July 24, 2014

CPMI
300 E. Locust, Suite 300
Des Moines, IA 50309

Attn: Mr. Randy Sharp
P: [515] 710-5876
E: RSharp@cpmi.com

Re: Geotechnical Engineering Report
Rock Port High School Gymnasium Addition
600 S. Nebraska Street
Rock Port, MO
Terracon Project Number: 02145105

Dear Mr. Sharp:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering services for the referenced project. These services were performed in general accordance with our Agreement executed on May 29, 2014. This Geotechnical Engineering Report presents the findings of the subsurface exploration and provides professional opinions and recommendations regarding design of addition foundations.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Daniel A. Barnett, P.G.
Project Geologist
Missouri: 2007035892

Sara J. Somsky, P.E.
Geotechnical Services Manager
Missouri: PE-2006029709

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Five (5) borings were performed at the site of the proposed Rock Port High School Gymnasium Addition. Samples recovered from the borings have been tested. Logs of borings with test data are appended to this Geotechnical Engineering Report. Professional opinions and recommendations presented in this report are summarized below.

- Existing fill comprised of clay soils with variable amounts of construction debris were encountered at the borings. Support of foundations and floor slabs on or above unmodified existing fill is not recommended.

- The native clay soils encountered below the existing fill exhibited very soft to medium stiff consistencies and groundwater was encountered at depths ranging from approximately 13 to depths exceeding 60 feet below existing ground surface. Overexcavation of the existing fill and placement of new engineered fill directly above very soft to medium stiff water bearing clay soils would be challenging.

- We recommend utilizing a ground improvement system such as rammed aggregate piers to reinforce the subgrade so it is capable of supporting conventional shallow foundations and grade-supported floor slabs.

- Based on the 2012 International Building Code (IBC), the seismic site classification for this site is E.

The professional opinions and recommendations presented in this report are based on evaluation of data developed by testing discrete samples obtained from widely spaced borings. Site subsurface conditions have been inferred from available data, but actual subsurface conditions will only be revealed by excavation. So that variations in subsurface conditions which may affect the design can be addressed as they are encountered, we recommend a qualified geotechnical engineer be retained to observe excavation and perform tests during the site preparation, earthwork and foundation construction phases of the project.

This executive summary should not be separated from or used apart from this report. This report presents recommendations and opinions based on our understanding of the project at the time the report was prepared. The report limitations are described in section **5.0 GENERAL COMMENTS**.

GEOTECHNICAL ENGINEERING REPORT
ROCK PORT HIGH SCHOOL GYMNASIUM ADDITION
600 S. NEBRASKA STREET
ROCK PORT, MO

Terracon Project No. 02145105
July 24, 2014

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) drilled five (5) borings at the site to depths of approximately 20 feet below the existing ground surface. Samples of subsurface strata were recovered and tested in our laboratory. An exploration plan and logs of borings with test data are included in Appendix A of this Geotechnical Engineering Report.

This report describes subsurface conditions encountered at the borings and presents opinions and recommendations regarding design of addition foundations and floor slabs.

2.0 PROJECT INFORMATION

2.1 Project Description

Item	Description
Site layout	See Appendix A, Exhibit A-1, Exploration Plan
Gymnasium addition	The proposed 13,500 square-foot gymnasium addition will be a pre-engineered metal structure with a grade-supported floor slab.
Finished floor elevation (FFE)	945.20 feet
Maximum loads (estimated by Terracon)	Columns: 150 kips Walls: 4 klf Floors: 150 psf
Grading	Based on the preliminary site grading plan, maximum fills of approximately 6 feet will be required to develop the design FFE.

2.2 Site Location and Description

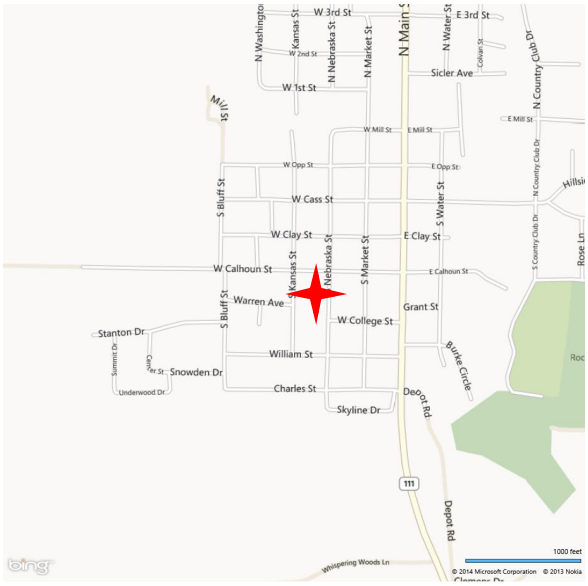


Figure 1. Site location

Figure 2. Aerial photograph of site

Item	Description
Location	The existing high school campus is located at 600 S. Nebraska Street in Rock Port, MO.
Existing Improvements	The existing school campus buildings are single- to multi-story brick and mortar structures. We do not know if the existing buildings have basements or other below-grade areas. We understand a former 3-story building once occupies the addition area. We understand that the existing structures are supported on shallow footings.
Current Ground Cover	Grass
Topography	Based on the reference elevations of our borings, the site is relatively level.

3.0 SUBSURFACE CONDITIONS

3.1 Typical Subsurface Profile

Subsurface conditions at the borings can be generalized as follows:

Stratum	Depth to Bottom of Stratum	Material	Comments
1	3 inches	Root zone materials	Encountered at all borings.

Stratum	Depth to Bottom of Stratum	Material	Comments
2	8 to 15 feet	Existing fill	The existing fill was comprised of lean clay soils with variable amounts of gravel, brick, and concrete fragments. We expect the existing fill is associated with demolition of the former 3-story building that once occupied the site.
3	Not determined [1]	Native lean clay	Very soft to medium stiff

1. The borings were terminated at depths ranging from approximately 20 to 60 feet in lean clay.

Conditions encountered at each boring location are indicated on the individual boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soil types; in situ, the transition between materials may be gradual.

3.2 Water Level Observations

The borings were observed while drilling and immediately after completion for the presence and level of groundwater. Groundwater level observations are presented in the following table:

Boring No.	Depth to Groundwater
B-1	13 feet
B-2	13 feet
B-3	not encountered
B-4	13 feet
B-5	18 feet
B-6	20 feet

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels could be different than indicated on the boring logs at other times. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

4.0 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

4.1 Geotechnical Considerations

Existing fill was encountered at the boring locations to depths ranging from approximately 8 to 15 feet. We understand a former 3-story structure once occupied the project site and the fill

encountered in the borings is likely associated with this former structure. The moisture contents of recovered samples of the existing fill ranged from approximately 10 to 20 percent and dry unit weights ranged from approximately 84 to 108 pcf. The test data suggests to us that the fill was not placed with strict moisture and density control. The native clay soils encountered below the existing fill exhibited very soft to medium stiff consistencies. In addition, groundwater was encountered at depths ranging from approximately 13 to 18 feet below existing ground surface.

Support of new structures on or above undocumented existing fill involves risks, which include, but are not limited to, unpredictable total and differential settlement of supported slabs, walls and foundations. These risks cannot be eliminated without complete removal of the existing fill and replacement with engineered fill, or supporting the structure, including floors, on deep foundations. However, the native clay soils encountered below the existing fill exhibited very soft to medium stiff consistencies and groundwater was encountered at depths ranging from approximately 13 to 18 feet below existing ground surface. Overexcavation of the existing fill and placement of new engineered fill directly above very soft to medium stiff water bearing clay soils would be challenging.

We recommend utilizing a ground improvement system such as rammed aggregate piers to reinforce the subgrade so it is capable of supporting conventional shallow foundations and grade-supported floor slabs. Up to 7 feet of new fill will be required to develop the finished grades within the proposed addition. We recommend new fill be placed as soon as possible. Settlement plates should be placed on the exposed subgrade prior to placement of engineered fill. The settlement plates should be regularly monitored to evaluate the rate of settlement as the soft clay soils are compressed by the weight of the new fill. Installation of rammed aggregate piers may be initiated immediately following placement of new fill.

To provide a more uniform subgrade below the proposed floor slab, we recommend an 18-inch thick LVC zone be constructed beneath the addition floor slab. The use of an LVC zone, as recommended in this report, should reduce, but will not eliminate potential for subgrade volume change and resultant floor slab movements. To further reduce this potential, a thicker LVC zone should be considered. Details regarding this LVC zone are provided in this report in sections **4.2.2 Engineered Fill Material Requirements** and **4.5 Floor Slab.**

This report provides recommendations to help mitigate the effects of subgrade movements below the floor slab. However, even with these procedures, some subgrade movement, which could cause deformation, distortion and/or cracks could still occur. The severity of cracks and other cosmetic damage such as floor slab movement will probably increase if any modification of the site results in excessive wetting or drying of the on-site soils. Eliminating the risk of movement and cosmetic distress may not be feasible, but it may be possible to further reduce the risk of movement if significantly more expensive measures are used during construction. We would be pleased to discuss other construction alternatives with you upon request.

4.2 Earthwork

Recommendations for site preparation, excavation, subgrade preparation, and placement of engineered fill for the project are provided in the following sections.

4.2.1 Site Preparation

Site preparation should be initiated by removing any vegetation, topsoil, and loose, soft, or otherwise unsuitable material from the construction areas. We recommend utilizing a ground improvement system such as rammed aggregate piers to reinforce the subgrade so it is capable of supporting grade-supported floor slabs. The soils present within 18 inches below the floor slab should be comprised of LVC materials.

The soils exposed following stripping and ground improvement should be observed and tested by Terracon prior to placing engineered fill. Following observation and testing of the exposed subgrade, new engineered fill should be placed as soon as possible. Settlement plates must be installed below new engineered fill sections.

4.2.2 Engineered Fill Material Requirements

Engineered fill should meet the following material property requirements:

Fill Type [1]	USCS Classification	Acceptable Location for Placement
Low Volume Change (LVC) Material [2]	CL (LL<45 and PI<23) or GM [3]	Within 18 inches of the addition floor slab and all other locations and elevations except where free-draining backfill is required.
Clay soils	CL	> 18 inches below grade-supported floor slabs unless tested and meets requirements for LVC material.
Granular soils	GM [3], GW, GP, SW, SP	Most locations and elevations except where free-draining backfill is required [4]

1. Controlled, compacted fill should consist of approved materials that are free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade.
2. Low plasticity cohesive soil or granular soil having at least 18% low plasticity fines.
3. Similar to MoDOT Type 5 crushed limestone aggregate.
4. Free-draining backfill should be granular material with less than 7% low plasticity fines.

4.2.3 Fill Placement and Compaction Requirements

Item	Description
Fill Lift Thickness [1]	9-inches or less in loose thickness when large, self-propelled compaction equipment is used. 4 inches or less when small, hand-guided equipment (plate or "jumping jack" compactor) is used.
Compaction Requirements [2]	95% of the material's maximum dry density [3]

Item	Description
Moisture Content Clay Soils	± 2% of optimum moisture content value [3]
Moisture Content Granular Material	Sufficient to achieve compaction without pumping when proofrolled

1. Reduced lift thicknesses are recommended in confined areas (e.g., utility trenches, foundation excavations, and foundation backfill) and when hand-operated compaction equipment is used.
2. We recommend that engineered fill be tested for moisture content and compaction during placement. Should the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved.
3. As determined by the standard Proctor test (ASTM D 698).

4.2.4 Grading and Drainage

During construction, grades should be developed to direct surface water flow away from or around the construction site. Exposed subgrades should be sloped to provide positive drainage so that saturation of subgrades is avoided. Surface water that accumulates on the site should be removed promptly. Final grades should promote rapid surface drainage away from the structure. Accumulation of water adjacent to the structure could contribute to significant moisture increases in the subgrade soils and subsequent softening/settlement or expansion/heave. Roof drains should discharge into a storm sewer or at least 10 feet away from the building.

4.2.5 Earthwork Construction Considerations

Care should be taken to avoid disturbance of prepared subgrades. Unstable subgrade conditions could develop during general construction operations, particularly if the soils are wetted and/or subjected to repetitive construction traffic. New fill compacted above optimum moisture content or that accumulates water during construction can also become disturbed under construction equipment. Construction traffic over the completed subgrade should be avoided to the extent practical. If the subgrade becomes saturated, desiccated, or disturbed, the affected materials should either be scarified and compacted or be removed and replaced. Subgrades should be observed and tested by Terracon prior to construction of the slab

Rammed aggregate piers can be installed immediately following placement of new engineered fill. The floor slab, walls and other above-grade portions of the structure should not be constructed until settlement plates indicate consolidation of the underlying soft and compressible clay soils have consolidated. Terracon should be provided the opportunity to review settlement plate survey data prior to commencement of floor slab construction.

The clayey soil fill is susceptible to disturbance from construction activity, particularly when the soils exhibit high moisture contents or are wetted by surface water and/or seepage. Depending on the subgrade conditions encountered at the time of construction, the subgrade following site stripping may require aeration or chemical treatment, such as incorporating Class C fly ash, to reduce moisture levels to achieve adequate compaction. We recommend building floor slabs be

supported on at least 18 inches of LVC fill. Atterberg limits tests performed on samples of fill indicate the fill materials meet the LVC criteria described in this report. Subgrade soils should be tested and fill soils that are not found to meet LVC criteria should be undercut and replaced.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, "Excavations" and its appendices, and in accordance with any applicable local, state, and federal safety regulations. The contractor should be aware that slope height, slope inclination, and excavation depth should in no instance exceed those specified by these safety regulations. Flatter slopes than those dictated by these regulations may be required depending upon the soil conditions encountered and other external factors. These regulations are strictly enforced and if they are not followed, the owner, contractor, and/or earthwork and utility subcontractor could be liable and subject to substantial penalties. Under no circumstances should the information provided in this report be interpreted to mean that Terracon is responsible for construction site safety or the contractor's activities. Construction site safety is the sole responsibility of the contractor who shall also be solely responsible for the means, methods, and sequencing of the construction operations.

4.3 Foundations

We recommend utilizing a ground improvement system such as rammed aggregate piers to reinforce the subgrade so it is capable of supporting conventional shallow foundations. The design of rammed aggregate reinforced subgrades is proprietary. Upon request, we can provide contact information for organizations specializing in design of these ground improvement methods. These organizations should be provided a copy of this geotechnical engineering report to use in design of the reinforced subgrade.

We expect excavations near existing structures will be required to construct new foundations. Care should be taken as soils are removed adjacent to existing footings so that the bearing soils beneath the existing building foundations are not disturbed. Where possible, excavations to remove existing soils should not extend below an imaginary plane that extends down from the top outside edge of existing footings at a slope of approximately 2 horizontal to 1 vertical (2H:1V). Even with these criteria, excavations that extend below the level of existing foundations should be backfilled the same day of excavation.

New foundations constructed immediately adjacent to the existing building foundations should not bear at an elevation higher than existing foundations. The bearing elevation for the adjacent existing foundations should be verified. Loads on new footings that are close to existing footings will result in a stress increase within the soils below the existing footings, which can cause movement of the existing footing. Maintaining a clear distance at least equal to the width of the new footings between edges of the new and existing footings helps reduce the stress increase below existing footings. Connections between the new addition and the existing building should be designed to allow for the anticipated differential movement.

The base of each foundation excavation should be free of water and loose or soft soil prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing soil disturbance. If the soils at bearing level become excessively dry, disturbed, saturated, or frozen, the affected soil should be removed prior to placing concrete. Placement of a lean concrete mud-mat over the bearing soils should be considered if the excavations must remain open overnight or for an extended period of time.

4.4 Seismic Site Class

Code	Site Class
2012 International Building Code (IBC)	E [1]

1. IBC Site Class determination is based on average properties of the subsurface profile within 100feet of the ground surface. Exploratory borings extended to a maximum depth of approximately 60 feet. Terracon's opinion of Site Class is based on boring data and our knowledge of geotechnical and geologic conditions in this locale.

4.5 Floor Slab

4.5.1 Design Recommendations

Item	Description
Floor Slab Support [1,2]	18 inches (minimum) of low volume change (LVC) materials on top of a reinforced subgrade [2]
Modulus of Subgrade Reaction	100 pounds per square inch per inch (psi/in) for point loading conditions
Granular Leveling Course Layer Thickness [3]	Minimum of 4 inches [5]
Capillary Break Layer Thickness [4]	Minimum of 6 inches [5]

Item	Description
1. Loads on footings which support structural walls are typically greater than floor slab loads. Consequently, footings should be expected to settle more than the adjacent floor slabs. Differential movement between foundations and grade-supported floors should be considered by the structural engineer.	
2. Subgrades should be prepared as recommended in Section 4.2 prior to placement of LVC materials. We recommend clay subgrades be maintained in a relatively moist condition until the floor slabs are constructed. If the subgrade should become desiccated prior to construction of the floor slabs, the affected material should be removed or the materials scarified, moistened, and recompacted. Upon completion of grading operations in the addition areas, care should be taken to maintain the recommended subgrade moisture content and density prior to construction of the addition floor slabs.	
3. If the purpose of this layer is solely to create a level base for concrete placement to maintain a more uniform slab thickness, well graded sand, gravel or crushed stone can be used.	
4. If penetration of moisture vapor through the slabs is a concern, the floor slab design should include a capillary break layer instead of the granular leveling course layer described above. Capillary break layers should be comprised of granular materials that have less than 5 percent fines (material passing the #200 sieve). Other design considerations such as cold temperatures and condensation development could warrant additional design considerations.	
5. These granular materials may be considered part of the LVC zone.	

Joints should be constructed at regular intervals as recommended by the American Concrete Institute (ACI) to help control the location of cracking. It should be understood that differential settlement between the floor slabs and foundation could occur.
The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

4.5.2 Floor Slab Construction Considerations

On most project sites, the site grading is generally accomplished early in the construction phase. However as construction proceeds, subgrades may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, floor slab subgrades may not be suitable for placement of granular material and/or concrete and corrective action will be required.

Terracon should review the condition of the floor slab subgrades immediately prior to placement of the granular leveling course and construction of the slabs. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas containing backfilled trenches. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill.

5.0 GENERAL COMMENTS

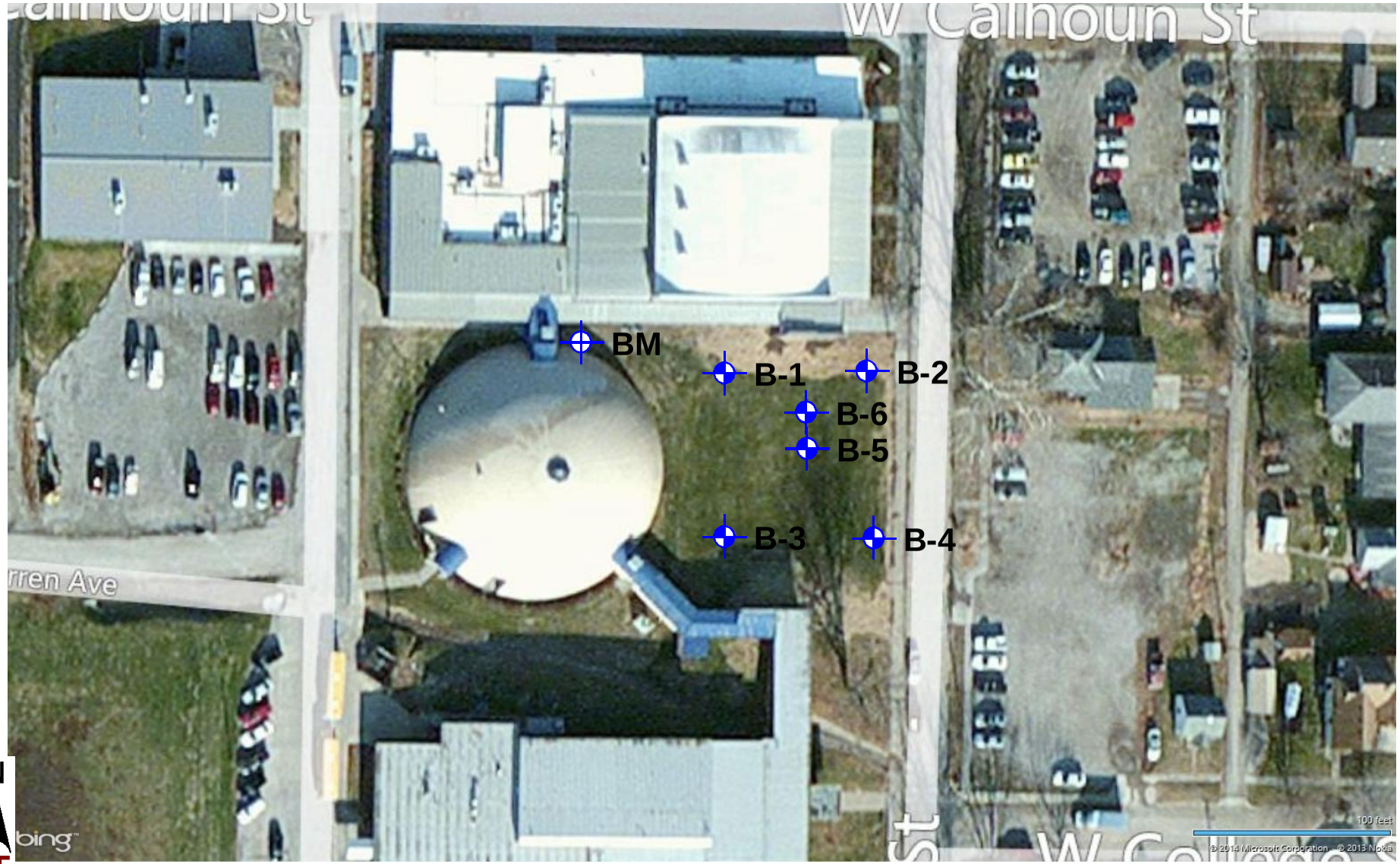
Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project.

The recommendations and professional opinions presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of geotechnical services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, express or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. If the nature, design, or location of the project are different or change from those outlined in this report , the opinions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX A
FIELD EXPLORATION



Boring Location

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

Project Manager: DAB	Project No. 02145105
Drawn by: DAB	Scale: NTS
Checked by: SJS	File Name:
Approved by: DAB	Date: 07/24/2014

Terracon
Consulting Engineers & Scientists
13910 West 96th Terrace Lenexa, KS 66215
PH. (913) 492-7777 FAX. (913) 492-7443

BORING LOCATION DIAGRAM

Rock Port Gymnasium Addition
600 S. Nebraska Street
Rock Port, MO

Exhibit
A-1

BORING LOG NO. B-1

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 99 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	98.5										
3" ROOT ZONE											
FILL - LEAN CLAY, trace gravel, brick fragments, and concrete fragments, brown					24		9000 (HP)		12	97	42-23-19
					24		9000 (HP)		21	95	
		5									
8.0	91										
FILL - LEAN CLAY, trace gravel, dark gray					14			1350	24	96	
		10	▽								
13.0	86										
LEAN CLAY (CL), light gray, soft					24			540	35	86	
		15									
20.0	79				16			970	31	95	
Boring Terminated at 20 Feet		20									

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Continuous flight solid stem auger

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:

WATER LEVEL OBSERVATIONS

▽ *13 feet while sampling*

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 6/2/2014 | Boring Completed: 6/2/2014

Drill Rig: 988 | Driller: SSS

Project No.: 02145105 | Exhibit: A-2

BORING LOG NO. B-2

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 95 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	94.5										
3" ROOT ZONE											
FILL - LEAN CLAY, trace gravel, light brown					24		9000 (HP)		14	84	
- with concrete fragments below 3 feet					12		9000 (HP)		12	97	
		5									
8.0	87										
LEAN CLAY (CL), light brown to light gray, soft to medium stiff					20			1390	30	94	
		10	▽								
					24			780	31	95	
		15									
20.0	75				24			620	31	92	
		20									
Boring Terminated at 20 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Continuous flight solid stem auger

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:

WATER LEVEL OBSERVATIONS

▽ *13 feet while sampling*

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 6/2/2014 | Boring Completed: 6/2/2014

Drill Rig: 988 | Driller: SSS

Project No.: 02145105 | Exhibit: A-3

BORING LOG NO. B-3

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 99 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	98.5										
3" ROOT ZONE											
FILL - LEAN CLAY, with gravel, light brown					24		9000 (HP)		14	108	
					24		9000 (HP)		18	104	
		5									
8.0	91										
FILL - LEAN CLAY, trace gravel, dark gray					16			3100	20	105	
		10									
15.0	84				14		500 (HP)		23		
LEAN CLAY (CL), light brown and light gray, soft		15									
20.0	79				24			610	29	98	
		20									
Boring Terminated at 20 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Continuous flight solid stem auger

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 6/2/2014 | Boring Completed: 6/2/2014

Drill Rig: 988 | Driller: SSS

Project No.: 02145105 | Exhibit: A-4

BORING LOG NO. B-4

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 97 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	96.5										
3" ROOT ZONE											
FILL - LEAN CLAY, trace gravel, brick fragments, and concrete fragments, light brown with light gray					24		8000 (HP)		14		44-23-21
					24		9000 (HP)		15	92	
		5									
8.0	89										
LEAN CLAY (CL), light gray, soft to medium stiff					24			1290	30	92	
		10	▽								
					16			800	31	92	
		15									
20.0	77				22			690	31	97	
Boring Terminated at 20 Feet		20									

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Continuous flight solid stem auger

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:

WATER LEVEL OBSERVATIONS

▽ *13 feet while sampling*

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 6/2/2014 | Boring Completed: 6/2/2014

Drill Rig: 988 | Driller: SSS

Project No.: 02145105 | Exhibit: A-5

BORING LOG NO. B-5

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 96.5 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	96										
3" ROOT ZONE											
FILL - LEAN CLAY, trace gravel, light brown and dark gray					16		9000 (HP)		10	101	
					24			6130	20	104	
		5									
8.0	88.5										
LEAN CLAY (CL), light gray, soft to medium stiff					18			1060	30	98	
		10									
					18			930	30	93	
		15	▽								
20.0	76.5				24			650	32	95	
Boring Terminated at 20 Feet		20									

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Continuous flight solid stem auger

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:

WATER LEVEL OBSERVATIONS

▽ *18 feet while sampling*

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 6/2/2014 | Boring Completed: 6/2/2014

Drill Rig: 988 | Driller: SSS

Project No.: 02145105 | Exhibit: A-6

BORING LOG NO. B-6

PROJECT: Rock Port High School Gymnasium Addition

CLIENT: CPMI
Des Moines, IA

SITE: 600 S. Nebraska Street
Rock Port, MO

LOCATION See Exhibit A-1

Surface Elev.: 96.5 (Ft.)

DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (In.)	FIELD TEST RESULTS	LABORATORY TORVANE/HP (psf)	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI
0.3	96										
3" ROOT ZONE											
FILL - LEAN CLAY, trace gravel, light brown and dark gray											
					20		+9000 (HP)		15		
		5			16		+9000 (HP)		16		
8.0	88.5										
LEAN CLAY (CL), light gray, very soft to medium stiff											
		10			13		3500 (HP)		30	93	
		15			20			1360	30	95	
		20	▽		18			1110	32	81	
		25			18			690	32	94	
		30			20			840	35	87	
		35			12	WOH-WOH-WOH			38		
		40			14	2-2-2 N=4			33		
		45			10	WOH-WOH-2 N=2			46		
		50			14	WOH-WOH-3 N=3			42		
		55			17			1360	31	97	
60.0	36.5	60			14	1-2-3 N=5			31		
Boring Terminated at 60 Feet											

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic SPT Hammer

Advancement Method:
Continuous flight hollow-stem augers and mud rotary

Abandonment Method:
Boring backfilled with soil cuttings upon completion.

See Exhibit A-8 for description of field procedures

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Elevations were measured in the field using an engineer's level and grade rod.

Notes:
WOH: Weight of Hammer

WATER LEVEL OBSERVATIONS

▽ *20 feet while sampling*

Terracon
13910 West 96th Terrace
Lenexa, Kansas

Boring Started: 7/3/2014 | Boring Completed: 7/3/2014

Drill Rig: 208 | Driller: DB

Project No.: 02145105 | Exhibit: A-7

Field Exploration Description

The boring locations were laid out at the site by Terracon utilizing the provided site plan by measuring distances from existing site feature and estimating right angles. Ground surface elevations indicated on the logs (rounded to the nearest ½ foot) were obtained by drill crew using an engineer's level and grade rod. The elevations were referenced to the FFE of the existing dome-shaped structure. We assigned an arbitrary elevation of 100 feet, site datum, to the FFE of this structure. The locations and elevations of the borings should be considered accurate only to the degree implied by the means and methods used to define them.

The borings were drilled with a rotary drill rig using continuous flight augers and core drilling to advance the boreholes. Samples of the soils encountered at the borings were obtained using thin-walled tube sampling procedures. In the thin-walled tube sampling procedure, a thin-walled, seamless steel tube with a sharp cutting edge is pushed hydraulically into the soil to obtain a relatively undisturbed sample. The samples were sealed and transported to the laboratory for testing and classification.

The drill crew prepared a field log of each boring. These logs included visual classifications of the materials encountered during drilling and the driller's interpretation of the subsurface conditions between samples. The boring logs included with this report represent an interpretation of the field logs and include modifications based on laboratory observation and tests of the samples.

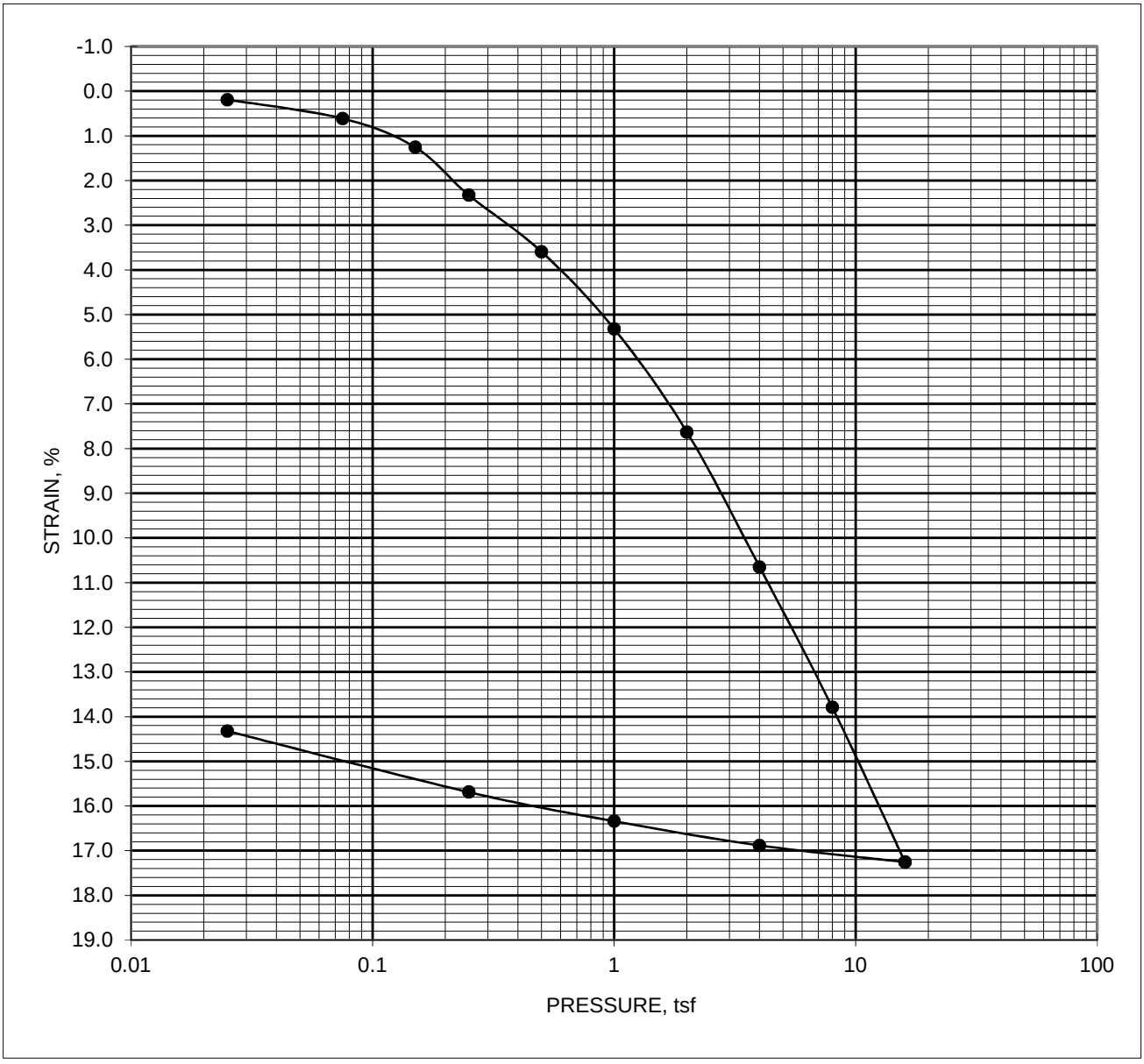
APPENDIX B
LABORATORY TESTS

Laboratory Tests

Representative samples obtained from the borings were tested in the laboratory to measure their natural water contents, dry unit weight, Atterberg limits, and unconfined compressive strength. A hand penetrometer was used to estimate the approximate unconfined compressive strength of selected cohesive samples. A one-dimensional consolidation test was performed on a sample obtained from Boring B-6. The test results are provided on the boring logs in Appendix A and the test data sheet in Exhibit B.

The soil samples were classified in the laboratory based on visual observation, texture, plasticity, and the limited laboratory testing described above. The soil descriptions presented on the boring logs for native soils are in accordance with the enclosed General Notes and Unified Soil Classification System (USCS). The estimated USCS group symbols for native soils are shown on the boring logs, and a brief description of the USCS is included in this report.

ONE-DIMENSIONAL CONSOLIDATION PROPERTIES OF COHESIVE SOILS
ASTM D2435



DIAMETER, mm	63.57	HEIGHT, mm	25.31	PROPERTY		BEFORE TEST	AFTER TEST
OVERBURDEN PRESSURE, tsf		1.68		MOISTURE, %		32.6	24.0
PRECONSOL. PRESSURE, tsf		0.81		DRY DENSITY, pcf		87.4	101.0
OVER CONSOLIDATION RATIO		0.5		SATURATION, %		95	99
COMPRESSION INDEX		0.22		VOID RATIO		0.928	0.652
REBOUND INDEX		0.023		SAMPLE TYPE		3" SHELBY TUBE	
LIQUID LIMIT	39	PLASTIC LIMIT	25	PLASTICITY INDEX	14	SPECIFIC GRAVITY	2.7 ESTIMATED
SAMPLE DESCRIPTION	LEAN CLAY WITH SAND, DARK GRAY						
BORING NO.	B-6	SAMPLE NO.	S-7	DEPTH, feet	28.0 - 30.0		

ROCK PORT GYMNASIUM ADDITION
ROCK PORT, MO
02145105
7/24/2014

TESTED BY _____

APPROVED BY _____

N:\Projects\2014\02145105\Working Files\Laboratory-Field Data-Boring Logs\[02145105 Consol B6-S7-28.0'.xlsx]REPORT % Strain

Terracon

ROCK PORT GYMNASIUM ADDITION
ROCK PORT, MO
02145105
7/24/2014

ADDITIONAL CONSOLIDATION DATA

B-6
S-7
28.0 - 30.0

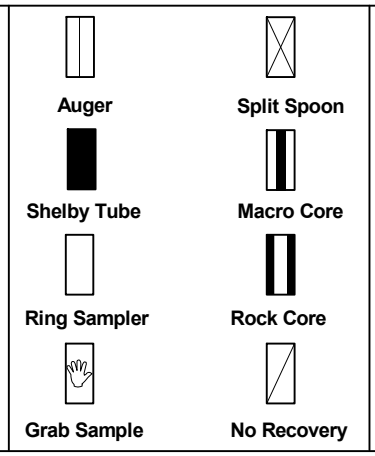
PRESSURE, tsf	Cv50, cm2/sec	Cv90, cm2/sec	Av, cm2/g	Mv, cm2/g	k, cm/sec
0					
0.025			1.50E-04	7.79E-05	
0.075	5.79E-04	5.83E-04	1.66E-04	8.63E-05	5.00E-08
0.15	6.79E-04	6.83E-04	1.69E-04	8.81E-05	5.98E-08
0.25	9.22E-04	9.27E-04	2.12E-04	1.11E-04	1.02E-07
0.5	1.01E-03	1.02E-03	9.96E-05	5.29E-05	5.34E-08
1	1.33E-03	1.34E-03	6.80E-05	3.66E-05	4.87E-08
2	1.43E-03	1.44E-03	4.55E-05	2.49E-05	3.57E-08
4	1.54E-03	1.55E-03	2.98E-05	1.67E-05	2.58E-08
8	1.83E-03	1.84E-03	1.55E-05	8.98E-06	1.65E-08
16	1.96E-03	1.97E-03	8.53E-06	5.13E-06	1.01E-08
AVERAGE	1.25E-03	1.26E-03	9.63E-05	5.09E-05	4.47E-08

APPENDIX C
SUPPORTING DOCUMENTS

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING



WATER LEVEL

Water Initially Encountered

Water Level After a Specified Period of Time

Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(b/f)	Standard Penetration Test (blows per foot)
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength, Qu, psf**	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or $1 > Cc > 3$ [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel [F,G,H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or $1 > Cc > 3$ [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G,H,I]
			Fines classify as CL or CH		SC	Clayey sand [G,H,I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A" line [J]		CL	Lean clay [K,L,M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K,L,M,N]
			Liquid limit - not dried			Organic silt [K,L,M,O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K,L,M]
			PI plots below "A" line		MH	Elastic Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K,L,M,P]
			Liquid limit - not dried			Organic silt [K,L,M,Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

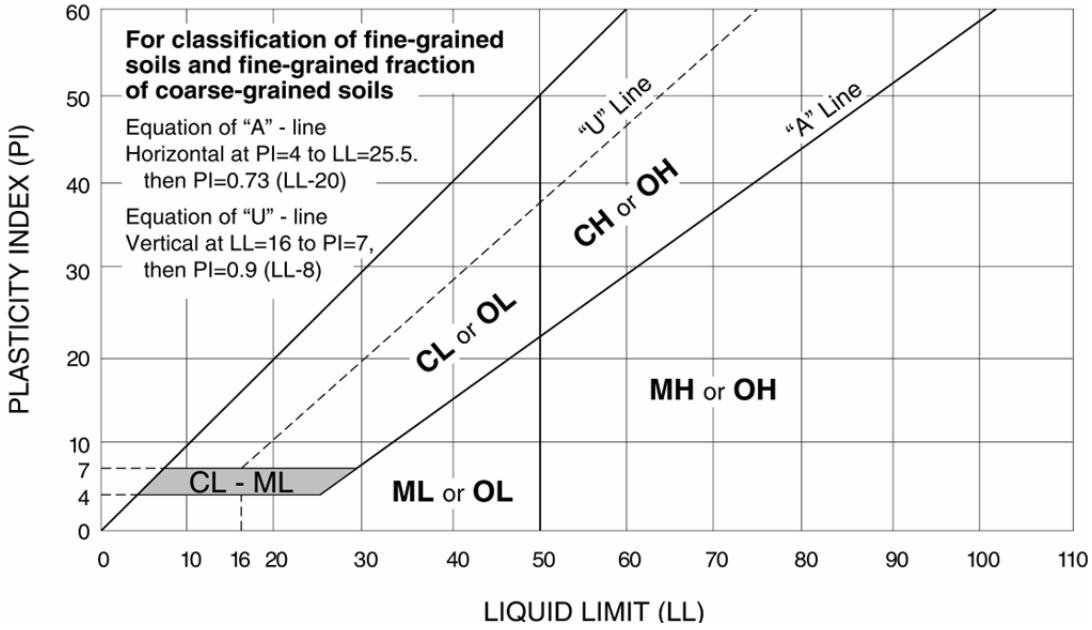
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



Terracon

Exhibit C-2

SECTION 011000 - SUMMARY OF WORK

1.0 GENERAL

1.1 RELATED DOCUMENTS

1.1.1 All Contract Documents including Bidding Documents, Conditions of the Contract, General Requirements, Specifications and Drawings apply to Work of this Section.

1.2 CONTRACTS

1.2.1 The Owner intends:

1. To award, in connection with this Project, a Contract or Multiple Contracts composed of the Packages described herein as Owner may determine appropriate based upon overall cost of the Project.
2. To have a full-time Construction Manager (CM) acting as defined in the General and Supplementary Conditions of the Contract.
3. To contract for independent survey, material testing and inspection services as it deems necessary.

1.2.2 Contract Work shall be performed concurrently with and/or in close coordination with Work performed on the Project under other Contracts to make a functionally complete Project.

1.2.3 The extent of the Work of each Package is briefly enumerated under "Description of Work" and “General Scope”, but is not necessarily limited to these summary descriptions. Each Contractor shall provide management of their Contract Work. This includes on and off-site management necessary to coordinate with the other Contractors and the Owner and CM, and to complete the Work within the Contract time.

1.2.4 Construction Packages for the Project are:

CP-1 Aggregate Piers
CP-2 Mutiscope (General Construction)
CP-3 Metal Building Systems
CP-4 Wood Athletic Flooring
CP-5 Telescoping Stands
CP-6 Mechanical
CP-7 Electrical

1.3 GENERAL SCOPE FOR ALL PACKAGES

1.3.1 Contractor’s work shall conform to plans and specifications and is to include furnishing material, fabrication, delivery, installation, tools, trucking, equipment, labor, supervision, insurance, taxes, incidentals, engineering and support functions necessary to complete their scope of work.

1.3.2 Contractor shall perform daily and final clean up of debris for all work performed under their scope of work and remove place in owner provided dumpsters. This clean up shall be performed often enough to ensure no other trades are hampered by debris and/or if debris causes a safety situation. Should contractor fail to clean work areas on a daily basis this shall constitute immediate default of contract and area will be cleaned by alternate methods forwarding all cost back to contractor. Should area be occupied by multiple contractors they shall share in the costs based on manpower on project site.

1.3.3 Contractor shall provide all hoisting and rigging for work under their scope unless specifically noted otherwise within Section 011000. All hoisting and scaffolding to be in accordance with O.S.H.A.

regulations, local and state agencies. All materials delivered F.O.B. jobsite shall be off loaded by contractor to a designated staging point.

1.3.4 Each contractor is responsible for all fees required by the architect/engineer for use of electronic files that may be used in coordination/development of shop drawings or as-built.

1.3.5 Contractor is responsible for coordinating and scheduling all necessary testing and inspections with CPMI. Be advised that any failed inspections of work will result in payment of re-inspection by Contractor.

1.3.6 Contractor is responsible for its' own layout, field verification and engineering. Contractor will be responsible to verify accuracy of work previously installed prior to continuing with their work.

1.3.7 Contractor acknowledges he (contractor) has visited the site and is fully aware of site conditions, staging area, access, parking requirements. Neither CPMI nor the Owner is responsible for theft or damage to tools and materials during construction.

1.3.8 Contractor is warned that any damage done to existing facilities, new construction, or appurtenances will result in back charges for repairs. Contractor shall and will respect work done by others.

1.3.9 Prior to any excavation, locate and protect any existing underground structures or utilities. It is the responsibility of the Contractor to call for locates. Damage of existing utilities shall be repaired by the contractor causing such damage at no cost to the Owner.

1.3.10 Should any contractor need to use any scaffolding, lift equipment, etc. provided by others, contractor is responsible to obtain permission prior to use, provide and sign any indemnification or waiver required by the provider of said equipment and identify the Owner & CM against any claim arising from use of said equipment.

1.3.11 Contractor to provide experienced flagmen and traffic control personnel to move traffic around the work area and trucks through the work area efficiently and quickly where deemed necessary.

1.3.12 Contractor must clean up all mud, dirt and dust tracked onto private and public roadways during construction operations or deliveries. This shall be accomplished as often as required and or at the end of each workday for contractor's work. Any damage caused to the existing walks, drives, fence etc. shall be repaired and paid for the Contractor causes such damage.

1.3.13 Contractor is responsible for adhering to all safety and protection guidelines set forth by OSHA, State, Local, and Owner mandates.

1.3.14 Contractor is responsible for covering any opening in the elevated metal decks or floors created by cutting or coring through metal deck or floors, either existing or new. This applies for openings created by this contractor for their work only.

1.3.15 If temporary barricades or floor opening covers need to be removed to perform contractor's work; it is the responsibility of that contractor to return the area to its previous condition upon completion of work.

1.3.16 Each contractor is responsible for all caulking and sealants associated with their work unless specifically noted elsewhere within Section 011000.

1.3.17 Each contractor is responsible for maintaining the wall ratings as shown on the drawings. If a contractor's work creates a penetration through a rated wall system, that contractor is responsible for fire safeing and fire sealant as required. This applies whether or not the wall is constructed at the time the material is run through the area. The Contractor for whose work the conduit was intended shall seal conduit left empty.

1.3.18 The Construction Manager will secure the Building Permit.

1.4 DESCRIPTION OF WORK

1.4.1 Packages listed herein represent significant elements of the Work. Division of Work responsibility between Packages shall be consistent with the "Description of Work". Division of Work responsibility is generally intended to follow standard industry trade divisions with exceptions noted. When Specification Sections are assigned to more than one Package, the Work associated with a Package or as specifically noted will be considered part of the Package. Every package shall include Division 0 – Bidding Requirements and Division 1 – General Requirements.

1.4.2 The Work is generally described and is to include everything necessary to make a functionally complete Project.

1.4.3 Packages for this project include the following:

CP- 1 Aggregate Piers

Notes:
1. Work includes the installation of the aggregate piers as shown on the drawings.

CP-2 Multiscope (General Construction)

024119 Selective Demolition
033543 Polished Concrete
042000 Unit Masonry
055000 Metal Fabrications
055213 Piping and Tube Railings
061000 Rough Carpentry
061600 Sheathing
071326 Self-Adhering Sheet Waterproofing
072100 Thermal Insulation
076200 Sheet Metal Flashing & Trim
078413 Penetration Firestopping
078443 Joint Firestopping
079500 Expansion Control
081113 Hollow Metal Door Repairs
083113 Access Doors and Frames
083323 Overhead Coiling Doors
084113 Aluminum-Framed Entrances & Storefronts
087100 Door Hardware
088000 Glazing
088813 Fire-Resistant Glazing
092216 Non-Structural Metal Framing
092900 Gypsum Board
095113 Acoustical Panel Ceilings
096513 Resilient Base & Accessories
096723 Resinous Flooring (Alternate)
099113 Exterior Painting
099123 Interior Painting
099600 High-Performance Coatings
101100 Visual Display Units
101416 Plaques
101419 Dimensional Letter Signage
101423 Panel Signage
102113.15 Stainless-Steel Toilet Compartments
102800 Toilet, Bath & Laundry Accessories
104413 Fire Protection Cabinets
104416 Fire Extinguishers
105113 Metal Lockers
116623 Gymnasium Equipment
116653 Gymnasium Divider (Alternate)
122113 Horizontal Louver Blinds
123661 Simulated Stone Countertops

Notes:
1. Work includes all grading, site preparation, backfill and earthwork shown on the drawings.
2. Work includes all site utilities shown on the drawings.
3. All concrete work is a part of this package including concrete foundations, walls, walks, pavements and slabs.
4. Work includes sealants, caulking and firestopping of any work installed by this contractor.
5. Work includes the restoration, seeding and maintenance of seeding for disturbed areas.

6. Work includes all selective demolition shown on the drawings except for mechanical and electrical systems.

CP-3 Metal Building System

133419 Metal Building Systems

Notes:
1. Work includes the supply and installation of the metal building system and components as described in the Contract Documents.
2. Aluminum windows will be by CP-2 contractor.

CP-4 Wood Athletic Flooring

096466 Wood Athletic Flooring

Note:
1. Work includes the supply and installation of the wood athletic flooring as shown in the Contract Documents

CP-5 Telescoping Stands

126600 Telescoping Stands

Notes:
1. Work includes the supply and installation of the Telescoping Stands as shown in the Contract Documents.

CP-6 Mechanical

078413 Penetration Firestopping
083113 Access Doors and Frames
220500 Common Work Results for Plumbing
220523 General Duty Valves for Plumbing Piping
220529 Hangers & Supports for Plumbing Piping
220553 Identification for Plumbing Piping & Equip.
220700 Plumbing Piping Insulation
221116 Domestic Water Piping
221119 Domestic Water Piping Specialties
221316 Sanitary Waste & Vent Piping
221319 Sanitary Waste & Vent Piping Specialties
224000 Plumbing Fixtures
230100 Basic Mechanical Requirements
230500 Common Work Results For HVAC
230553 Identification of HVAC Piping & Equipment
230593 Testing, Adjusting & Balancing For HVAC
230713 Duct Insulation
230900 Instrumentation & Control for HVAC
231123 Natural Gas Piping
233113 Metal Ducts
233300 Air Duct Accessories
233423 HVAC Power Ventilators
233713 Diffusers, Registers & Grilles
237413 Packages Outdoor Central Station Air Handling Units
238216 Split system Air-Conditioners

Notes:
1. Work includes the demolition of all mechanical systems indicated on drawings.
2. Work includes all firestopping necessary for the work of this contract.
3. Provide access doors as required to access installed work. Turnover doors to appropriate contractor for installation. Coordinate location of access door with installing contractor.

CP-7 Electrical

078413 Penetration Firestopping
083113 Access Doors & Frames
260519 Low Voltage Electrical Power & Conductors
260526 Grounding & Bonding For Electrical Systems
260529 Hangers & Supports for Electrical Systems
260533 Raceways & Boxes for Electrical Systems
260553 Identification for Electrical Systems
260923 Lighting Control Devices
262200 Low-Voltage Transformers
262416 Panel Boards
262726 Wiring Devices
262816 Enclosed Switches & Circuit Breakers
265100 Interior Lighting
275123 Educational Intercommunication & Program Systems
283111 Digital Addressable Fire Alarm System

Notes:

1. Work includes all firestopping necessary for the work of this contract.
2. Work includes installing, modifying, maintaining and removing temporary power and lighting for the Project. Work includes replacement of lamps for temporary lighting.
3. Provide access doors as required to access installed work. Turnover doors to appropriate contractor for installation. Coordinate location of access door with installing contractor.
4. Work included the demolition of all electrical systems as indicated on the drawings.

1.4.4 Referenced standards or codes shall not supersede the division of responsibility established in the Contract Documents.

1.4.5 Each contractor will be responsible for their own layout, excavating, backfilling, grout, welding, expansion control, core drilling, caulking, wood blocking, flashing, insulation, firestopping, joint sealer, hangers, anchors, fasteners, rough hardware, fittings, supports, trim, material/equipment identification, housekeeping slabs, equipment pads and vibration control as required for the installation of their commodity and to make a functionally complete Project unless specifically noted otherwise.

1.4.6 Each contractor shall layout and place all sleeves or openings necessary for the installation of their commodity unless otherwise noted.

1.5 DEFINITIONS

1.5.1 The terms "Architect, Architect/Engineer, Arch/Eng, A/E, Engineer, Design Professional or like terms shall mean the same.

1.5.2 The term "CM" or like terms shall mean Construction Manager.

1.5.3 The term "Provide" shall mean furnish and install unless otherwise noted.

1.5.4 The term "By Others" or "NIC" or like terms shall mean the Owner or individual Contractor consistent with the Division of Responsibility as determined by the CM.

END OF SECTION 011000