



February 2, 2022

Daylight Investments, LLC.  
2415 N Bakker Landing Avenue  
Tea, South Dakota 57064

Attn: Mr. Bruce Nerison  
[ba@i29rv.com](mailto:ba@i29rv.com)

Subject: Geotechnical Exploration  
Proposed Site Development  
14116 Sturgis Road  
Piedmont, South Dakota  
AET Job No. P-0009246

Dear Bruce,

### **Introduction**

As requested, American Engineering Testing, Inc. (AET) has completed the geotechnical engineering services for the above-referenced project. This study was performed in general accordance with our proposal dated January 19, 2022 and your written authorization to proceed on the same date. This letter report presents the results of our geotechnical services.

Based on the information provided, we understand the project will consist of the future development of the 34-acre lot located at 14116 Sturgis Road in Piedmont, South Dakota. The purpose of our work was to perform 6 soil borings to depths of approximately 15 feet, at the general locations indicated by you, to obtain representative soil samples to allow AET to provide you with completed logs that will depict the subsurface soils and groundwater conditions at the site. No laboratory testing was requested.

### **Field Exploration**

The subsurface exploration program conducted for the project consisted of 6 Standard Penetration Test (SPT) soil borings, which were drilled on January 27, 2022. The borings were drilled at the approximate locations selected by you with the exception of Boring B-6, which due to access limitations, was drilled to the west. The elevations at the boring locations were interpolated using GoogleEarth Pro. The approximate boring locations are shown on the Boring Location Map included at the end of this letter report.

### **Subsurface Conditions**

In general, below a layer of topsoil, the subsurface soils encountered within the borings consisted of varying depth layers of firm to hard sandy and silty lean clays and loose to very dense clayey gravels. An exception was noted in Boring B-1 where soft silty lean clay of the Spearfish Formation was encountered at a depth of approximately 15 feet. The Subsurface Boring Logs, included in at the end of this letter, give a more detailed description of the soils encountered within the borings.

At the time of drilling, measurable groundwater was only encountered in Boring B-1 at a depth of approximately 15.5 feet below grade. Subsurface water levels should be expected to fluctuate seasonally and yearly. The time of year that the boring was drilled, and the history of precipitation prior to drilling, as well as other factors should be known when using the water level information on the soil boring log to extrapolate water levels at other points in time.

### **Closing**

Within the limitations of scope, budget, and schedule, our services have been conducted according to generally accepted geotechnical engineering practices at this time and location. Other than this, no warranty, either expressed or implied, is intended. If you have any questions or we can be of further service, please contact our office at (605) 388-0029.

Sincerely,  
**American Engineering Testing, Inc.**



Robert Temme, PE  
VP West Region Business Development

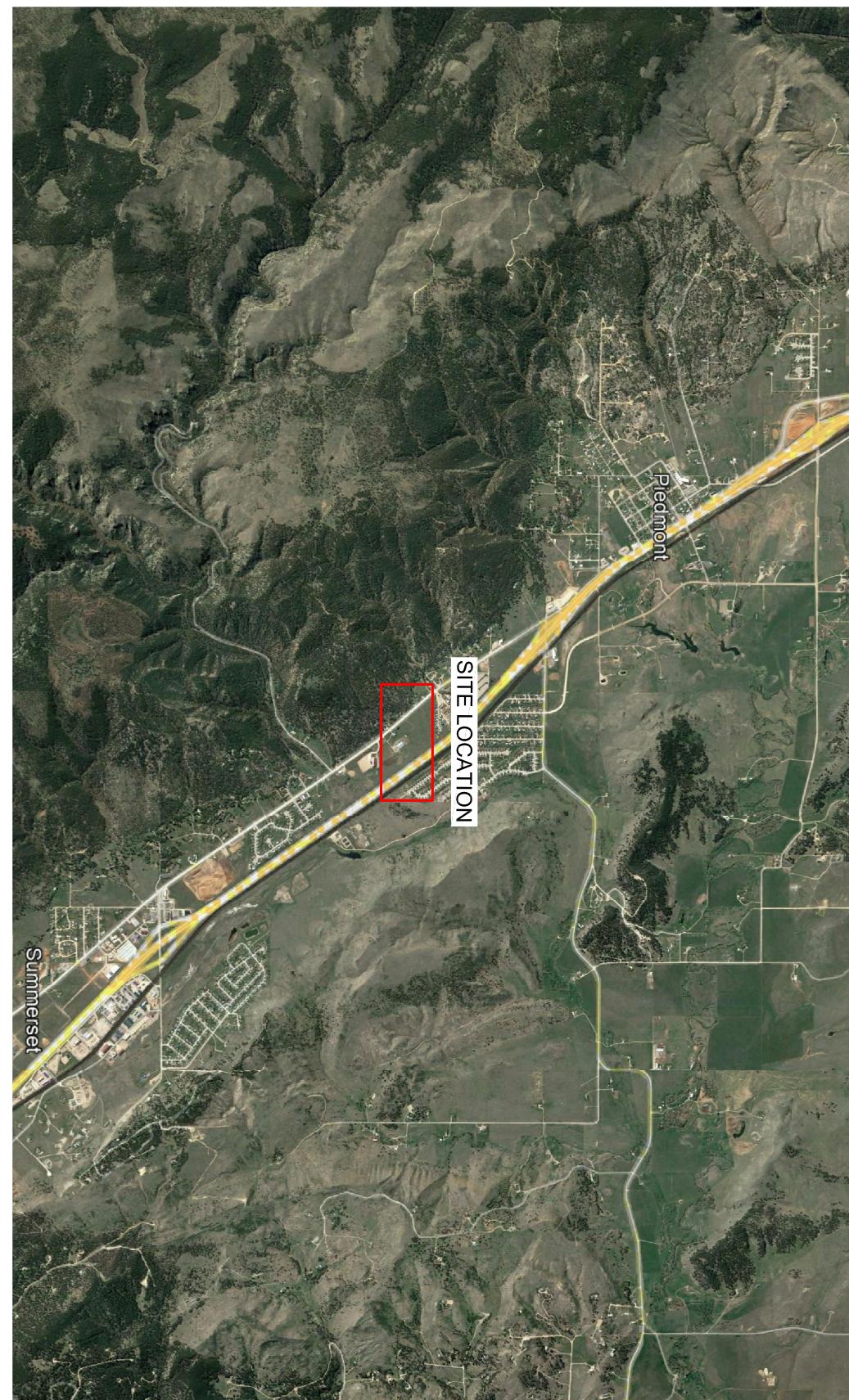


James Reed, PG  
Geologist II

Attachments: Figure 1: Site Location Map  
Figure 2: Boring Location Map  
Soil Boring Logs



SCALE  
(FEET)  
0  
4000



PROJECT: 14116 STURGIS ROAD DEVELOPMENT

PIEDMONT, SOUTH DAKOTA

PROJECT NO. P-0009246

SUBJECT: FIGURE 1: SITE LOCATION MAP

DATE: FEBRUARY 2, 2022

SCALE: 1 INCH = 4000 FEET

DRAWN BY:

JR

REVIEWED BY:  
RT





AMERICAN  
ENGINEERING TESTING

SCALE  
(FEET)  
0  
400



PROJECT: 14116 STURGIS ROAD DEVELOPMENT  
PIEDMONT, SOUTH DAKOTA

SUBJECT: FIGURE 2: BORING LOCATION MAP

SCALE: 1 INCH = 400 FEET

PROJECT NO. P-0009246

DRAWN BY: JR

DATE: FEBRUARY 2, 2022

REVIEWED BY: RT



# SUBSURFACE BORING LOG

AET No: <b>P-0009246</b>		Log of Boring No. <b>B-1 (p. 1 of 1)</b>		FIELD & LABORATORY TESTS							
Project: <b>14116 Sturgis Road Development; Piedmont, South Dakota</b>		FIELD & LABORATORY TESTS									
DEPTH IN FEET	Surface Elevation <b>3508.0</b> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	<b>SILTY LEAN CLAY</b> , brown, very stiff (CL)	ALLUVIUM	18	M	SS	18					
2											
3	<b>CLAYEY GRAVEL</b> with sand, tan, dense to very dense (GC)		36	M	SS	18					
4											
5			87	M	SS	18					
6											
7											
8											
9											
10			86/9	M	SS	18					
11											
12											
13	<b>SILTY LEAN CLAY</b> with gravel, red, hard (CL)		38	M	SS	18					
14											
15	<b>SILTY LEAN CLAY</b> , red, soft (CL)	SPEARFISH FORMATION	4	▽ M	SS	18					
16											
Bottom of Boring											
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
<b>15.0 3.25" HSA</b>		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		<b>1/27/22</b>	<b>9:30</b>	<b>16.5</b>	<b>15.0</b>	<b>NA</b>	<b>NA</b>	<b>15.5</b>			
BORING COMPLETED: <b>1/27/22</b>											
DR: <b>JS</b> LG: <b>JH</b> Rig: <b>99</b>											

# SUBSURFACE BORING LOG

AET No: <b>P-0009246</b>		Log of Boring No. <b>B-2 (p. 1 of 1)</b>		FIELD & LABORATORY TESTS							
Project: <b>14116 Sturgis Road Development; Piedmont, South Dakota</b>		FIELD & LABORATORY TESTS									
DEPTH IN FEET	Surface Elevation <b>3508.0</b> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	TOPSOIL, Silty Lean Clay with organics, brown SILTY LEAN CLAY, brown, very stiff (CL)	TOPSOIL ALLUVIUM	19	M	SS	18					
2			27	M	SS	18					
3			54	M	SS	18					
4	CLAYEY GRAVEL with sand, red, gray, tan, medium dense to very dense (GC)		71	M	SS	18					
5			60	M	SS	18					
6			63	M	SS	18					
7											
8											
9											
10											
11											
12											
13											
14											
15											
16	SANDY LEAN CLAY with sandy gravel lenses, red, tan, very stiff (CL)		26	M	SS	18					
Bottom of Boring											
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
<b>15.0 3.25" HSA</b>		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		<b>1/27/22</b>	<b>11:00</b>	<b>16.5</b>	<b>15.0</b>	<b>NA</b>	<b>NA</b>	<b>None</b>			
BORING COMPLETED: <b>1/27/22</b>											
DR: <b>JS</b> LG: <b>JH</b> Rig: <b>99</b>											

# SUBSURFACE BORING LOG

AET No: <b>P-0009246</b>		Log of Boring No. <b>B-3 (p. 1 of 1)</b>		FIELD & LABORATORY TESTS							
Project: <b>14116 Sturgis Road Development; Piedmont, South Dakota</b>		FIELD & LABORATORY TESTS									
DEPTH IN FEET	Surface Elevation <b>3512.0</b> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	<b>TOPSOIL</b> , Silty Lean Clay with organics, brown	TOPSOIL ALLUVIAL FAN	16	M	SS	18					
2	<b>CLAYEY GRAVEL</b> with sand, brown, medium dense (GC)										
3	<b>SANDY LEAN CLAY</b> , red, stiff to firm (CL)		10	M	SS	18					
4											
5			8	M	SS	18					
6											
7											
8			19	M	SS	18					
9	<b>CLAYEY GRAVEL</b> with sand, pink, tan, gray, medium dense to very dense (GC)										
10			80/.6	M	SS	14					
11											
12			50/.2	M	SS	3					
13											
14											
15	<b>SILTY SANDY LEAN CLAY</b> with trace gravel, very stiff (CL)		17	M	SS	18					
16	Bottom of Boring										
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
<b>15.0 3.25" HSA</b>		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
<b>1/27/22</b>		<b>13:15</b>	<b>16.5</b>	<b>15.0</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>None</b>			
<b>BORING COMPLETED: 1/27/22</b>											
<b>DR: JS LG: JH Rig: 99</b>											

# SUBSURFACE BORING LOG

AET No: <b>P-0009246</b>		Log of Boring No. <b>B-4 (p. 1 of 1)</b>		FIELD & LABORATORY TESTS							
Project: <b>14116 Sturgis Road Development; Piedmont, South Dakota</b>		FIELD & LABORATORY TESTS									
DEPTH IN FEET	Surface Elevation <b>3539.0</b> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							WC	DEN	LL	PL	%-#200
1	<b>TOPSOIL</b> , Silty Lean Clay with organics, brown	TOPSOIL	12	M	SS	18					
2	<b>SILTY SANDY LEAN CLAY</b> , red, stiff (CL)	ALLUVIAL FAN	43	M	SS	18					
3	<b>CLAYEY GRAVEL</b> with sand, red, gray, tan, dense (GC)		9	M	SS	18					
4	<b>SANDY LEAN CLAY</b> , red-brown, stiff (CL)		30	M	SS	18					
5	<b>CLAYEY GRAVEL</b> with sand, red, gray, tan, medium dense to dense (GC)		28	M	SS	18					
6			35	M	SS	18					
7											
8											
9											
10											
11											
12											
13											
14											
15	<b>SILTY LEAN CLAY</b> with sand, red, firm (CL)		8	M	SS	18					
16	Bottom of Boring										
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
<b>15.0 3.25" HSA</b>		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		<b>1/27/22</b>	<b>12:00</b>	<b>16.5</b>	<b>15.0</b>	<b>NA</b>	<b>NA</b>	<b>None</b>			
<b>BORING COMPLETED: 1/27/22</b>											
<b>DR: JS LG: JH Rig: 99</b>											



# SUBSURFACE BORING LOG

AET No: <u>P-0009246</u>		Log of Boring No. <u>B-5 (p. 1 of 1)</u>		FIELD & LABORATORY TESTS						
Project: <u>14116 Sturgis Road Development; Piedmont, South Dakota</u>		FIELD & LABORATORY TESTS								
DEPTH IN FEET	Surface Elevation <u>3529.0</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	WC DEN LL PL %/#200			
							WC	DEN	LL	PL
1	<b>TOPSOIL</b> , Silty Lean Clay with organics, brown <b>SILTY LEAN CLAY</b> with trace gravel, very stiff (CL)	TOPSOIL ALLUVIUM	29	M	SS	18				
2			17	M	SS	18				
3			18	M	SS	18				
4			10	M	SS	18				
5			12	M	SS	18				
6			9	M	SS	18				
7			9	M	SS	18				
8	<b>SILTY LEAN CLAY</b> with gravel, red-brown, stiff (CL)									
9										
10										
11										
12										
13										
14										
15										
16										
Bottom of Boring										
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG	
<b>15.0</b> <b>3.25"</b> HSA		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL		
		1/27/22	14:15	16.5	15.0	NA	NA	None		
BORING COMPLETED: 1/27/22										
DR: JS LG: JH Rig: 99										



# SUBSURFACE BORING LOG

AET No: <u>P-0009246</u>		Log of Boring No. <u>B-6 (p. 1 of 1)</u>		FIELD & LABORATORY TESTS							
Project: <u>14116 Sturgis Road Development; Piedmont, South Dakota</u>		FIELD & LABORATORY TESTS									
DEPTH IN FEET	Surface Elevation <u>3528.0</u> MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	WC DEN LL PL %/#200				
							WC	DEN	LL	PL	%/#200
1	SILTY LEAN CLAY with trace gravel, brown, very stiff (CL)	ALLUVIUM	17	M	SS	18					
2			25	M	SS	18					
3			32	M	SS	18					
4	CLAYEY GRAVEL with sand, red-brown, loose to very dense (GC)		8	M	SS	18					
5			11	M	SS	18					
6			51	M	SS	18					
7			52	M	SS	18					
8											
9											
10											
11											
12											
13											
14											
15											
16											
Bottom of Boring											
DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG		
<u>15.0</u> <u>3.25"</u> HSA		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL			
		<u>1/27/22</u>	<u>15:15</u>	<u>16.5</u>	<u>15.0</u>	<u>NA</u>	<u>NA</u>	<u>None</u>			
BORING COMPLETED: <u>1/27/22</u>											
DR: JS LG: JH Rig: 99											