS's presence on-site does not in any way guarantee the completion or quality of the performance of the work of any third party. VECTOR ENGINEERS will not be responsible for and will not have

11. SAMPLING OR TEST LOCATION. Unless otherwise stated, the fees in the Proposal do not include costs associated with surveying of the site for the accurate horizontal or vertical locations of tests. Field tests or boring locations described in a report or shown on sketches are based upon information furnished by others or estimates made in the field by our representatives. Such dimensions, depths, or elevations should be considered as approximations only, unless otherwise stated. If the client specifies the test or boring location, we reserve the right to deviate a reasonable distance from the location specified.

12. WASTES; SAMPLES. This paragraph applies in those instances where Services performed involve wastes or samples. Unless otherwise specified in the Proposal, proper disposition of any contaminated materials generated during the Services (including, but not limited to, waste materials, samples, produced soils or fluids, cuttings, or protective gear or equipment) is out-of-scope and shall require a written amendment by the parties specifying Client's choice of transporter and waste facility. In no event shall VECTOR ENGINEERS be required to sign or certify a manifest, disposal ticket or like document relating to the transport or disposition of hazardous materials or hazardous waste. It is understood and agreed that VECTOR ENGINEERS, in performing the Services, does not act as a generator, transporter, arranger, or disposer of hazardous materials or hazardous waste as defined under any law or regulation. Client and VECTOR ENGINEERS understand and agree that title to all foregoing samples and waste materials remains with Client. Laboratory or field equipment that cannot be decontaminated from hazardous constituents shall become the property and responsibility of Client, and Client shall reimburse VECTOR ENGINEERS for its fair market value unless otherwise agreed in writing. Unless otherwise requested, test specimens or samples will be disposed of immediately upon completion of ordered analytical tests; other investigation-derived wastes will be disposed of within 60 days after submission of a final VECTOR ENGINEERS report documenting the Services. At Client's written request, VECTOR ENGINEERS will retain preservable test specimens or the residue therefrom at an agreed-to charge, and will use reasonable and common business efforts to retain such test specimens or samples but only for a mutually acceptable and agreed-to storage charge and period of time. Client agrees that VECTOR ENGINEERS is not responsible or liable under any circumstance or in any event to Client or any third party for any loss of test specimens or samples retained in storage, Client waiving all claims in connection therewith and agreeing to indemnify VECTOR ENGINEERS in connection therewith.

13. DELAYS; CHANGED CONDITIONS. If Services cannot be performed on or before the projected due date because of circumstances beyond the reasonable control of VECTOR ENGINEERS, including, but not limited to, strike, fire, riot, excessive precipitation, act of God, access limitations, health and safety risks, governmental action, third party action or Client action or omission, or criminal acts by non-VECTOR ENGINEERS persons or entities, or acts of war, terrorism, or the public enemy, the Services shall be amended by Client and VECTOR ENGINEERS in accordance with paragraph 19. In the event Site conditions change materially from those observed at the Site or described to VECTOR ENGINEERS at the time of Proposal, VECTOR ENGINEERS and Client shall execute a written change order evidencing equitable adjustments to the Proposal and Project Cost; Client understands that said changed conditions may delay, postpone or suspend the Services until such time as Services and the Project Cost are amended. In the event a timely and equitable change order cannot be negotiated by the parties, VECTOR ENGINEERS, at its discretion, may terminate its Proposal, Services, and agreement with Client.

14. DISCOVERY OF HAZARDOUS MATERIALS. Client represents that it has made a reasonable effort to evaluate if hazardous materials are on or near the Site, and that Client has informed VECTOR ENGINEERS of Client's findings relative to the possible presence of such materials. Hazardous materials may exist where there is no reason to

believe they could or should be present. VECTOR ENGINEERS and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the Proposal or termination of the Services. VECTOR ENGINEERS and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for VECTOR ENGINEERS to take immediate measures to protect health and safety of its personnel. Client agrees to compensate VECTOR ENGINEERS for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials. VECTOR ENGINEERS agrees to notify Client when unanticipated or suspected hazardous materials are encountered. Client shall make any and all disclosures required by law to the appropriate governing agencies. CLIENT ALSO AGREES TO HOLD VECTOR ENGINEERS HARMLESS FOR ANY AND ALL CONSEQUENCES OF DISCLOSURES MADE BY VECTOR ENGINEERS THAT ARE REQUIRED BY GOVERNING LAW OR ETHICAL CANON. In the event the Site is not owned by the Client, Client shall be responsible for informing the Site owner of the discovery of unanticipated or suspected hazardous materials. Notwithstanding any other provision of the Agreement, CLIENT WAIVES ANY CLAIM AGAINST VECTOR ENGINEERS AND, TO THE MAXIMUM EXTENT PERMITTED BY LAW, AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS VECTOR ENGINEERS FROM ANY CLAIM, LIABILITY, AND DEFENSE COSTS FOR INJURY OR LOSS ARISING FROM VECTOR ENGINEERS'S DISCOVERY AND DISCLOSURE OR REPORTING OF UNANTICIPATED OR SUSPECTED HAZARDOUS MATERIALS, including, but not limited to, any project delay costs and any costs associated with possible reduction of the Site's value.

In connection with toxic or hazardous substances or constituents and to the maximum extent permitted by applicable law, for separate and valuable consideration of the promises contained in this environmental indemnity language (which is a valuable and fundamental inducement to VECTOR ENGINEERS to provide services to Client), Client agrees to defend, hold harmless, and indemnify VECTOR ENGINEERS from and against any and all claims, liabilities, or judgments, except to the extent finally determined as being caused by VECTOR ENGINEERS's negligence or willful misconduct (such exception being always subject to the "Risk Allocation and Liability Limitation" provision set out elsewhere herein), resulting from:

- a) Client's violation of any federal, state, or local statute regulation or ordinance relating to the management or disposal of toxic or hazardous substances or constituents;
- b) Client's undertaking of or arrangements for the handling, removal, treatment, storage, transportation or disposal of toxic or hazardous substances or constituents found or identified at a site;
- c) Toxic or hazardous substances or constituents introduced at the site by Client or third persons before, during, or after the completion of VECTOR ENGINEERS's services;
- d) allegations that VECTOR ENGINEERS is a handler, generator, operator, treater, storer, transporter, or disposer unless expressly retained by Client for such services under the Resource Conservation and Recovery Act of 1976 as amended or any other similar federal, state, or local regulation or law due to VECTOR ENGINEERS's services; or
- e) any third party suit or claim for damages against VECTOR ENGINEERS alleging strict liability, personal injury (including death) or property damage from exposure to or releases of toxic or hazardous substances or constituents at or from the project site before, during, or after completion of VECTOR ENGINEERS's services under this Agreement.

The obligations of this paragraph are in addition to (and not in the place of) any other Client indemnity obligations herein. Nothing herein shall operate to increase the limitation of liability set out elsewhere herein.

15. MONITORING WELLS. Client will take custody of all monitoring wells and probes installed as part of the services provided by VECTOR ENGINEERS and will take any and all necessary steps for the proper maintenance, repair of closure or such well or probes at Client's expense.

16. TERMINATION. Client or VECTOR ENGINEERS may terminate a Proposal, the Services or this Agreement upon seven (7) days written

notice should the other party fail substantially to perform in accordance with these Terms & Conditions through no fault of the terminating party or if the Client suspends the Services for more than three (3) months. Further, VECTOR ENGINEERS may terminate Services as described in the Proposal Acceptance Sheet hereunder. Client shall compensate VECTOR ENGINEERS for Services performed up to the date of receipt of termination plus any and all reasonable costs incurred in terminating the Services in as per VECTOR ENGINEERS's current fee schedule, including, but not limited to, the cost of completing analyses, records, and reports necessary to document project status at the time of termination.

17. ASSIGNMENTS. Neither these Terms & Conditions nor any interest, claim or obligation hereunder shall be assigned or transferred by Client to any party or parties without the prior consent of VECTOR ENGINEERS. Nothing herein shall prevent VECTOR ENGINEERS from using VECTOR ENGINEERS's subcontractors to assist in performing the Services.

18. NON-WAIVER; INVALIDITY. In the event that a provision herein shall for any reason be held invalid, illegal or unenforceable in any respect, such finding shall not affect the enforceability of any other provision of these Terms & Conditions. Failure or delay in exercising any right, power or remedy under these Terms & Conditions shall not impair any right, power or remedy which any party hereto may have, nor shall any such failure or delay be construed to be a waiver of any such right, power or remedy or an acquiescence in any breach or default hereunder absent an express, written waiver or acquiescence, nor shall any waiver of any breach or default be deemed a waiver of any default or breach subsequently occurring under these Terms & Conditions. These Terms & Conditions may be executed via facsimile or by transmitting originals; any number of executed counterparts will constitute one and the same instrument.

19. APPLICABLE LAW; VENUE; SURVIVAL. THE SERVICES, PROPOSAL AND THESE TERMS & CONDITIONS SHALL BE GOVERNED BY AND CONSTRUED ACCORDING TO THE LAWS OF THE STATE CORRESPONDING TO THE LOCATION OF THE SOLICITING VECTOR ENGINEERS OFFICE (as identified on the Proposal Acceptance Sheet). Venue for any legal action hereunder shall be in the same said location. Paragraphs 3, 7 and 8 will survive termination of this Agreement for any cause.

20. PRECEDENCE; AMENDMENTS. These Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, purchase order, requisition, notice to proceed, oral communications or other agreement regarding the Services. These Terms & Conditions replace and supersede all prior discussions and agreements between and amongst Client and VECTOR ENGINEERS with respect to the matters contained herein. These Terms & Conditions herein may be amended only by an agreement signed by both VECTOR ENGINEERS and Client.

21. CONTINUING AGREEMENT. The indemnity obligations and the limitations of liability established under this Agreement will survive the expiration or termination of this Agreement. If VECTOR ENGINEERS provides services to Client that the parties do not confirm through execution of an amendment to this Agreement, the obligations of the parties to indemnify each other and the limitations of liability established under the Agreement apply to such Services as if the parties had executed an amendment.

22. CONFLICTS OF INTEREST. VECTOR ENGINEERS will advise the Client of any existing or potential conflicts of interest which are discovered during the performance of services under this Agreement. All parties agree that VECTOR ENGINEERS may discontinue its services in accordance with the "Termination" provisions set out elsewhere in this Agreement in the event a material conflict of interest is discovered or becomes evident.



Consulting Services Incorporated of Kentucky

250 Gold Rush Road | Suite 6 | Lexington, Kentucky 40503

September 23, 2009

Hardin County Schools
C/O Sherman Carter Barnhart, PSC
2405 Harrodsburg Road
Lexington, Kentucky 40504

Attn: Ben Sorrell

Subject: **Kentucky Building Code Special Inspections and Materials Testing Proposal**
Radcliff Middle School
Radcliff, Kentucky
CSI Proposal Number: 1113

Consulting Services Incorporated of Kentucky (CSI) is pleased to submit this proposal for providing Kentucky Building Code (KBC) Special Inspections and material testing services on the above noted project. CSI and Vector Engineering, both Kentucky owned and operated firms, are planning a joint venture to provide the Geotechnical and KBC Special Inspections for the project. Our proposal describes our understanding of the KBC Special Inspection and material testing for the project, a review of your Request For Proposal (RFP), our anticipated scope of services and a **LUMP SUM Fee** based as a percentage of the total construction costs.

Project Information

We understand the project will consist of a new two story with lower level mechanical room, 75,000 square feet addition. The structural design has not been completed as of this proposal but will include load bearing masonry, reinforced concrete and structural steel members. The anticipated column load is about 20 kips and maximum wall loads will be less than five (5) kips per foot. The construction schedule will be about eight (8) months in duration starting around January 2010. The estimated construction value for the project is \$6,020,000.00

Based on this information, we anticipate the KBC Special Inspection requirements for the project to include:

1. **Concrete Construction - KBC Citation 1704.4**
2. **Soil Construction - KBC Citation 1704.7**
3. **Steel Construction – KBC Citation 1704.3**
4. **Masonry Construction – KBC Citation 1704.5**
5. **Inspection of Fabricators – KBC Citation 1704.2**

As per your RFP, the actual periodic and continuous testing/inspection will be determined based on the specific project schedule, which will be developed after the construction contract is awarded.

How can you benefit from CSI

1. **Experience** - CSI's Special Inspection and Material Testing experience will help to provide the owner, with a level of confidence that their project will be constructed according to Kentucky's Building Code. CSI's professionals have been involved with the KBC Special Inspections since its adoption in 2002.
2. **Expensive Repairs** - CSI's services can help reduce long term rehabilitation costs by verifying project specifications are met, and proper design materials are used.
3. **Certification of Occupancy** - CSI will work closely with the Design Professionals, Contractors, Construction Manager and the Building Official to help resolve structural deviations that may delay or even stop you from obtaining your anticipated Certification of Occupancy approval.
 - a. After each site visit is completed, a KBC Special Inspection Report will be sent via email in PDF format within typically eight (8) working hours to your project team informing them of the Special Inspection items observed and tested.
 - b. Digital Photographs will be utilized in our KBC Special Inspection Reports to illustrate and document construction activities.
 - c. Unresolved deviations to your project plans and specifications will be noted in our KBC Special Inspection Report and Weekly Progress Reports then sent to your project team.
 - d. Our operations methods will allow for smoother project construction and less frustration during the Special Inspection process.
4. **Team Work** - Special Inspections are a team effort. CSI will work together with the Design Professionals, Building Official, Construction Manager, and Contractors helping the success of your final product.
5. **Community Investment** - Your tax revenues are very important to your community and the Commonwealth of Kentucky. CSI is a locally owned firm and your investment back into the state, starts with us. Other large national firms transfer your tax payer's income out of Kentucky which does not allow it to be recycled back into our community.

Experience

CSI's professional staff has been involved with KBC Special Inspection services since its adoption in 2002. Our team members have been asked to present presentations about IBC Special Inspections (administration and technical) all over the country. Our team members have proudly presented to the following organizations:

1. Structural Engineers Association of Kentucky (SEAK) - Annual Meeting, Louisville, Kentucky
2. Tennessee Structural Engineering Association, Knoxville, Tennessee
3. ASFE - Fundamentals of Professional Practice, Denver, Colorado
4. Greenville Technical College - Greenville, South Carolina

5. Various other organizations including ACEC, AGC, AIA, KSPE, & ABC.

Within the last year CSI has provided similar type KBC Special Inspections of the following projects:

Project	Location	Client	KBC Special Inspection Items
Nicholas County Middle School Gymnasium	Carlisle, Kentucky	Nicholas County Schools	KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction KBC 1704.7 - Soils Construction
Commonwealth Cancer Center - New office Building	Danville, Kentucky	Common Wealth Cancer	KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction KBC 1704.7 - Soils Construction
Value Place Hotel	Lexington, Kentucky	MCR, LLC	KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction KBC 1704.7 - Soils Construction
Holiday Inn Express	Mt. Sterling, Kentucky	Tri-State Hotels, Inc.	KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction KBC 1704.7 - Soils Construction
Central Baptist Office Building - Brannon Crossing	Nicholasville, Kentucky	Jarboe Construction	KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction KBC 1704.7 - Soils Construction
Montgomery County Field Fasig Tipton Office Building	Mt. Sterling, Kentucky Lexington, Kentucky	Montgomery County Schools DAVID Construction	KBC 1704.7 - Soils Construction KBC 1704.2 - Inspection of Fabricators KBC 1704.3 - Steel Construction KBC 1704.4 - Concrete Construction KBC 1704.5 - Masonry Construction

Scope of Services

We will provide qualified observation and testing in accordance with Chapter 17 of the 2007 KBC and the project specifications. The following Special Inspections and material testing services we are anticipating on the project include:

Inspection of Fabricators - KBC Citation 1704.2

- 1704.2.1 Observe and document that the fabricator maintains detailed fabrication and quality control procedures that provide a basis for inspection control of the workmanship and their ability to conform to approved construction documents and standards.

Steel Construction - KBC Citation 1704.3

- 1704.3.1 Periodically observe and document the materials used for high-strength bolts, nuts and washers are in accordance with the project documents.
- a) Observe the material's identification markings conform to ASTM standards as specified in the project documents.
 - b) Observe and document the manufacturer's certificate of compliance.
- 1704.3.2 Observe the high-strength bolting techniques as per AISC LRFD Section M2.5.
- a) Periodically observe and document bearing-type connections.
- 1704.3.3 Observe and document the materials for structural steel used are in accordance with the project documents.
- a) Observe and document the identification markings conform to ASTM standards as specified in the project documents.
 - b) Observe and document the manufacturers' certified mill test reports.
- 1704.3.4 Observe and document the materials for weld filler materials used are in accordance with the project documents.
- a) Observe and document the identification markings conform to AWS standards as specified in the project documents.
 - b) Observe and document the manufacturer's certificate of compliance.
- 1704.3.5 Conduct welding observation and testing of structural steel per the following:
- a) Structural Steel
 - 1) Continuous Special Inspections of complete and partial penetration groove welds.
 - 2) Continuous Special Inspections of multi-pass fillet welds.
 - 3) Continuous Special Inspections of single-pass fillet welds $>5/16"$.
 - 4) Periodic Special Inspections of single-pass fillet welds $<5/16"$.
 - 5) Periodic Special Inspections of floor and deck welds.

Concrete Construction - KBC Citation 1704.4

- 1704.4.1 Periodically observe the Grade, Placement and Condition of Reinforcing Steel as per ACI 318:3.5, 7.1-7.7.
- 1704.4.2 Continuously observe the welding of Reinforcing Steel as per AWS D1.4 and ACI 318: 3.5.2.

- 1704.4.3 Continuously observe bolts to be installed in concrete prior to and during the placement of concrete.
- 1704.4.4 Periodically verify the use of the required design mix as per ACI 318: 4, 5.2-5.4.
- 1704.4.5 Sample and test fresh concrete for slump, air content and temperature as per ASTM C172, C31 and ACI 318: 5.9 & 5.10.
- 1704.4.6 Continuously observe concrete placement for proper application techniques as per ACI 318: 5.9, & 5.10.
- 1704.4.7 Periodically observe the specified curing temperature and techniques as per ACI 318: 5.11-5.13.

Masonry Construction - KBC Citation 1704.5

- 1704.5.1.1 **Level I Special Inspections.** From the beginning of construction, we will:
 - a) Periodically observe and document the proportions of site prepared mortar.
 - b) Periodically observe and document the construction of mortar joints.
 - c) Periodically observe and document the location of reinforcement and connectors.
- 1704.5.1.2 Observe and document:
 - a) Size and location of structural elements, periodic.
 - b) Type, size and location of anchors, periodic, as per ACI 530/ASCE 5/TMS 402, Sec 1.115.4, 2.1.2 and the project documents.
 - c) Specified size, grade and type of reinforcement, periodic, as per the project documents.
 - d) Welding of reinforcing bars, continuous, as per project documents and KBC 2108.9.2.11.2.
 - e) Protection of masonry during cold (<40F) and hot (>90F), periodic, as per project documents and KBC 2104.3, 4.
- 1704.5.1.3 Periodically observe and document the following prior to grouting operations:
 - a) Grout space is clean and free of debris.
 - b) Placement of reinforcement and connectors as per the project document.
 - c) Proportions of site-prepared grout.
- 1704.5.1.4 Continuously observe and document grout placement per the construction documents.
- 1704.5.1.5 Continuously observe the preparation of test samples. Test masonry specimens as per the project documents and KBC 2105.3, 4 & 5.
- 1704.5.1.6 Periodically observe and document of submittals per the project documents.

Soil Construction - KBC Citation 1704.7

- 1704.7.1 Periodically verify Materials below footings are adequate to achieve the design bearing capacity.
- 1704.7.2 Periodically verify excavations are extended to proper depth and have reached proper material.
- 1704.7.3 Periodically perform classification and testing of controlled fill materials.
- 1704.7.4 Continuously verify the use of proper materials, densities and lift thicknesses during placement and compaction of controlled fill.

- 1704.7.5 Periodically observed and verify that the site has been prepared as per the project documents before placement of controlled fill.

Project Organization

CSI will provide the before mentioned scope with qualified Construction Engineering Professionals (CEP's). CSI's staff includes International Code Council (ICC) Certified Special Inspectors, National Institute for Certifications in Engineering Technologies (NICET), American Welding Society (AWS), American Concrete Institute (ACI) and others.

Our KBC Special Inspection team will be led by Mr. Darrin E. Croucher, E.I.T., S.I., who will manage and oversee the construction KBC Special Inspection and material testing program for CSI. Mr. Croucher brings over 14 years of construction testing and project management to the team. He has been a leader in the development of the KBC/IBC throughout Kentucky and the Eastern United States. Mr. Croucher developed CSI's Total Reporting System (TRS) that includes a completely paperless, precise and detailed method of reporting. The TRS provides the design team and owner, assurance that specific structural items were observed and meet the plan design and helping the owner obtain their Certification of Occupancy. Mr. Croucher is a graduate engineer from the University of Kentucky and holds International Code Council Special Inspection certificates. Mr. Croucher will provide the KBC Special Inspections during the Masonry and Concrete Construction.

Mr. Shayne Brashear, CWI, SI, is CSI's Construction Manager and will also be involved on the project providing Structural Steel and Fabricator Inspection along with technical guidance. Mr. Brashear brings over 19 years of construction testing and project management to the team and is certified by the American Welding Society as a Certified Weld Inspector, the International Code Council as a Masonry Special Inspector and NICET as Level III in Concrete and Soils.

Mr. Joe Cooke, P.E., S.I. will be assigned as the Registered Professional Engineer for CSI. Mr. Cooke has over 15 years of construction experience in Kentucky and is the only Geotechnical Engineer with an International Code Council (ICC) Certification in Soil Construction (KBC 1704.7). If chosen to provide KBC Special Inspections and material testing, Mr. Cooke will oversee CSI's technical aspects of the KBC Special Inspection items. This includes laboratory, fill placement, field inspections and monitoring.

Mr. Kevin Farthing, P.E. will be assigned to the project during the foundation. Mr. Farthing has over nine (9) years of construction and Geotechnical construction experience. Mr. Farthing will on-site during the soils and foundation portion of the project conduction Soil and Concrete KBC Special Inspection and testing.

If an alternate inspector is required, we will inform the Structural Engineer and Architect immediately. Other CSI CEP's may include:

Mr. Harry Cryus, ACI, NICET Level I, KY Grade and Drain Level II – Asphalt and Roadway

Mr. Scott Gevedon, CAWI, ACI – Structural Steel and Bolting & Site Testing.
Mr. Ron Griffith, ACI, NICET Level I – Site Testing.

General

1. Report daily inspection and observation activities to on-site representative.
2. Submit weekly reports documenting activities weekly to the Architect and Structural Engineer.
3. Submit a final report of inspections documenting required special inspections and correction of discrepancies noted during field inspections.

We strongly suggest that Special Inspections be discussed at a Pre-Construction Meeting so all participants are made aware of the Special Inspection requirements for this project and the unique scheduling needs. The contractor and CSI must work together to make sure adequate time is allotted to make the Special Inspection. We request 48 hours prior to the start of construction and a 24 hours notice each time our presence at the job site is required afterward. Please be aware that many Special Inspections items require that we be on-site earlier than in the past to document specific items and any corrections can be made prior to proceeding with the construction task. This provision affects virtually all phases of construction.

Construction materials testing consists of sampling and testing a very small portion of the materials used in construction. As such, one must not interpret the test results as a guarantee that the entire work product is represented by the results. Our presence at the job site and our performance of testing services must not be construed as relieving the contractor from his responsibility to comply with the plans and specifications. Our representatives do not have the authority to supervise the work nor direct contractor personnel. Also, our services are not in any way related to job site safety.

Compensation

We have reviewed the RFP provided to us in preparing our KBC Special Inspection and material testing budget. We have established a **Lump Sum budget \$44,548.00 or 0.0074 percent** of the construction cost to perform the required Special Inspection and Testing for the project. We understand that once a contractor has been chosen and a schedule set, the specific number of trips for periodic and continuous inspection will be determined.

Authorization

In order to formally authorize our services and make this proposal and the attached Terms and Conditions the agreement between us, we request that you sign the attached Proposal/Work Acceptance Sheet and return a signed copy of the proposal to us. Any exceptions to this proposal, or any special requirements not covered in the proposal, should be listed on the terms and Condition Sheet.

Conclusion

Thank you for considering CSI for your project. Please call if you have any questions regarding the information contained herein.

Sincerely,



CONSULTING SERVICES INCORPORATED OF KENTUCKY

A handwritten signature in black ink, appearing to read 'SB', representing Shayne Brashear.

Shayne Brashear
Senior Project Manager

A handwritten signature in black ink, appearing to read 'Darrin E. Croucher', representing Darrin E. Croucher.

Darrin E. Croucher, E.I.T., S.I.
Project Engineer

Attachments: Fee Schedule, Proposal Acceptance Sheet/Terms and Conditions

Fee Schedule

Radcliff Middle School, Proposal Number 1113

KBC Special Inspections, Testing and Observation Services

Construction Engineering Professional – Soils, per hour.....	\$45.00
Construction Engineering Professional – Masonry, per hour	\$45.00
Construction Engineering Professional – Concrete, per hour	\$45.00
Construction Engineering Professional – Foundations, per hour	\$45.00
Construction Engineering Professional – Steel, per hour	\$85.00

Engineering Services

Project Engineer, per hour.....	\$85.00
Senior Engineer, per hour.....	\$125.00
Project Manager, per hour	\$65.00
Review & Distribution of Reports, per item.....	\$25.00
Clerical, per hour.....	\$40.00

Laboratory Testing Services

Concrete Compressive Sets (Set of 5), (including reserves), each	\$85.00
Masonry Prism Set (Set of 6), each	\$375.00
Standard Proctor (ASTM D 698), each	\$135.00
Atterberg Limits (LL, PL, PI) and Natural Moisture content, each.....	\$55.00

Miscellaneous

Travel, per trip.....	\$160.00
Travel, per trip.....	\$110.00
Nuclear Density Gauge, per day	\$35.00
Final Special Inspection Letter, each	\$250.00

Remarks

- ⚠ All projects will be invoiced a one time \$70.00 project set-up fee.
- ⚠ Services and fees not listed will be quoted on request.
- ⚠ All personnel hourly rates are based on portal-to-portal time.
- ⚠ A minimum of four (3) hours will be charged for personnel per jobsite or field visit. A minimum of 24 hours advance notice is requested for scheduling or canceling field services.
- ⚠ Overtime rates are applicable for services performed before 8:00 a.m. or after 4:00 p.m., 8 hours per day, Saturdays, Sundays and Holidays, and will be billed at 1.5 multiplied by hourly rate.
- ⚠ Distribution & Review Reporting Fee is applicable for all field reports.
- ⚠ For jobsite or field testing or sampling services, personnel hours are charged for job preparation including specifications, drawings and lab data review, consultations with engineers, mobilization, travel time portal to portal, demobilization and documentation for reports.