GARNER ENGINEERING PA

Supplemental Soil Borings
Stuttgart Industrial Park
U.S. Hwy 79
Stuttgart, Arkansas

Report
To

BETHANY HILDEBRAND
PRESIDENT & CEO
STUTTGART CHAMBER OF COMMERCE
507 SOUTH MAIN STREET
STUTTGART, AR 72160

Little Rock, Arkansas
June 23, 2025

Garner Engineering PA
9300 Professor Drive Little Rock, Arkansas 72227 Phone: 501-225-8181
Mobile: 501-681-1491
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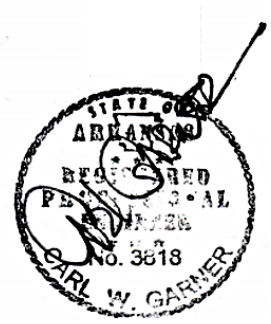
June 23, 2025

To: Bethany Hildebrand
President & CEO
Stuttgart Chamber of Commerce
507 South Main Street
Stuttgart, AR 72160

From: Carl W Garner P.E.



Re: Supplemental Soil Borings
Stuttgart Industrial Park
Hwy 79
Stuttgart, Arkansas

As requested, the subsurface conditions have been further investigated by one (1) 30 ft deep SPT sample boring and one (1) 15 ft SPT sample boring. The results of these Supplemental Borings are summarized hereinafter.

- The borings were performed with hollow stem auger. Insitu samples were obtained via automatic hammer assisted Standard Penetration Tests (SPT). The location of 30 ft Boring A and 15 ft Boring B are shown on the Plan of Borings, Plate 1. The Plan of Borings also includes previous borings performed for the Geotechnical Study report dated December 16, 2024.
- Insitu soil strength and compressibility properties were evaluated by SPT N-values. N-values are plotted at appropriate depths on the logs in the Blows Per Foot column. Additionally, insitu cohesion estimates were obtained with a calibrated hand penetrometer. Cohesion estimates in Tons per Square Foot (TSF) are plotted on the logs using the symbol ⊗.
- All samples were field classified and subsequently examined in the laboratory for selective testing of engineering properties. Descriptions of soil strata encountered in the borings are presented in the Log of Boring, Plates 2 and 3. Results of selective laboratory tests i.e., Atterberg Limits and moisture content, are plotted on each Log of Boring.

Conclusions

The soils encountered to the completion depths of Borings A and B were found to be consistent with previous borings on the site and in the site vicinity. Accordingly, please refer

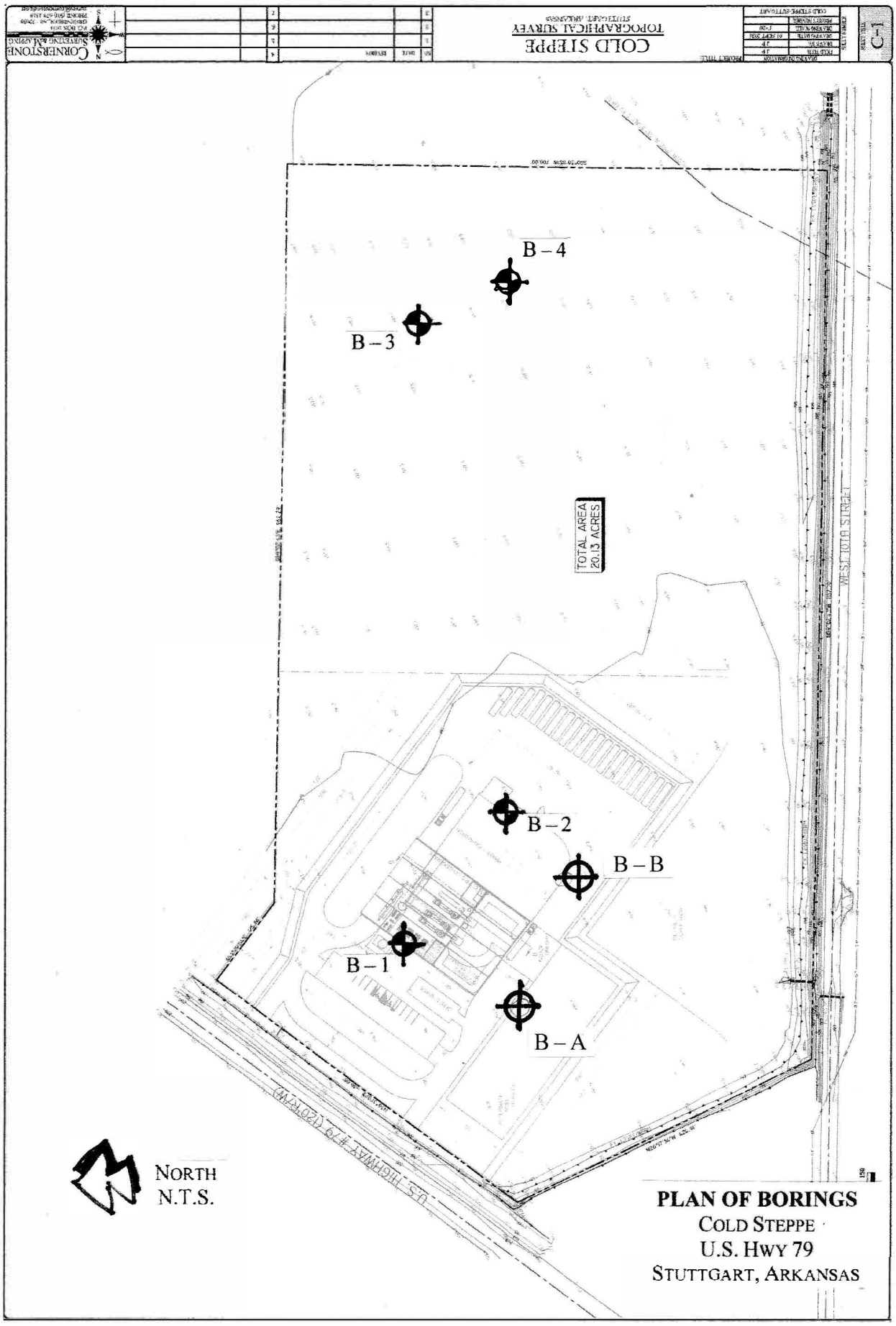
to our December 16, 2024 Geotechnical Report for detailed discussion of subsurface stratigraphy, engineering properties and recommendations for soil parameters for project design.

The following illustrations are attached and complete this report:

Plate 1	Plan of Borings
Plates 2 and 3	Log of Boring
Plate 4	Key to Terms and Symbols

We trust the performance of Supplemental soil borings on the Cold Steppe site will assist in your project activity. However, if further information other than included in the soil and foundation study report should be required, please do not hesitate to call.

Cc: Bethany Hildebrand
Matt Freniere
Tommy Hoskyn



PLAN OF BORINGS
COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

LOG OF BORING NO. A

U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60 70)	- NO 200, %
			SURF EL: 197 ±				
			VERY STIFF GRAY WITH BROWN SILTY CLAY, CL, MOIST	7			
			STIFF GRAY AND REDDISH BROWN CLAY, CL-CH, MOIST	8			
			VERY STIFF GRAY WITH BROWN CLAY, CH, MOIST				
5			- WITH TAN, BLOCKY, MOIST	7			
			STIFF REDDISH BROWN CLAY, CH, BLOCKY WITH TAN SILT PARTINGS, MOIST	7			
			FIRM REDDISH TAN SILTY CLAY, CL-ML, TRACE FINE SAND, MOIST	6			
10							
			MEDIUM DENSE TAN FINE SAND, SP, DRY	13			
15							
			- MEDIUM DENSE REDDISH TAN FINE SANDY SILT, ML, DRY	20			
20							
			- MEDIUM DENSE TAN FINE SAND, SP, DRY	17			
25							
			- TRACE GRAY, DRY	13			
30							

SCALE CHANGE →

COMPLETION DEPTH: 30.0 FT
DATE: 6-11-2025

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 6-11-2025

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PLATE 2

LOG OF BORING NO. B

U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60 70)	- NO 200, %
			SURF EL: 197 ±				
			VERY STIFF GRAY TRACE TAN SILTY CLAY, CL, DRY	7			
			- STIFF GRAY SILTY CLAY, CL-ML, DRY	6			
5			STIFF GRAY TRACE TAN CLAY, CL, MOIST	7			
			STIFF REDDISH TAN SILTY CLAY, CL, MOIST	8			
10			MEDIUM DENSE REDDISH TAN SILT, ML, DRY	11			
15			MEDIUM DENSE TAN FINE SAND, SP, DRY	15			
20							
25							

COMPLETION DEPTH: 15.0 FT
DATE: 6-11-2025

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 6-11-2025

GARNER ENGINEERING PA

PLATE 3

SYMBOLS AND TERMS USED ON BORING LOGS

SOIL TYPES
(SHOWN IN SYMBOL COLUMN)

Gravel | Sand | Silt | Clay

Predominant type shown heavy

SAMPLER TYPES
(SHOWN ON SAMPLES COLUMN)

Shelby Tube | Rock Core | Split Spoon | No Recovery

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No. 200 sieve): includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

DESCRIPTIVE TERM	N-VALUE	RELATIVE DENSITY
VERY LOOSE	0-4	0-15%
LOOSE	4-10	15-35%
MEDIUM DENSE	10-30	35-65%
DENSE	30-50	65-85%
VERY DENSE	50 And above	85-100%

FINE GRAINED SOILS (major portion passing No. 200 sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH TON/SQ. FT.
VERY SOFT	Less than 0.25
SOFT	0.25 - 0.50
FIRM	0.50 - 1.00
STIFF	1.00 - 2.00
VERY STIFF	2.00 - 4.00
HARD	4.00 and higher

NOTE: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

SLICKENSIDED — having inclined planes of weakness that are slick and glossy in appearance.

FISSURED — containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.

LAMINATED — composed of thin layers of varying color and texture.

INTERBEDDED — composed of alternate layers of different soil types.

CALCAREOUS — containing appreciable quantities of calcium carbonate.

WELL GRADED — having wide range in grain sizes and substantial amounts of all intermediate particle sizes.

POORLY GRADED — predominantly of one grain size, or having a range of sizes with some intermediate sizes missing.

Terms used in this report for describing soils according to their texture or grain size distribution are in accordance with the UNIFIED SOIL CLASSIFICATION SYSTEM, as described in Technical Memorandum No. 3-357, Waterways Experiment Station, March 1953.

Garner Engineering PA
9300 Professor Drive Little Rock, Arkansas 72227 Phone: 501-225-8181
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August 30, 2024

To: Matt Freniere
Cold Steppe Inc
matt@coldsteppe.com

Bethany Hildebrand
Stuttgart Chamber of Commerce
bethany@stuttgartchamber.com

From: Carl W Garner P.E.

Re: Interim Report
Cold Steppe
U.S. Hwy 79
Stuttgart, Arkansas

This is the interim report of findings and preliminary recommendations developed from the geotechnical study on the site of the new Cold Steppe facility in Stuttgart, Arkansas. At this writing, specific building criteria and site grading plans are not yet available. Accordingly, this report summarizes basic geotechnical considerations for design development. The final report will be prepared when specific criteria and grading criteria become available.

- The geotechnical field investigation consisted of four (4) SPT sample borings. Two (2) borings were performed for the 110 ft x 180 ft facility and two (2) borings were performed in the 300 ft x 300 ft Tailwater Recovery Retention Pond and potential on site borrow area. The site layout was based on the "rough" site layout received July 31, 2024. Laboratory testing is currently ongoing to develop specific engineering properties.
- Based on subsurface conditions established from the borings and laboratory examination, the foundation soils may be generalized as follows.

Stratum I: Gray silt, ML, and clayey silt, ML-CL, was encountered to depths of about 2 to 3.5 ft. These low plasticity soils were seasonally desiccated with apparent cohesion over 1.5 TSF. On the other hand, the soils are also moisture sensitive and subject to loss of strength and stability during wet seasons.

Stratum II: Stratum I was underlain by a nominally 2 ft thick interval of very stiff reddish brown trace gray clay, CL, CL-CH. This stratum is moderately plastic with cohesion typically over 1.2 TSF. Insitu water contents were

low reflecting moderate potential for swell related movement with cyclical or point source water content increase.

Stratum III: From depths of about 4 to 8 ft very stiff and stiff gray with brown clay, CL, CH, was encountered in all borings. This stratum exhibited variable but generally high moisture content with cohesion values of 0.6 to 1.5 TSF.

Stratum IV: The basal soil unit encountered below Stratum III consist of medium dense reddish tan silty fine sand, SM, grading to find sand, SP, with depth. N-values of 10 to 14 BPF were obtained in this dry sand interval.

Free groundwater was not encountered in the borings. However, the Stratum III clays exhibited variable moisture content with relatively high values near or above the Plastic Limit. The potential also exists for wet season saturation of the Stratum I silts with attendant loss of strength and stability.

- Although specific site grading criteria is not yet available, it is understood that grading will involve placement of up to 4 ft of Select Fill. Current plans are to obtain fill soils from the 8 ft deep ± Tailwater Retention Pond. Based on conditions encountered in the two (2) borings in this area, the soils should generally be suitable for fill with selective placement of the moderate plasticity clay intervals of Strata II and III in deeper fill areas outside the main building.
- It is understood that the main building will be a pre-engineered metal structure with slab on grade and relatively light foundation loads. Considering the planned placement of several feet of fill in the building area, a foundation system consisting of individual and continuous spread footing should be appropriate. At this writing, allowable soil bearing pressures on the order of 2000 to 3000 psf should be appropriate pending final grading plans and fill soil characteristics yet to be developed.
- The potential exists for wet season loss of strength and stability of the moisture sensitive silty soils, Stratum I. Accordingly, site grading should be scheduled for typically drier late Summer/early Fall months to reduce the potential for undercut and replacement of saturated Stratum I soils. Undercut to depths on the order of 2 ft should be anticipated for wet season site grading. Specific review of undercut potential will be performed when site grading plans are available.

As noted, this is an interim report of geotechnical factors of potential consequence to final design, site grading and future performance of the Cold Steppe facility. Final recommendations will be prepared as design development continues.

PLAN OF BORINGS
COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

PLAN OF BORINGS
COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

APPENDIX A

LOG OF BORING NO. 1

COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60 70)	- NO 200, %
			SURF EL: 196.9 ±				
			VERY STIFF LIGHT GRAY CLAYEY SILT, ML-CL, DESICCATED	23			
			- TRACE BROWN, DRY	12			
5			VERY STIFF REDDISH BROWN TRACE GRAY CLAY, CL-CH, DRY	8			
			VERY STIFF GRAY WITH BROWN CLAY, CH, MOIST	7			
				6			
10			MEDIUM DENSE REDDISH TAN FINE SAND, SP, DRY				
			- DRY	14			
15							
20							
25							

COMPLETION DEPTH: 15.0 FT
DATE: 8-21-2024

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 8-21-2024

LOG OF BORING NO. 2

COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60 70)	- NO 200, %
			SURF EL: 196.9 ±				
			VERY STIFF LIGHT GRAY CLAYEY SILT, ML-CL, DESICCATED	19			
			VERY STIFF REDDISH BROWN TRACE GRAY CLAY, CL-CH, DRY	12			
5			STIFF GRAY TRACE BROWN CLAY, CL-CH, MOIST	9			
			- VERY STIFF, MOIST	7			
			MEDIUM DENSE REDDISH TAN SILTY FINE SAND, SM, DRY	12			
10							
			- REDDISH TAN SLIGHTLY SILTY FINE SAND, SP, DRY	10			
15							
20							
25							

COMPLETION DEPTH: 15.0 FT
DATE: 8-21-2024

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 8-21-2024

LOG OF BORING NO. 3

COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (0.2 0.4 0.6 0.8 1.0 1.2 1.4) / PLASTIC LIMIT — WATER CONTENT, % — LIQUID LIMIT (10 20 30 40 50 60 70)	- NO 200, %
			SURF EL: 197.7 ±				
			VERY STIFF GRAY SLIGHTLY CLAYEY SILT, ML-CL, DESICCATED	14			
			VERY STIFF REDDISH BROWN WITH GRAY SILTY CLAY, CL, DRY	13			
5			VERY STIFF GRAY TRACE BROWN CLAY, CH, MOIST	8			
				7			
			MEDIUM DENE REDDISH TAN SILTY FINE SAND, SM, MOIST	10			
10							
15							
20							
25							

COMPLETION DEPTH: 9.5 FT
DATE: 8-21-2024

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 8-21-2024

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PLATE 4

LOG OF BORING NO. 4

COLD STEPPE
U.S. HWY 79
STUTTGART, ARKANSAS

Type: AUGER/SPT Location: SEE PLATE 1

DEPTH, FT	SYMBOL	SAMPLES	DESCRIPTION OF MATERIAL	BLOWS PER FT	UNIT DRY WT. LB./CU FT	COHESION, TON/SQ FT (o) 0.2 0.4 0.6 0.8 1.0 1.2 1.4 / PLASTIC LIMIT (+) WATER CONTENT, % (•) LIQUID LIMIT (+) 10 20 30 40 50 60 70	- NO 200, %
			SURF EL: 197.7 ±				
			VERY STIFF GRAY SLIGHTLY CLAYEY SILT, ML-CL, DESICCATED	18			
			VERY STIFF BROWN TRACE GRAY SILTY CLAY, CL, DRY	14			
5			STIFF GRAY WITH BROWN SILTY CLAY, CL, MOIST	7			
			- STIFF GRAY CLAY, CL, MOIST	7			
			MEDIUM DENSE REDDISH TAN FINE SAND, SP, DRY	14		NONPLASTIC	
10							
15							
20							
25							

COMPLETION DEPTH: 9.5 FT
DATE: 8-21-2024

DEPTH TO WATER IN BORING: DRY AT DRILLING
DATE: 8-21-2024

GARNER ENGINEERING PA

PLATE 5

SYMBOLS AND TERMS USED ON BORING LOGS

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(SHOWN IN SYMBOL COLUMN)

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(SHOWN ON SAMPLES COLUMN)

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PLATE

GARNER ENGINEERING, P.A.