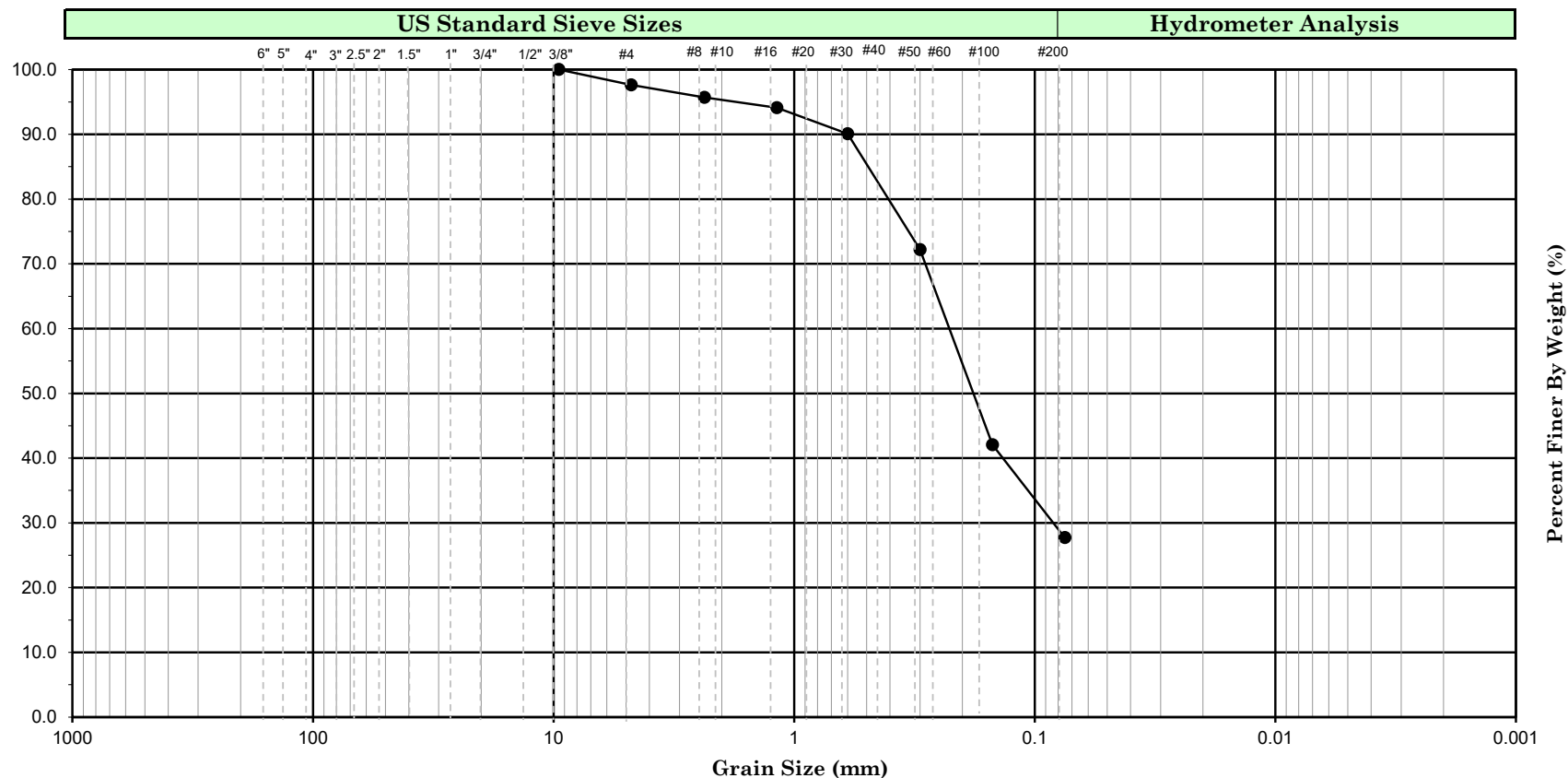


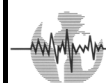
[illegible]

Project Name : UCSD Steel Pile Research



Cobbles		Gravel		Sand			Silt or Clay		
		Coarse	Fine	Coarse	Medium	Fine			

Symbol	Boring Number	Sample Number	Depth				Soil Color	Soil Description	U.S.C.S.
			(ft)		(m)				
●	BH-1	D-6	12.5				yellowish brown with brown	Clayey sand	SC
Remark									



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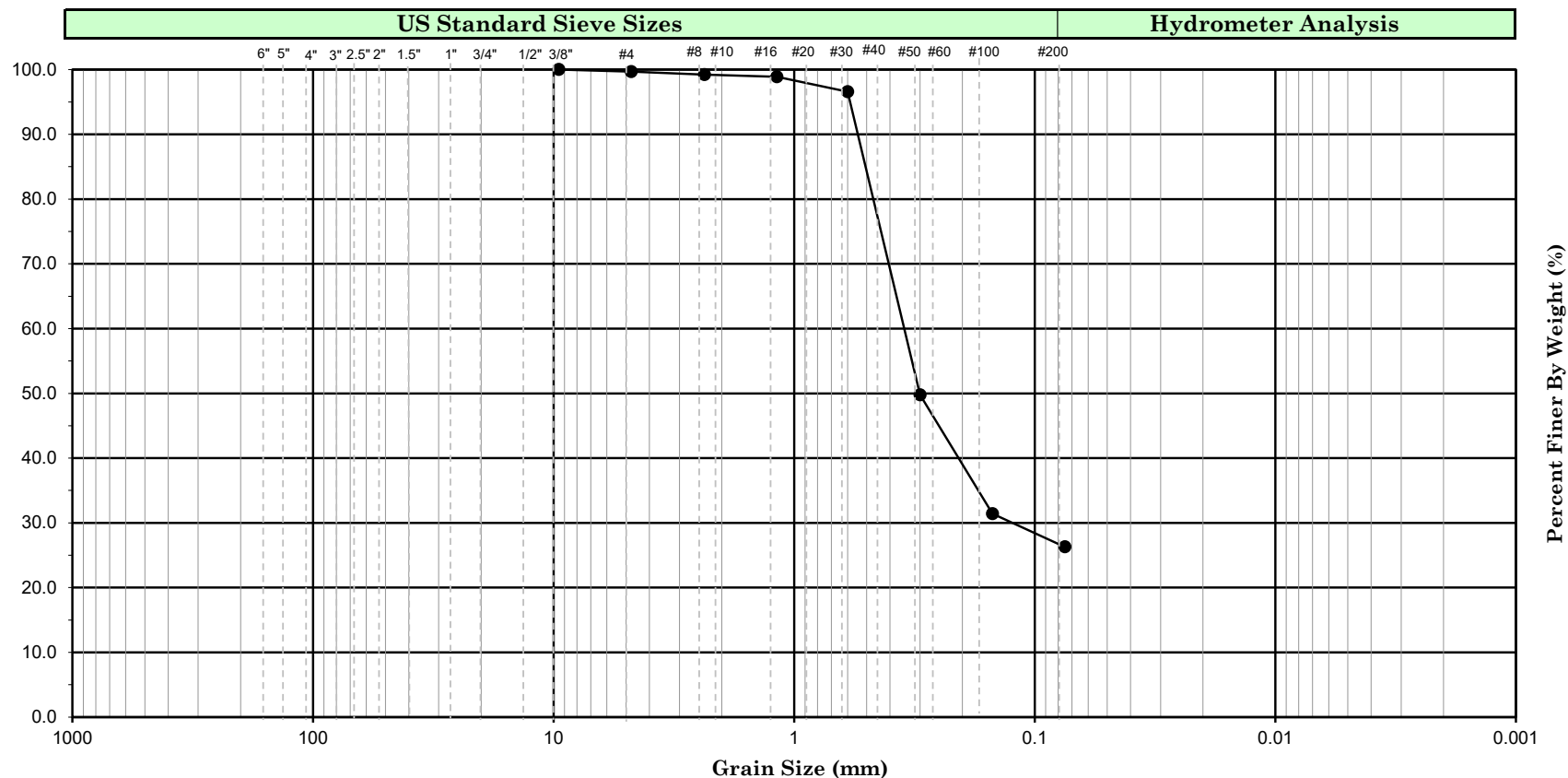
GRAIN SIZE ANALYSIS
(ASTM D-7928)

Figure No. :



Cobbles		Gravel		Sand			Silt or Clay	
		Coarse	Fine	Coarse	Medium	Fine		

Symbol	Boring Number	Sample Number	Depth				Soil Color	Soil Description	U.S.C.S.
			(ft)		(m)				
●	BH-2	D-6	12.5				mottled yellowish brown, white, light gray	Clayey sand	SC
Remark									



Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	

Symbol	Boring Number	Sample Number	Depth				Soil Color	Soil Description	U.S.C.S
			(ft)		(m)				
●	BH-2	D-9	20				dark yellowish brown	Clayey sand	SC
Remark									



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Date : **05/05/24**

GRAIN SIZE ANALYSIS
(ASTM D-7928)

Figure No. :



Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-1	D-1	0.0		yellowish brown with brown	Clayey sand	SC
Remark							



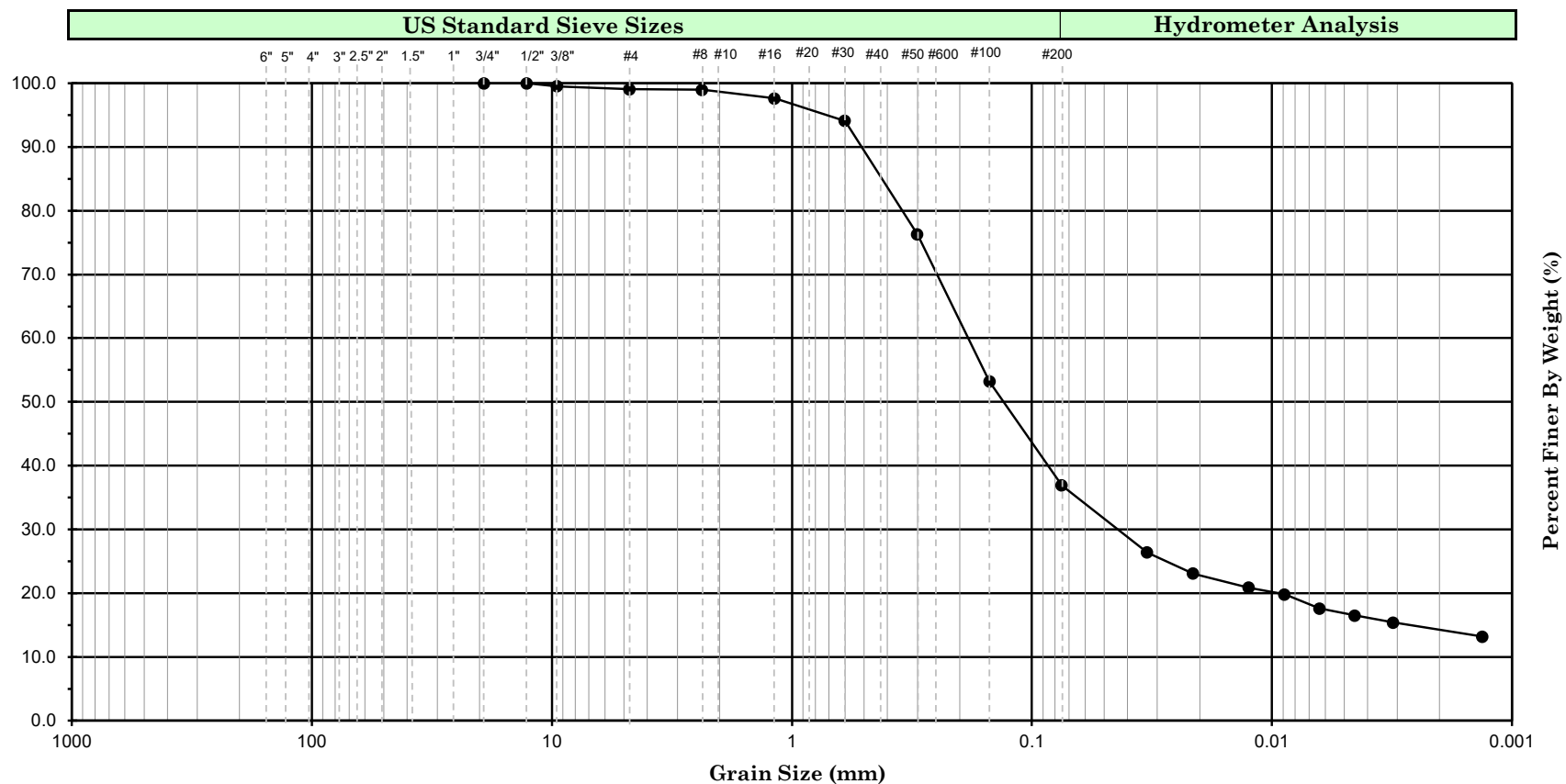
Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-1	T-2	2.5		yellowish brown with brown	Clayey sand	SC
Remark							



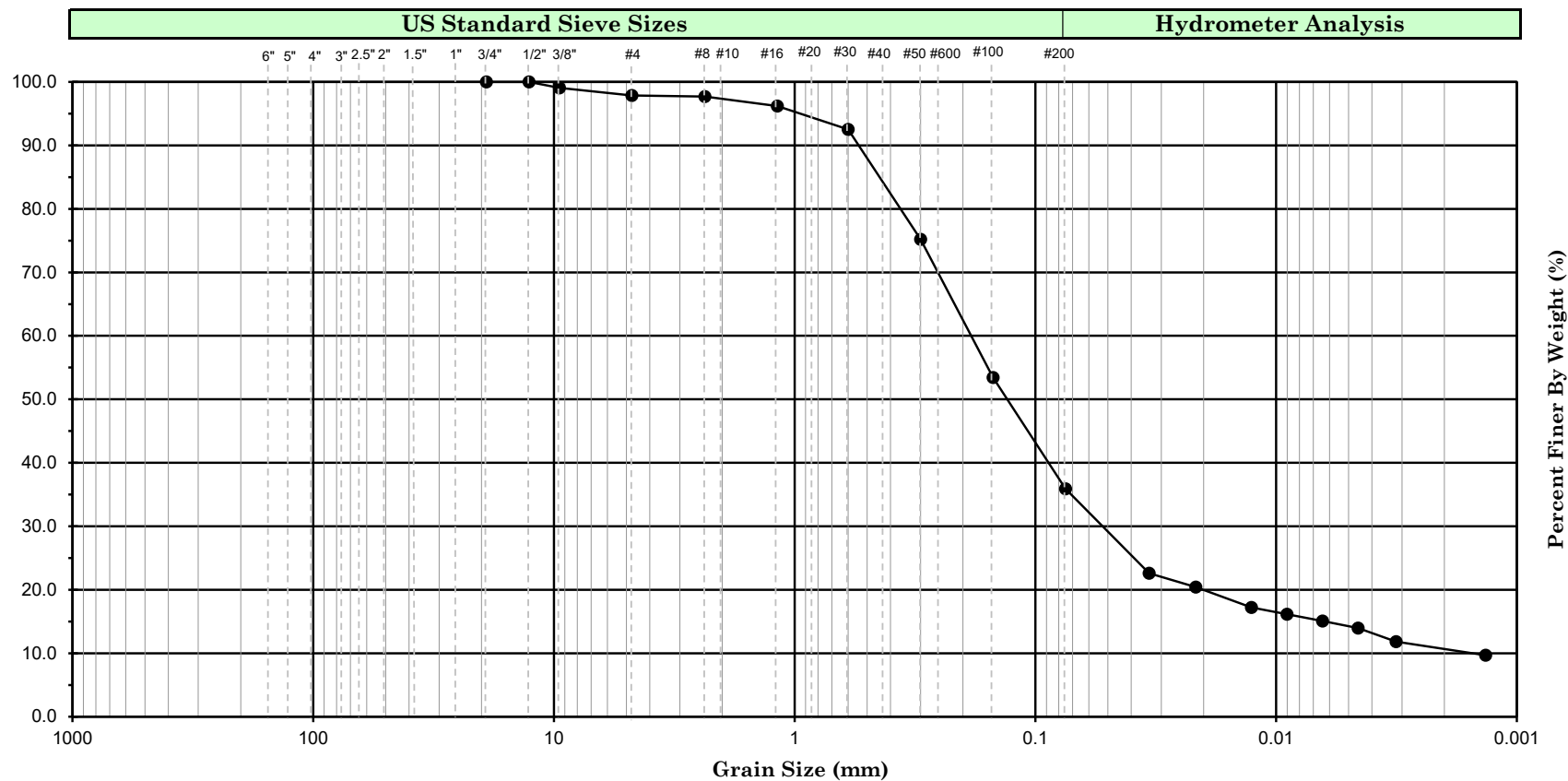
Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-1	D-3	5.0		yellowish brown	Clayey sand	SC
Remark							



Cobbles		Gravel				Sand		Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine		
Symbol	Boring Number	Sample Number	Depth			Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)				
●	BH-1	T-4	7.5			yellowish brown	Silty clayey sand	SC-SM
Remark								

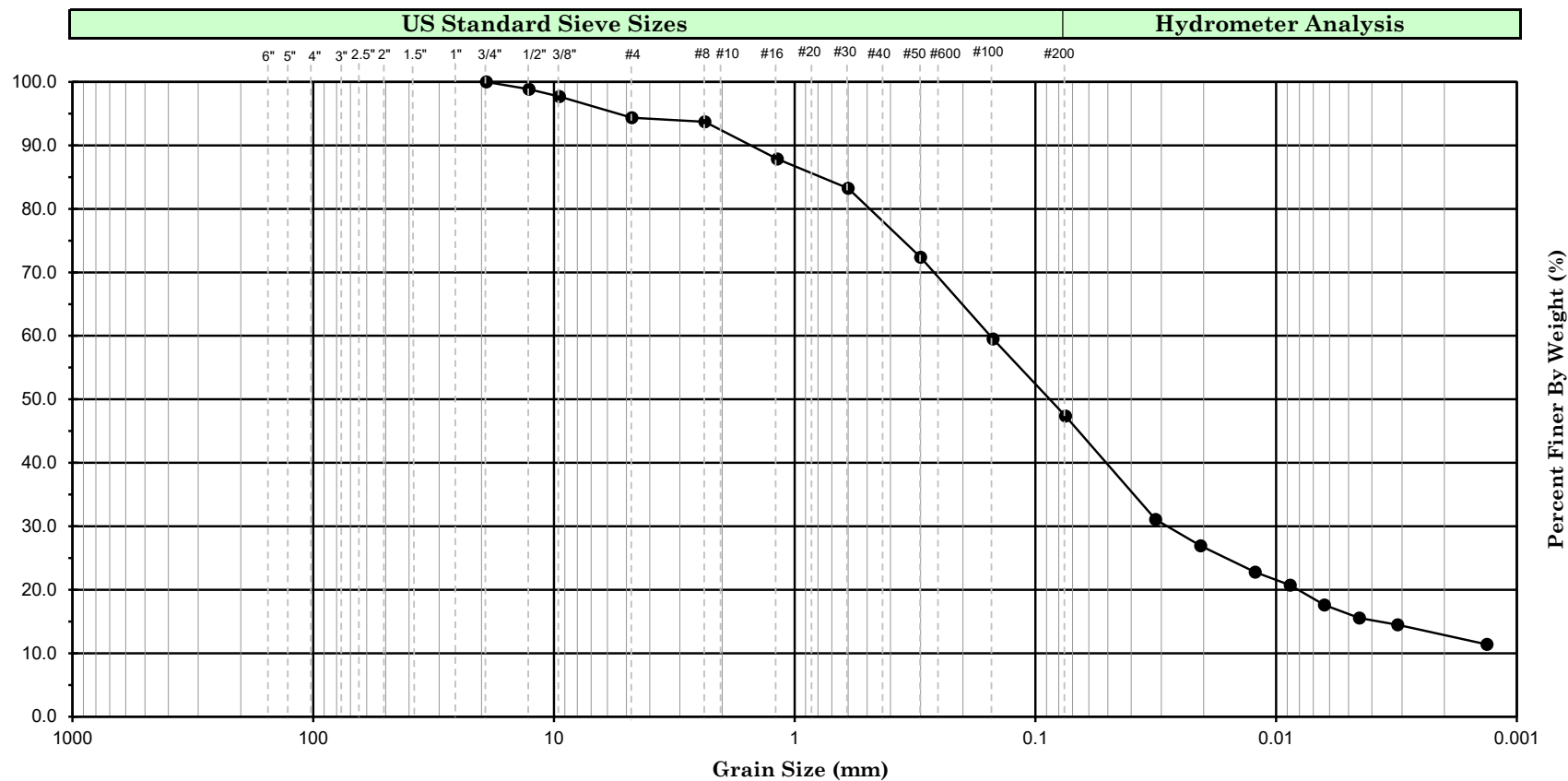


Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-1	D-5	10.0		yellowish brown	Clayey sand	SC
Remark							



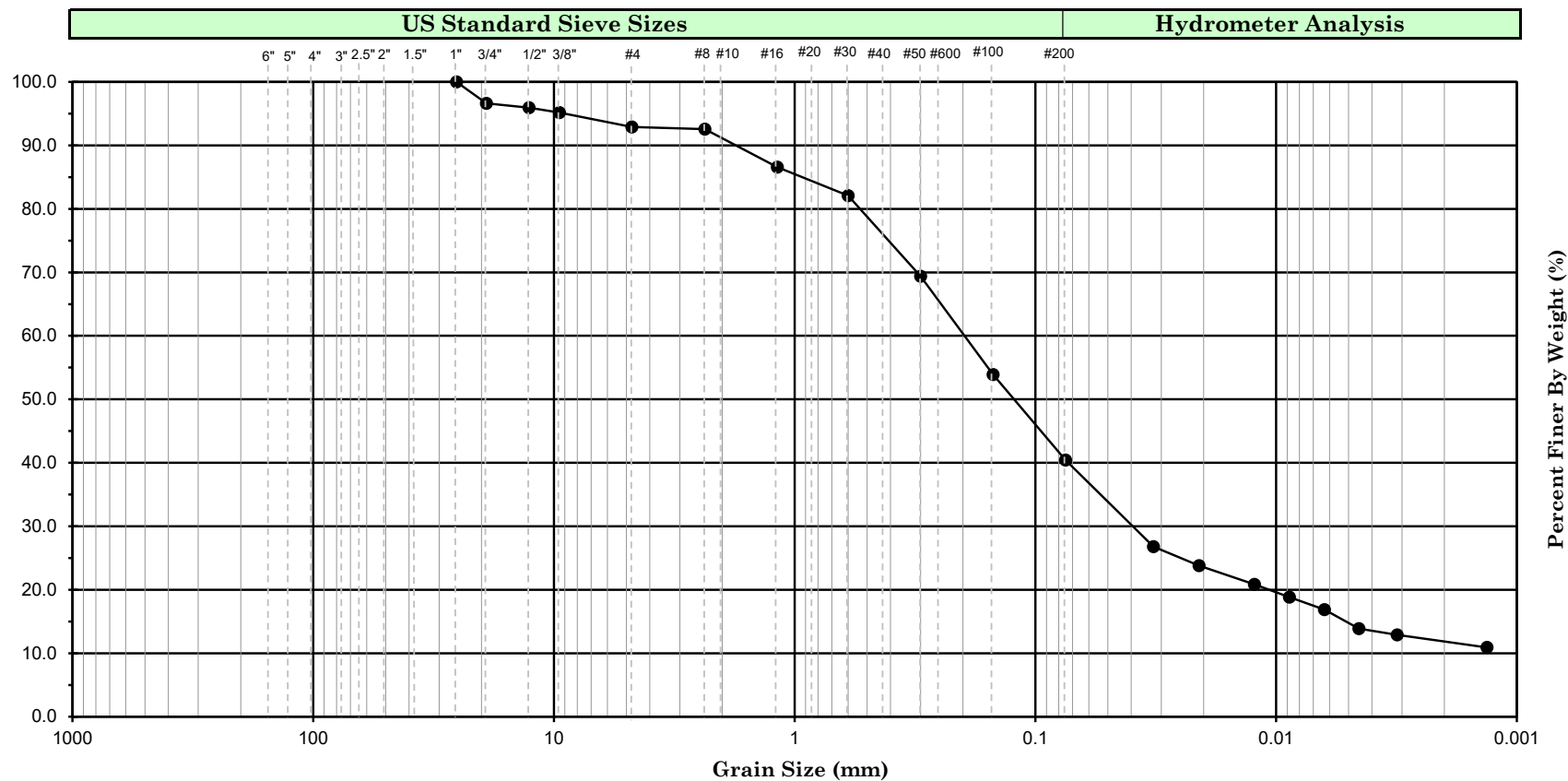
Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	

Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-1	D-7	15.0		yellowish brown	Silty clayey sand	SC-SM
Remark							

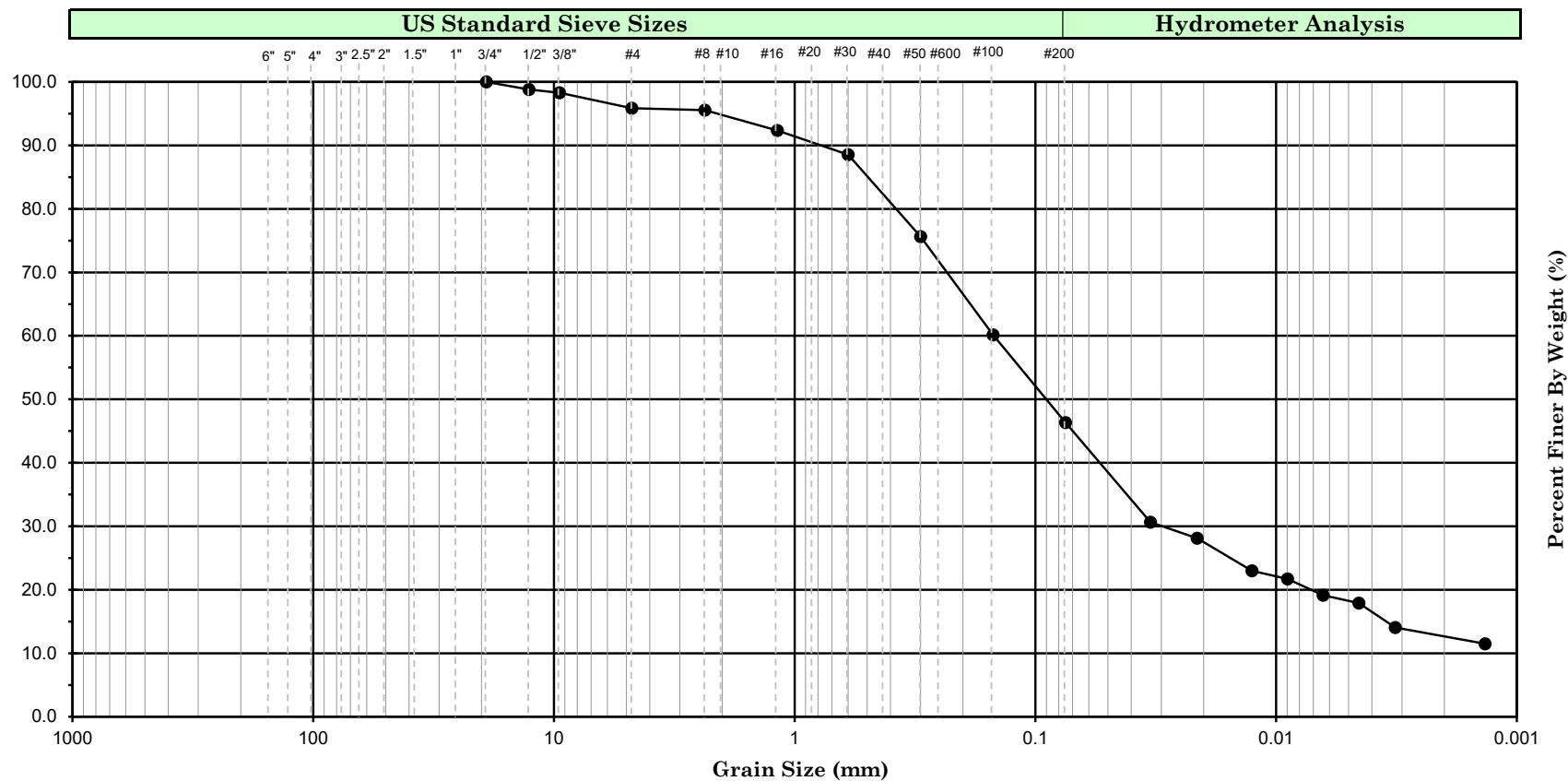


Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	

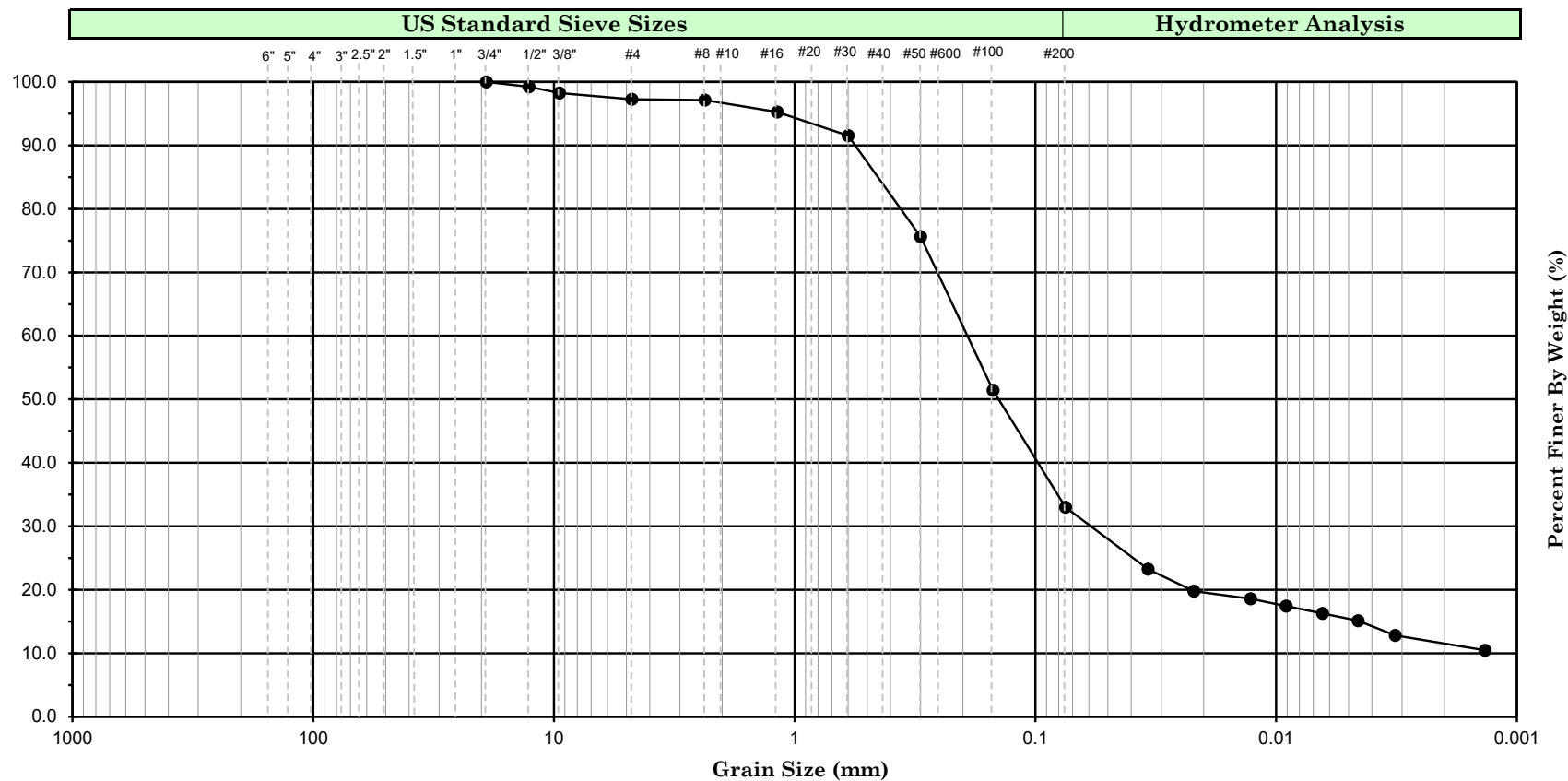
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-2	D-1	0.0		yellowish brown	Clayey sand	SC
Remark							



Cobbles		Gravel				Sand		Silt or Clay	
		Coarse		Fine		Coarse	Medium		
Symbol	Boring Number	Sample Number	Depth			Soil Color	Soil Description	U.S.C.S.	
			(ft)	(m)					
●	BH-2	T-2	2.5			yellowish brown with brown	Clayey sand	SC	
Remark									

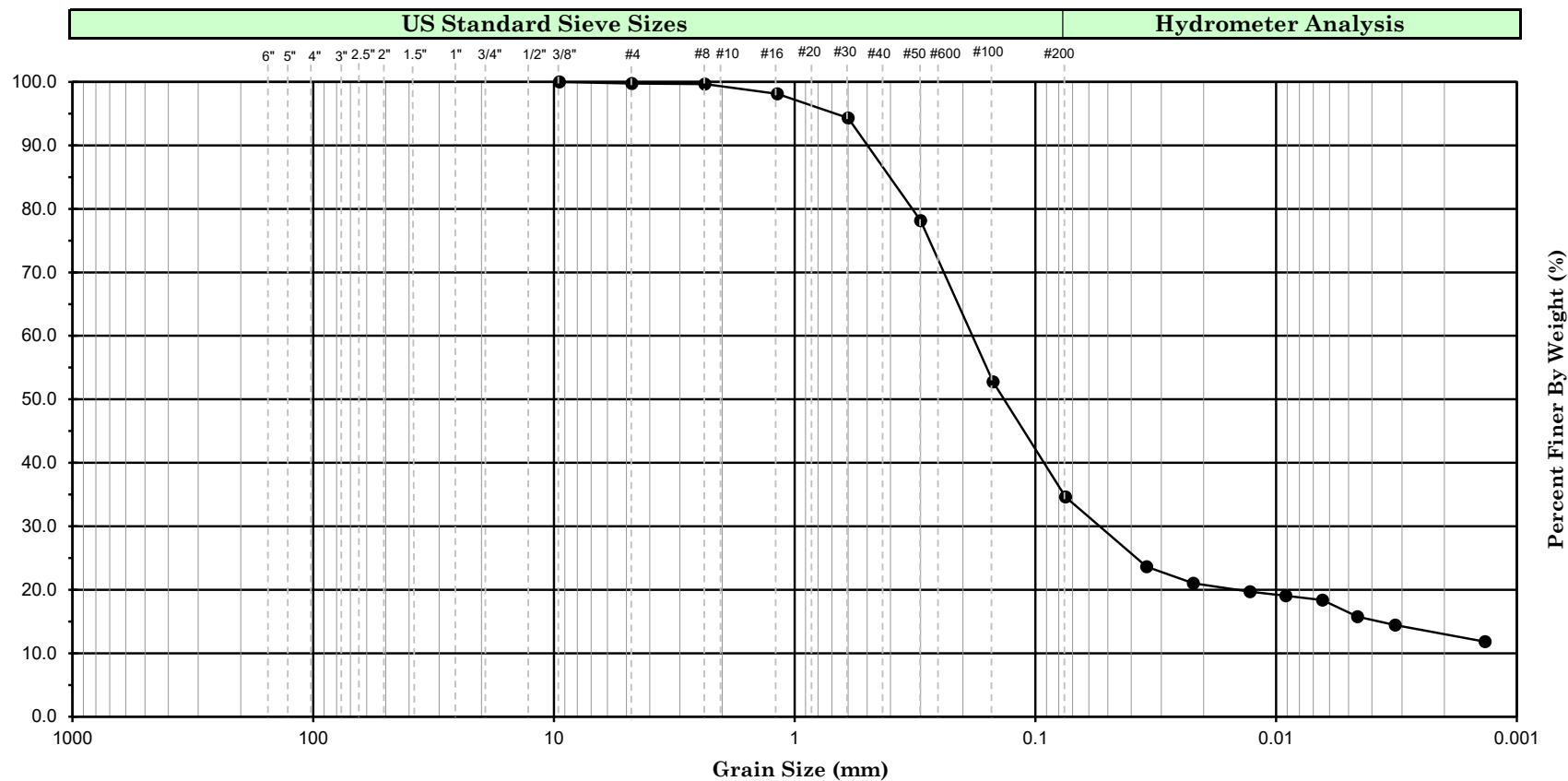


Cobbles		Gravel				Sand		Silt or Clay	
		Coarse		Fine		Coarse	Medium		
Symbol	Boring Number	Sample Number	Depth			Soil Color	Soil Description	U.S.C.S.	
			(ft)	(m)					
●	BH-2	D-3	5.0			yellowish brown	Clayey sand	SC	
Remark									

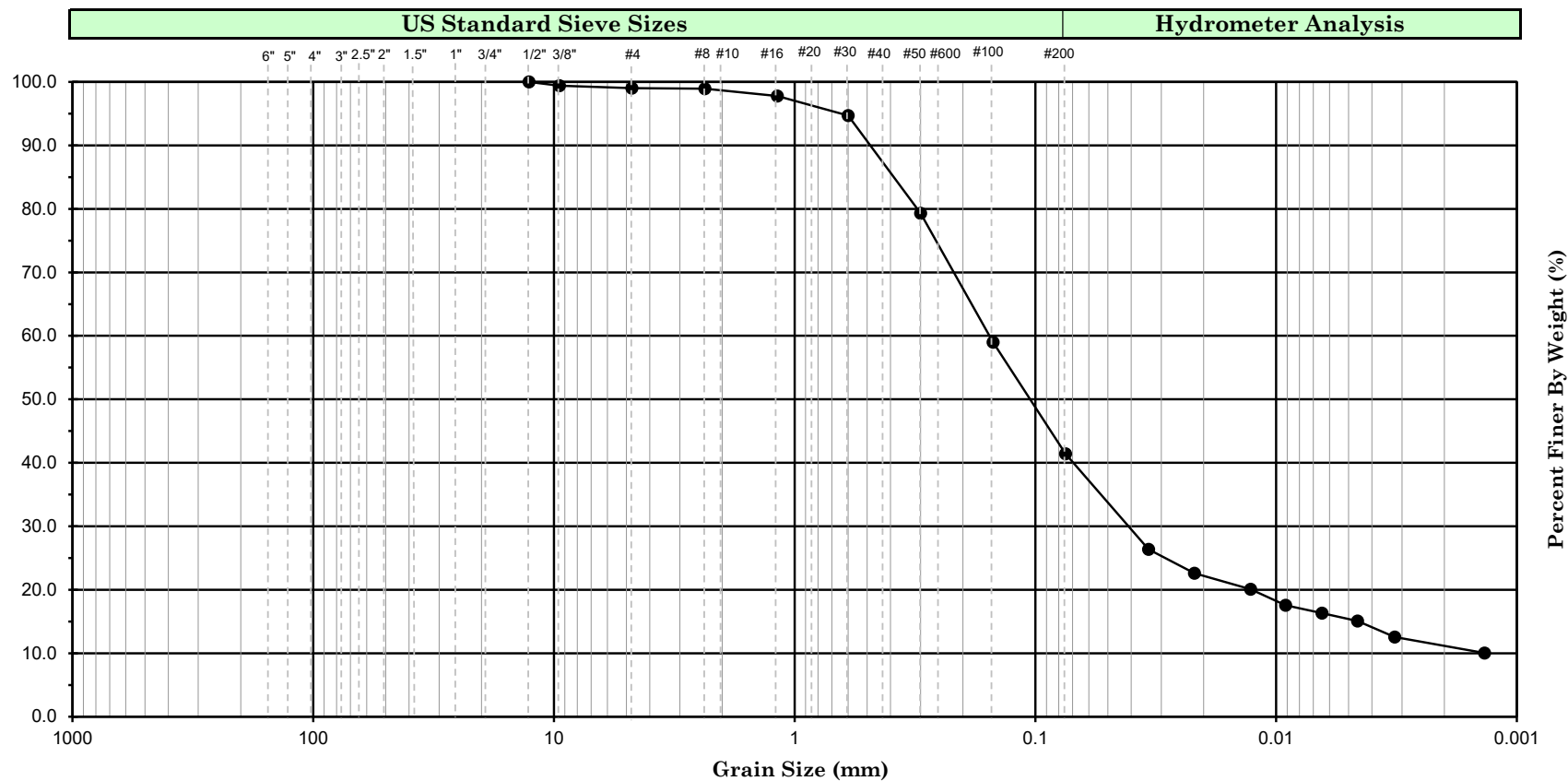


Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	

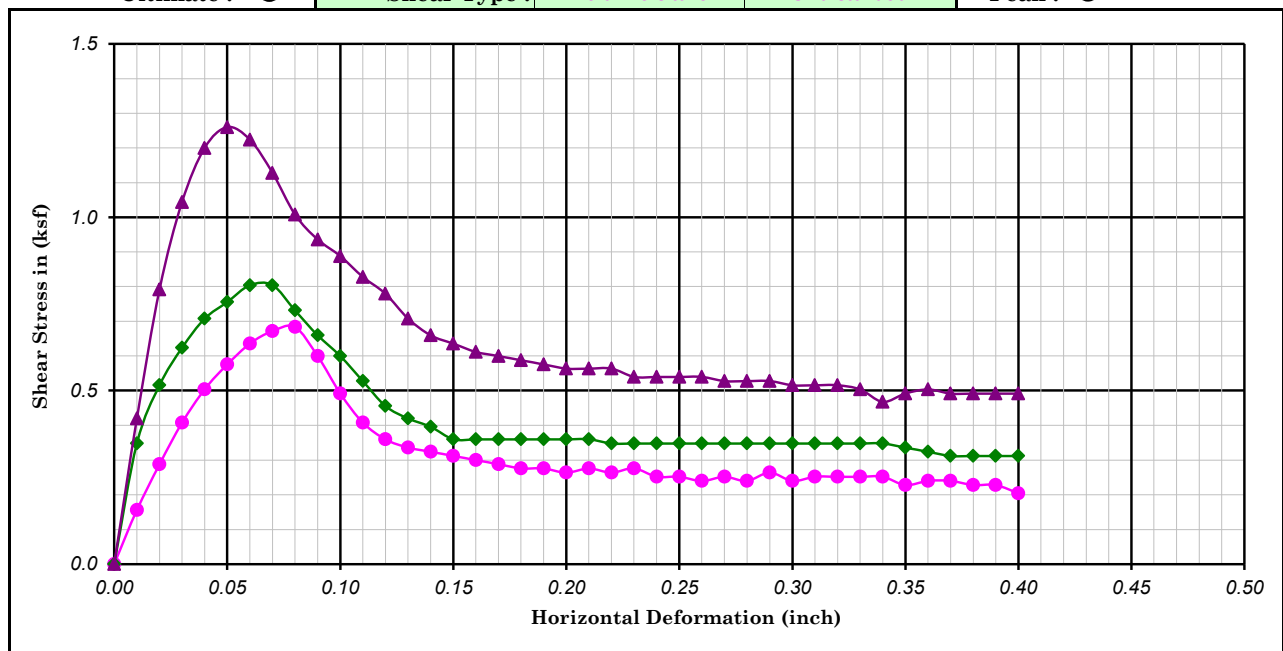
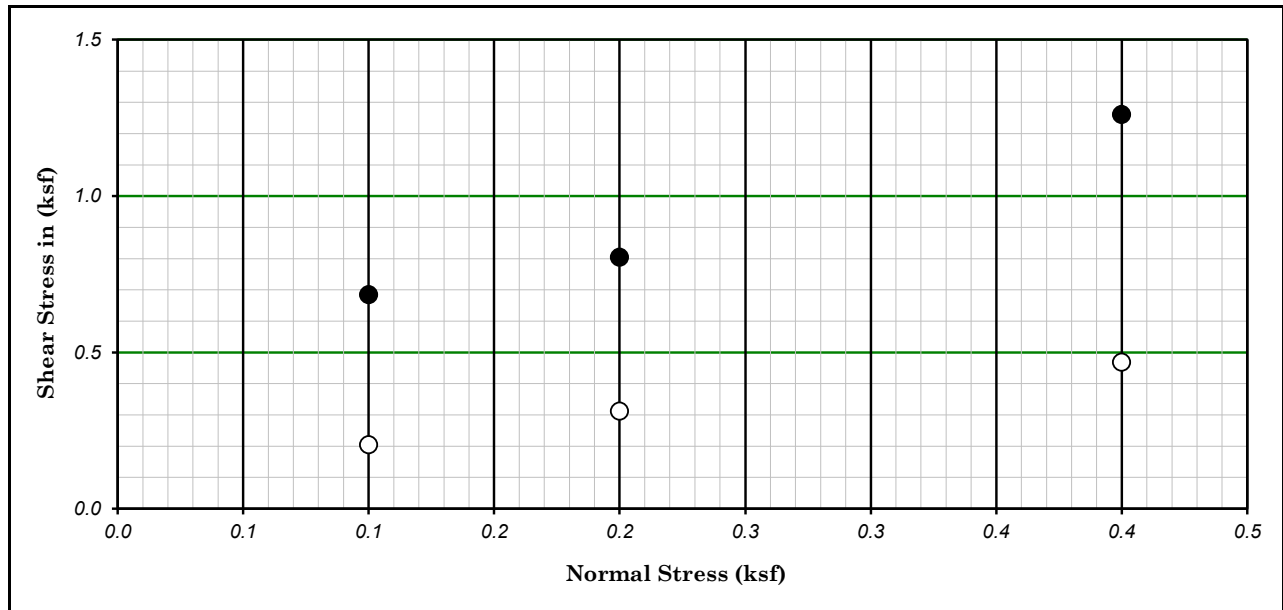
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-2	T-4	7.5		yellowish brown	Silty clayey sand	SC-SM
Remark							






Cobbles		Gravel		Sand			Silt or Clay
		Coarse	Fine	Coarse	Medium	Fine	
Symbol	Boring Number	Sample Number	Depth		Soil Color	Soil Description	U.S.C.S.
			(ft)	(m)			
●	BH-2	D-5	10.0		yellowish brown	Silty clayey sand	SC-SM
Remark							



				Gravel		Sand				
				Coarse	Fine	Coarse	Medium	Fine		
Symbol	Boring Number	Sample Number	Depth		Soil Color		Soil Description			U.S.C.S.
●	BH-2	D-7	(ft)	(m)						
			15.0		yellowish brown		Clayey sand			SC
Remark										



Boring No. : <i>BH-1</i>			Strength Intercept (C) :		<i>0.46</i>	(ksf)	Peak	<i>0.13</i>	(ksf)	Ultimate		
Sample No. : <i>D-1</i>					<i>21.8</i>	(kPa)		<i>6.0</i>	(kPa)			
Depth (ft/m) : <i>0.0</i>		<i>0.00</i>	Friction Angle (ϕ) :		<i>63</i>	Degree		<i>41</i>	Degree			
Description : <i>Yellowish brown, CLAYEY SAND (SC)</i>											Shear Rate (inch/minute) : <i>0.02</i>	
SYMBOL	MOISTURE CONTENT (%)		DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS		
			(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)	
	<i>13.80</i>		<i>105.80</i>	<i>16.65</i>	<i>0.59</i>	<i>0.10</i>	<i>4.79</i>	<i>0.68</i>	<i>32.75</i>	<i>0.20</i>	<i>9.77</i>	
	<i>14.61</i>		<i>111.75</i>	<i>17.59</i>	<i>0.51</i>	<i>0.20</i>	<i>9.58</i>	<i>0.80</i>	<i>38.50</i>	<i>0.31</i>	<i>14.94</i>	
	<i>14.51</i>		<i>114.18</i>	<i>17.97</i>	<i>0.48</i>	<i>0.40</i>	<i>19.15</i>	<i>1.26</i>	<i>60.33</i>	<i>0.47</i>	<i>22.41</i>	



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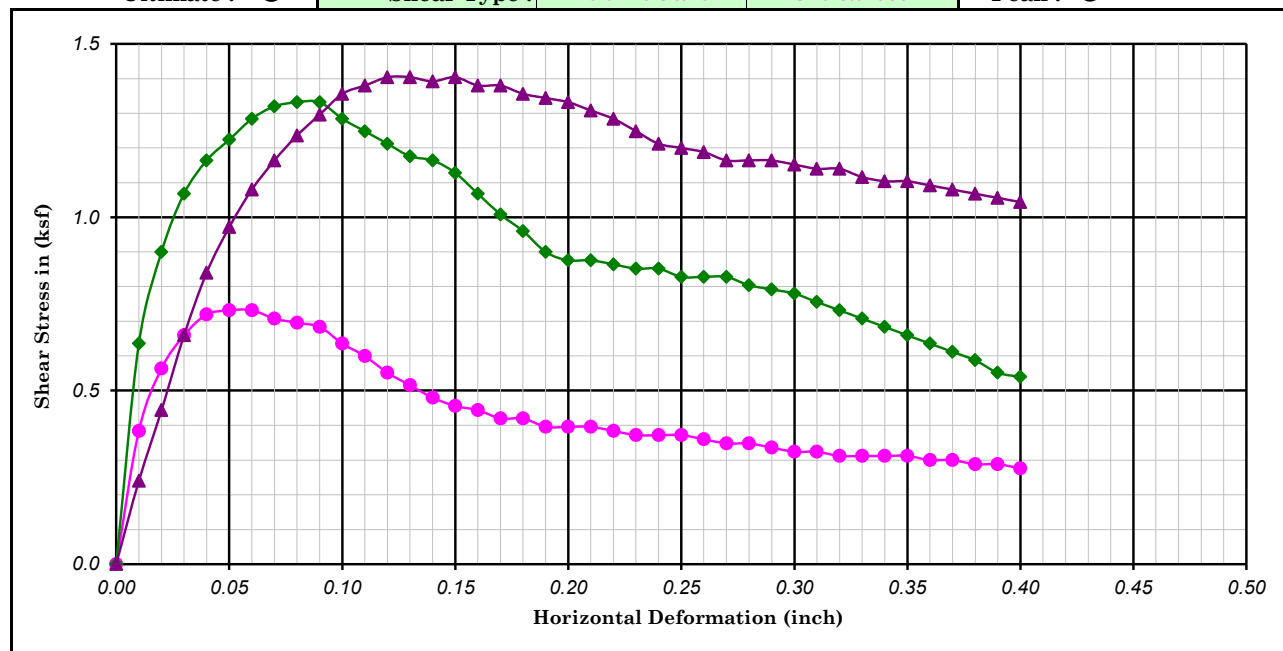
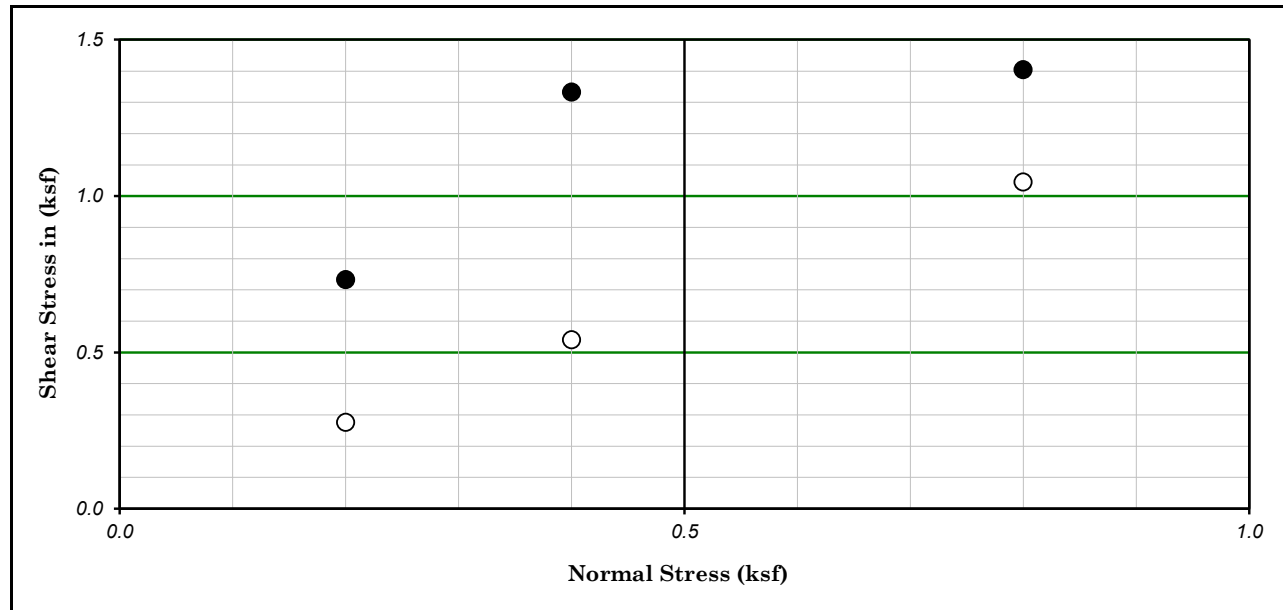
DIRECT SHEAR TEST

(ASTM D-3080)

Project No. : *21-601*

Date : *05/22/24*

Figure No.



Boring No. : BH-1			Strength Intercept (C) :		0.70	(ksf)	Peak	0.02	(ksf)	Ultimate		
Sample No. : T-2					33.3	(kPa)		1.1	(kPa)			
Depth (ft/m) : 2.5		0.00	Friction Angle (ϕ) :		45	Degree		45	Degree			
Description : Yellowish brown, CLAYEY SAND (SC)											Shear Rate (inch/minute) : 0.02	
SYMBOL	MOISTURE CONTENT (%)		DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS		
			(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)	
●	12.63		115.62	18.20	0.46	0.20	9.58	0.73	35.05	0.28	13.21	
◆	12.22		117.59	18.51	0.43	0.40	19.15	1.33	63.78	0.54	25.86	
▲	12.22		112.04	17.64	0.50	0.80	38.30	1.40	67.22	1.04	49.99	



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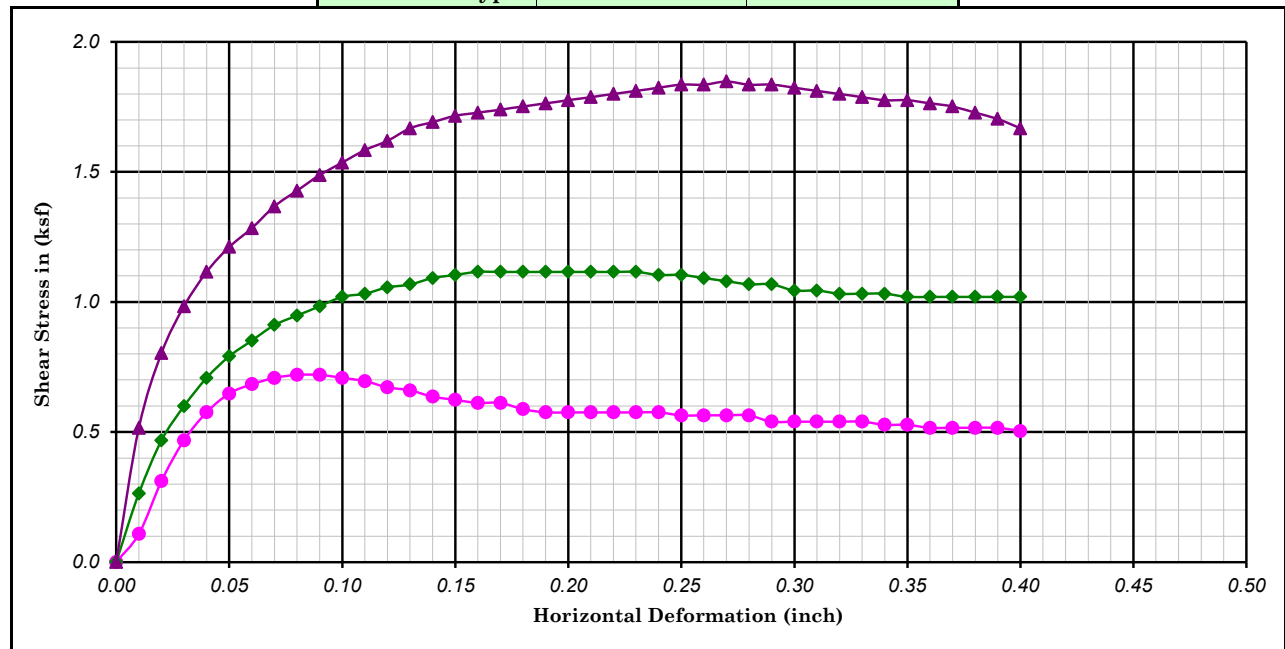
Project No. : 21-601

Date : 05/22/24

Figure No.



Ultimate : ○ Shear Type : *Field Moisture* *Undisturbed* Peak : ●



Boring No. : <i>BH-1</i>			Strength Intercept (C) :		0.35		(ksf)	Peak	0.18		(ksf)	Ultimate	
Sample No. : <i>T-4</i>					16.9		(kPa)		8.6		(kPa)		
Depth (ft/m) : <i>7.5</i> <i>0.00</i>			Friction Angle (ϕ) :		37		Degree	Peak	37		Degree	Ultimate	
Description : <i>Yellowish brown, SILTY CLAYEY SAND (SC-SM)</i>													Shear Rate (inch/minute) : <i>0.02</i>
SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS				
		(pcf)	(kN/m^3)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)			
●	11.01	102.64	16.16	0.64	0.50	23.94	0.72	34.47	0.50	24.13			
◆	11.12	106.46	16.76	0.58	1.00	47.88	1.12	53.43	1.02	48.84			
▲	10.73	104.10	16.39	0.62	2.00	95.76	1.85	88.48	1.67	79.86			



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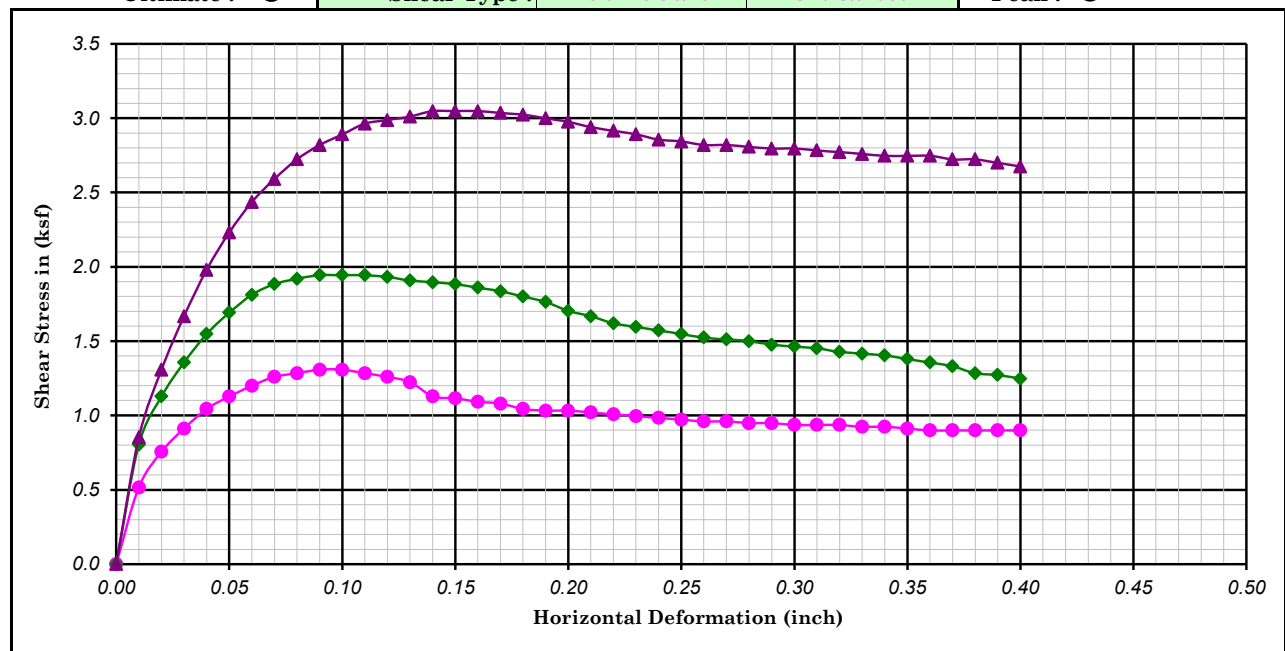
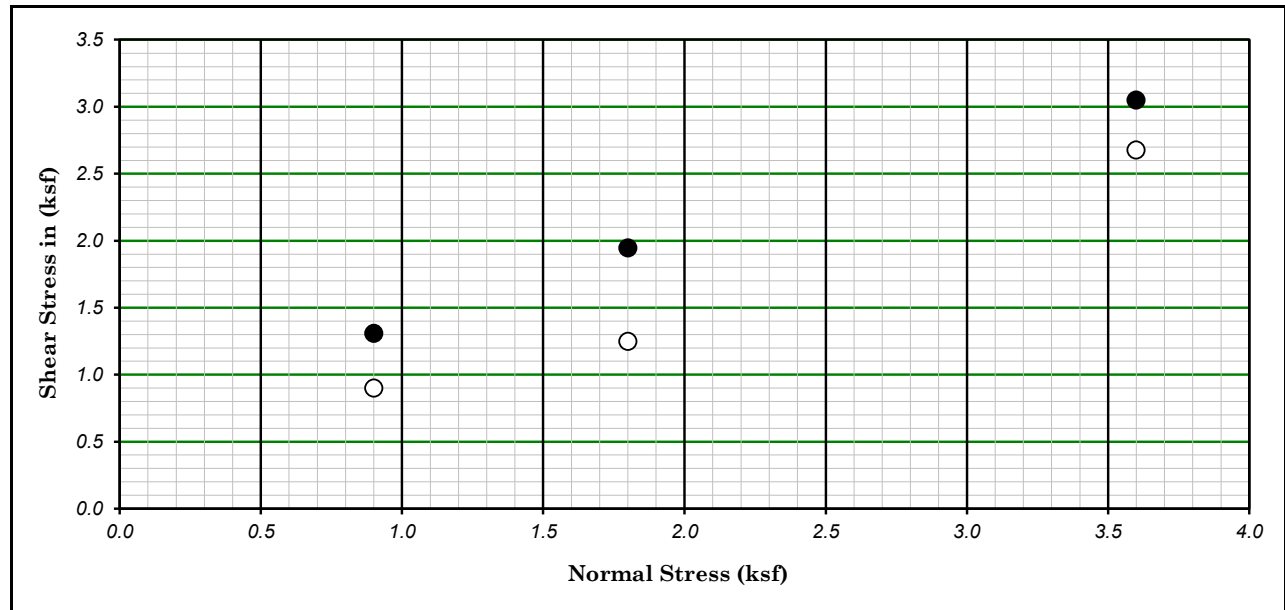
DIRECT SHEAR TEST

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Figure No.



Boring No. : <i>BH-1</i>			Strength Intercept (C) :		<i>0.76</i>	(ksf)	Peak	<i>0.19</i>	(ksf)	Ultimate	
Sample No. : <i>D-7</i>					<i>36.20</i>	(kPa)		<i>8.91</i>	(kPa)		
Depth (ft/m) : <i>15.0</i>		<i>0.00</i>	Friction Angle (ϕ) :		<i>33</i>	Degree		<i>33</i>	Degree		
Description : <i>Yellowish brown, SILTY CLAYEY SAND (SC-SM)</i>										Shear Rate (inch/minute) : <i>0.02</i>	
SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS		
		(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)	
●	<i>14.19</i>	<i>101.85</i>	<i>16.03</i>	<i>0.65</i>	<i>0.90</i>	<i>43.09</i>	<i>1.31</i>	<i>62.63</i>	<i>0.90</i>	<i>43.09</i>	
◆	<i>13.13</i>	<i>109.95</i>	<i>17.31</i>	<i>0.53</i>	<i>1.80</i>	<i>86.18</i>	<i>1.94</i>	<i>93.08</i>	<i>1.25</i>	<i>59.75</i>	
▲	<i>13.53</i>	<i>109.08</i>	<i>17.17</i>	<i>0.55</i>	<i>3.60</i>	<i>172.37</i>	<i>3.05</i>	<i>145.94</i>	<i>2.68</i>	<i>128.13</i>	

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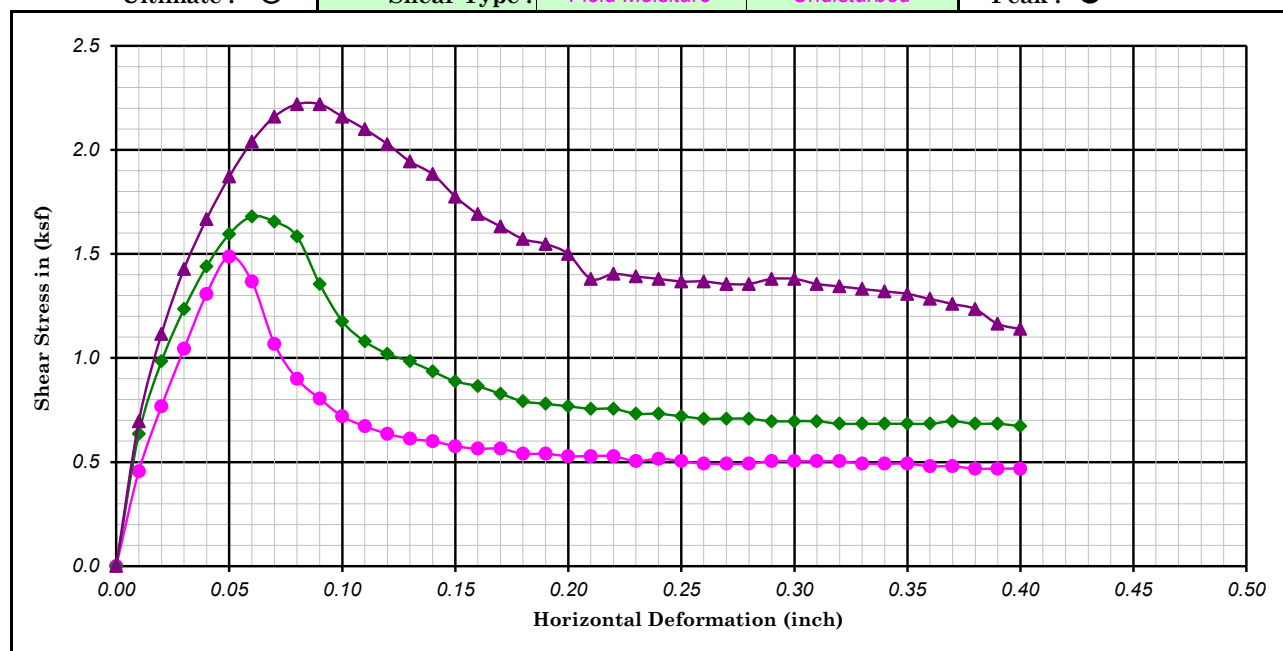
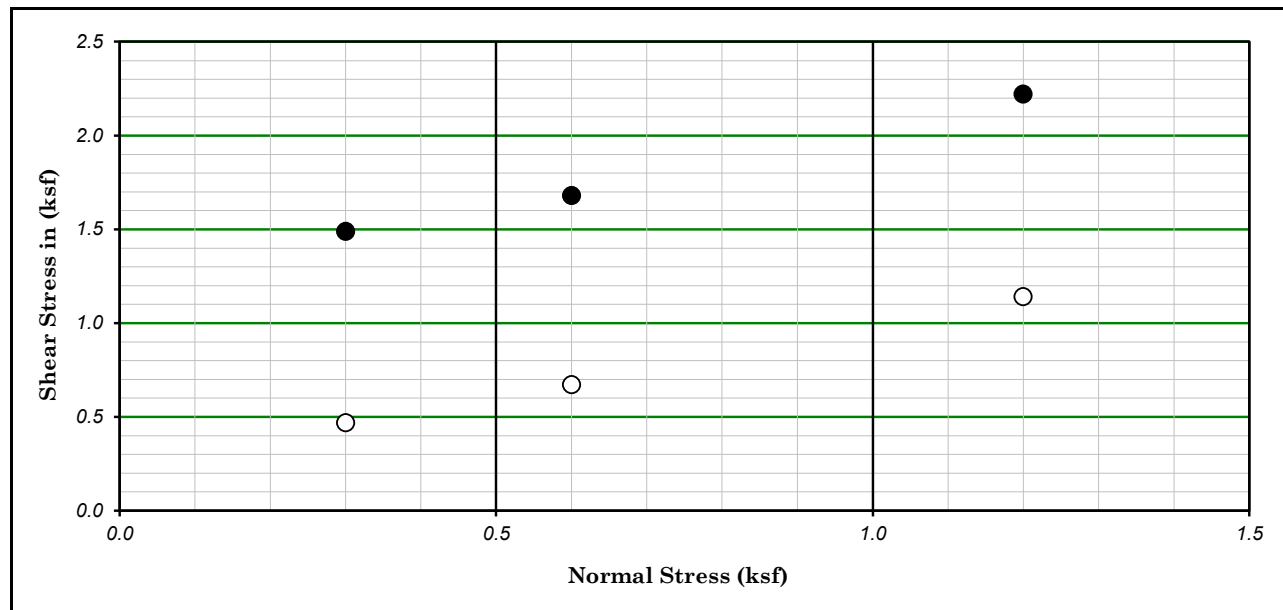
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Figure No.



Boring No. : <i>BH-2</i>			Strength Intercept (C) :		<i>1.22</i>	(ksf)	Peak	<i>0.23</i>	(ksf)	Ultimate		
Sample No. : <i>D-3</i>					<i>58.3</i>	(kPa)		<i>11.2</i>	(kPa)			
Depth (ft/m) : <i>5.0</i>		<i>0.00</i>	Friction Angle (ϕ) :		<i>40</i>	Degree		<i>37</i>	Degree			
Description : <i>Yellowish brown with brown, CLAYEY SAND (SC)</i>											Shear Rate (inch/minute) : <i>0.02</i>	
SYMBOL	MOISTURE CONTENT (%)		DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS		
			(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)	
●	<i>14.59</i>		<i>120.60</i>	<i>18.98</i>	<i>0.40</i>	<i>0.30</i>	<i>14.36</i>	<i>1.49</i>	<i>71.25</i>	<i>0.47</i>	<i>22.41</i>	
◆	<i>12.16</i>		<i>114.73</i>	<i>18.06</i>	<i>0.47</i>	<i>0.60</i>	<i>28.73</i>	<i>1.68</i>	<i>80.44</i>	<i>0.67</i>	<i>32.18</i>	
▲	<i>12.65</i>		<i>113.18</i>	<i>17.81</i>	<i>0.49</i>	<i>1.20</i>	<i>57.46</i>	<i>2.22</i>	<i>106.29</i>	<i>1.14</i>	<i>54.58</i>	



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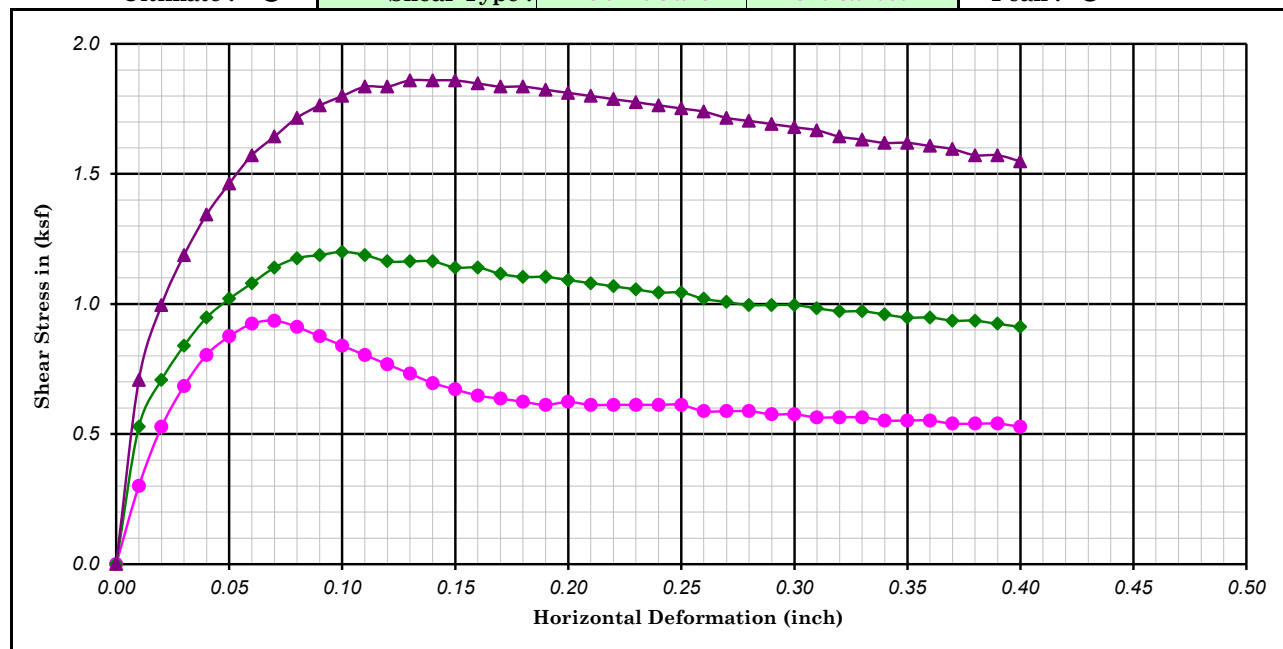
Project No. : *21-601*

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Figure No.



Ultimate : ○ Shear Type : *Field Moisture* *Undisturbed* Peak : ●



Boring No. : <i>BH-2</i>			Strength Intercept (C) :		0.61		(ksf)	Peak	0.21		(ksf)	Ultimate		
Sample No. : <i>T-4</i>					29.0		(kPa)		10.1		(kPa)			
Depth (ft/m) : 7.5 0.00			Friction Angle (ϕ) :		32		Degree		32		Degree			
Description : <i>Yellowish brown, SILTY CLAYEY SAND (SC-SM)</i>													Shear Rate (inch/minute) : 0.02	
SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS					
		(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)				
●	11.97	106.19	16.71	0.59	0.50	23.94	0.94	44.82	0.53	25.28				
◆	11.09	110.44	17.38	0.53	1.00	47.88	1.20	57.46	0.91	43.67				
▲	11.34	108.97	17.15	0.55	2.00	95.76	1.86	89.06	1.55	74.12				



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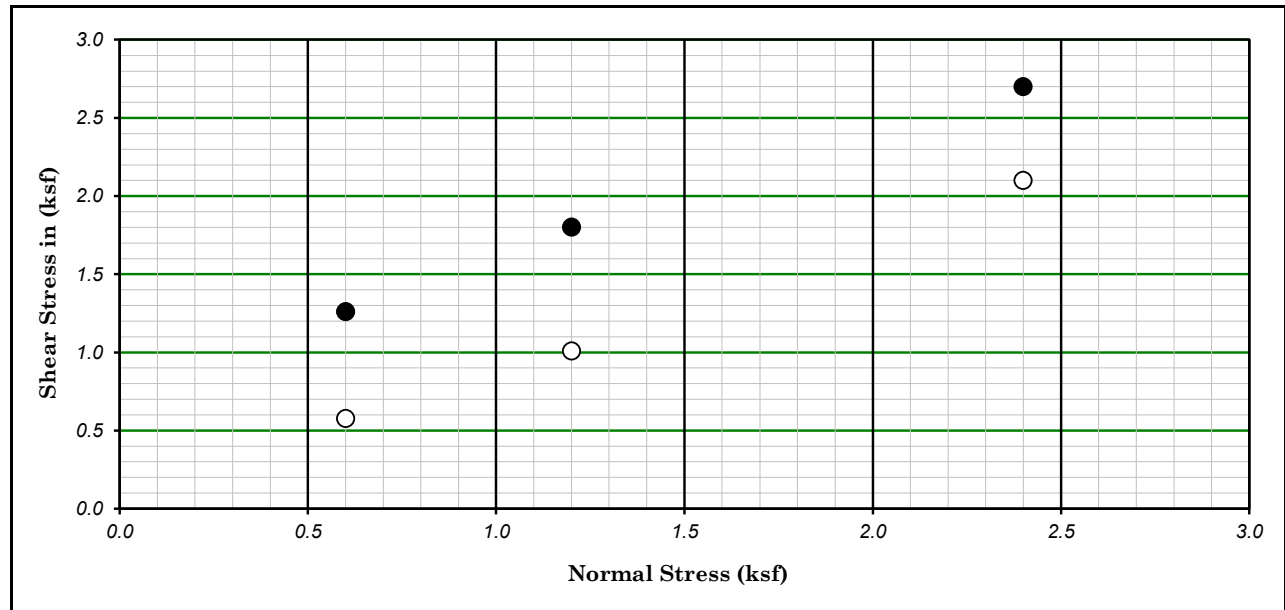
DIRECT SHEAR TEST

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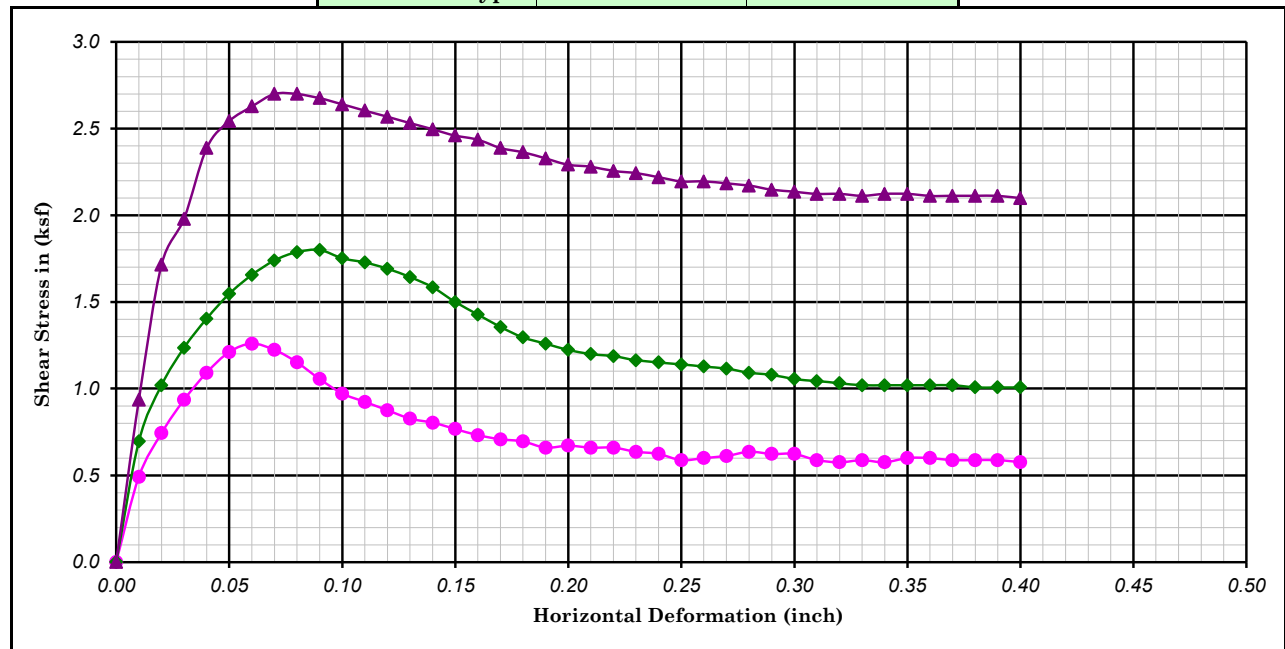
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Figure No.



Ultimate : ○ Shear Type : *Field Moisture* Undisturbed Peak : ●



Boring No. : <i>BH-2</i>		Strength Intercept (C) :		<i>0.81</i>	(ksf)	Peak	<i>0.03</i>	(ksf)	Ultimate	
Sample No. : <i>D-5</i>				<i>38.8</i>	(kPa)		<i>1.4</i>	(kPa)		
Depth (ft/m) :	<i>10.0</i> <i>0.00</i>	Friction Angle (ϕ) :		<i>38</i>	Degree		<i>38</i>	Degree		
Description : <i>Yellowish brown, SILTY CLAYEY SAND (SC-SM)</i>						Shear Rate (inch/minute) : <i>0.02</i>				
SYMBOL	MOISTURE CONTENT (%)	DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS	
		(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)
●	<i>13.74</i>	<i>114.62</i>	<i>18.04</i>	<i>0.47</i>	<i>0.60</i>	<i>28.73</i>	<i>1.26</i>	<i>60.33</i>	<i>0.58</i>	<i>27.58</i>
◆	<i>12.46</i>	<i>109.89</i>	<i>17.30</i>	<i>0.53</i>	<i>1.20</i>	<i>57.46</i>	<i>1.80</i>	<i>86.18</i>	<i>1.01</i>	<i>48.26</i>
▲	<i>11.94</i>	<i>112.26</i>	<i>17.67</i>	<i>0.50</i>	<i>2.40</i>	<i>114.91</i>	<i>2.70</i>	<i>129.28</i>	<i>2.10</i>	<i>100.55</i>



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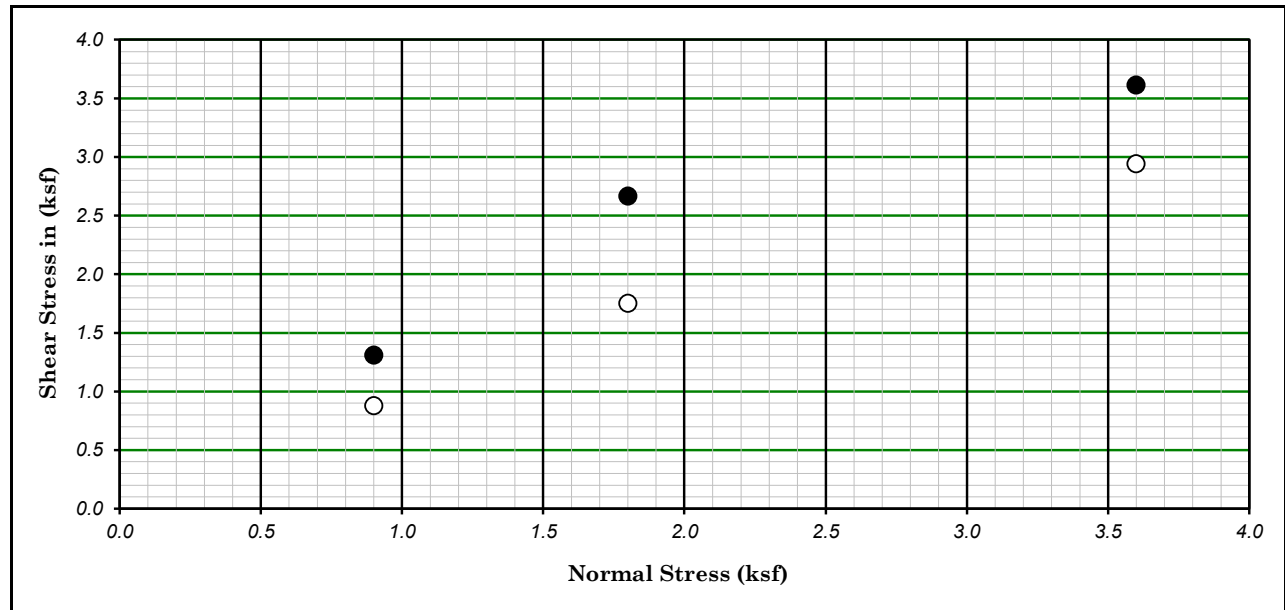
DIRECT SHEAR TEST

(ASTM D-3080)

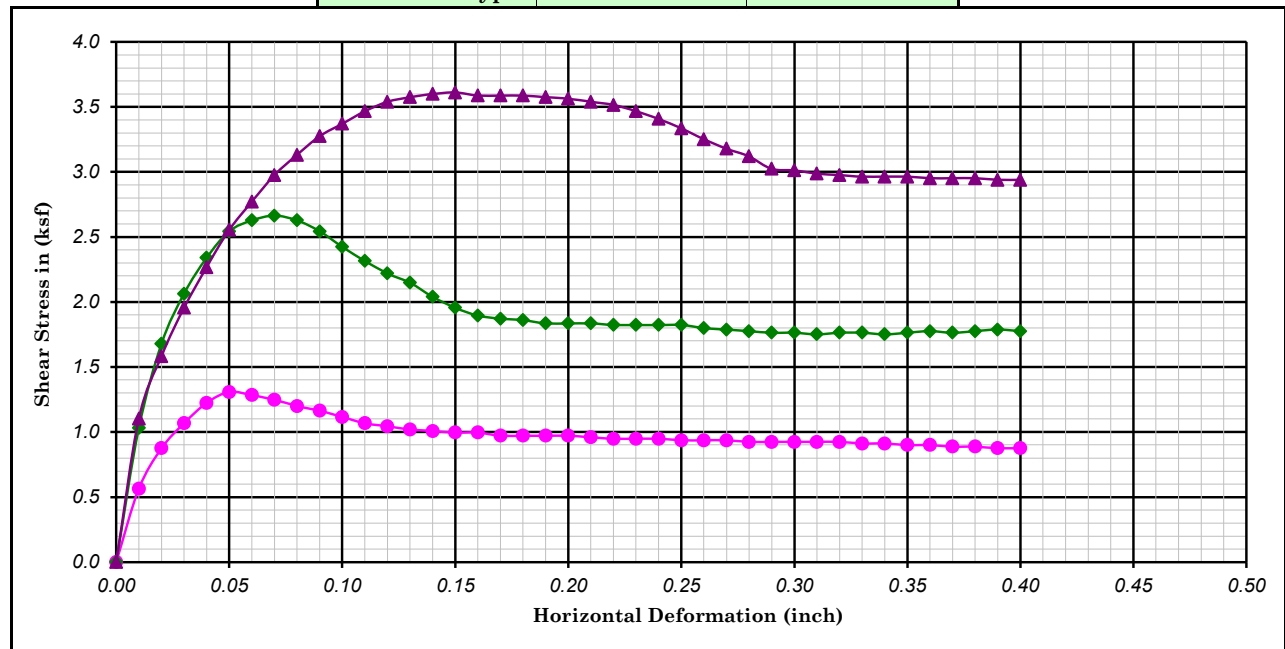
Project No. : *21-601*

Date : *05/22/24*

Figure No.



Ultimate : ○ Shear Type : *Field Moisture* Undisturbed Peak : ●



Boring No. : <i>BH-2</i>			Strength Intercept (C) :		0.83		(ksf)		Peak	0.28		(ksf)		Ultimate			
Sample No. : <i>D-7</i>					39.9		(kPa)			13.5		(kPa)					
Depth (ft/m) : 15.0 0.00			Friction Angle (ϕ) :		39		Degree			37		Degree					
Description : <i>Dark yellowish brown , CLAYEY SAND (SC)</i>														Shear Rate (inch/minute) :		0.02	
SYMBOL	MOISTURE CONTENT (%)		DRY DENSITY		VOID RATIO	NORMAL STRESS		PEAK STRESS		ULTIMATE STRESS							
			(pcf)	(kN/m ³)		(ksf)	(kPa)	(ksf)	(kPa)	(ksf)	(kPa)						
●	14.29		114.01	17.95	0.48	0.90	43.09	1.31	62.63	0.88	41.94						
◆	14.36		120.36	18.94	0.40	1.80	86.18	2.66	127.55	1.75	83.89						
▲	13.70		116.06	18.27	0.45	3.60	172.37	3.61	172.94	2.94	140.77						



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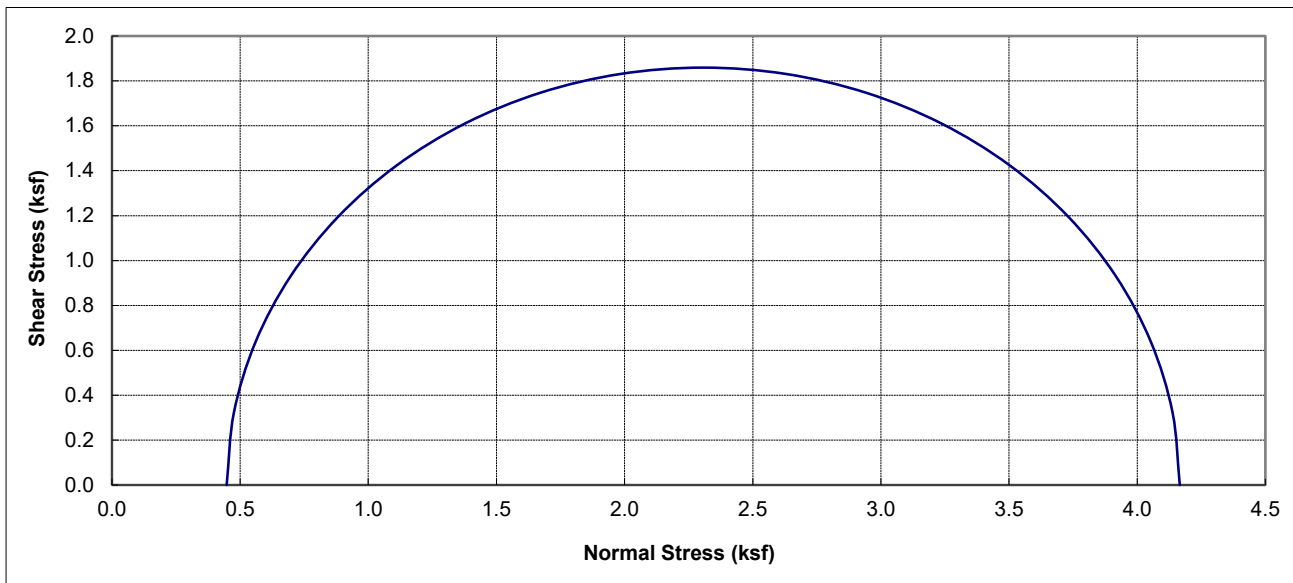
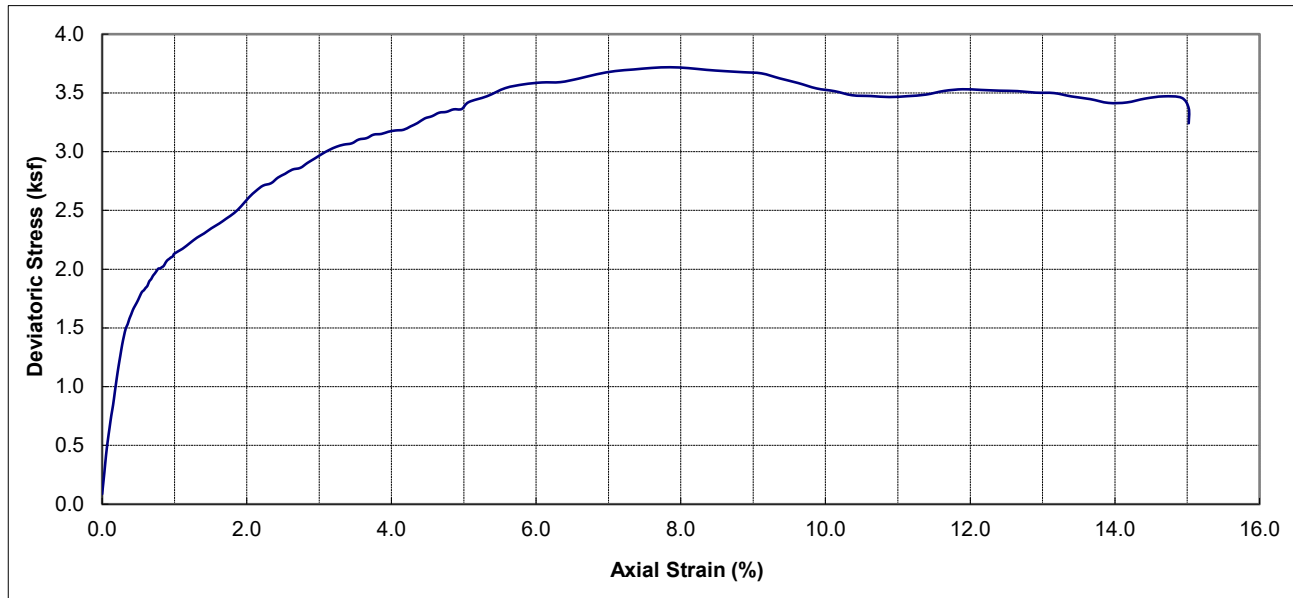
DIRECT SHEAR TEST

(ASTM D-3080)


Project No. : *21-601*

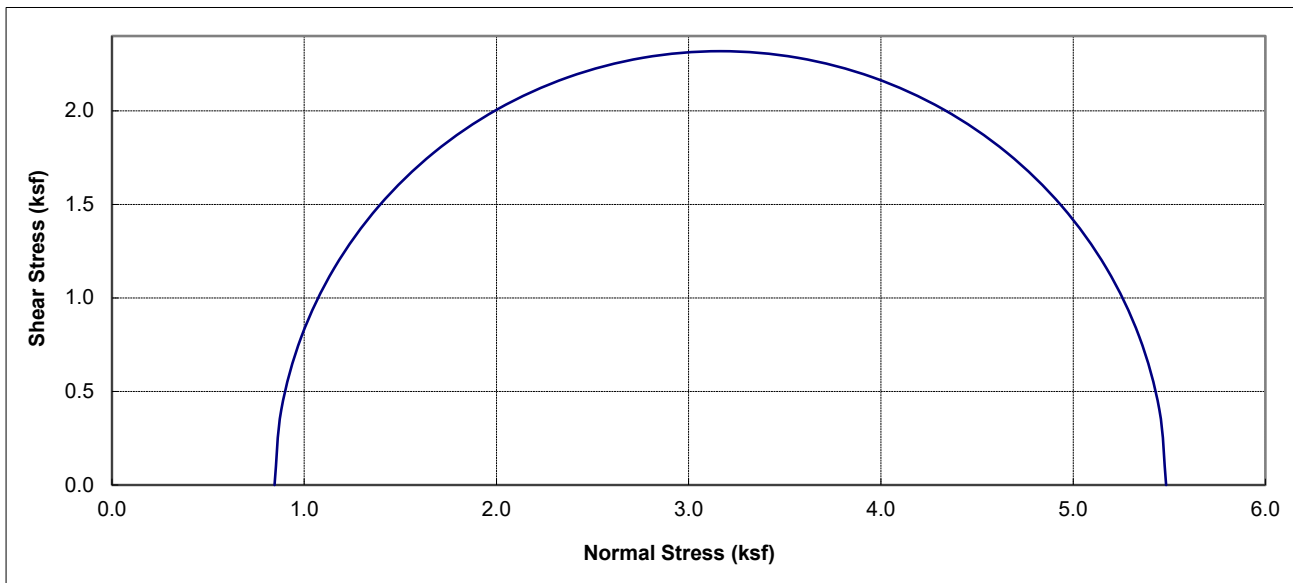
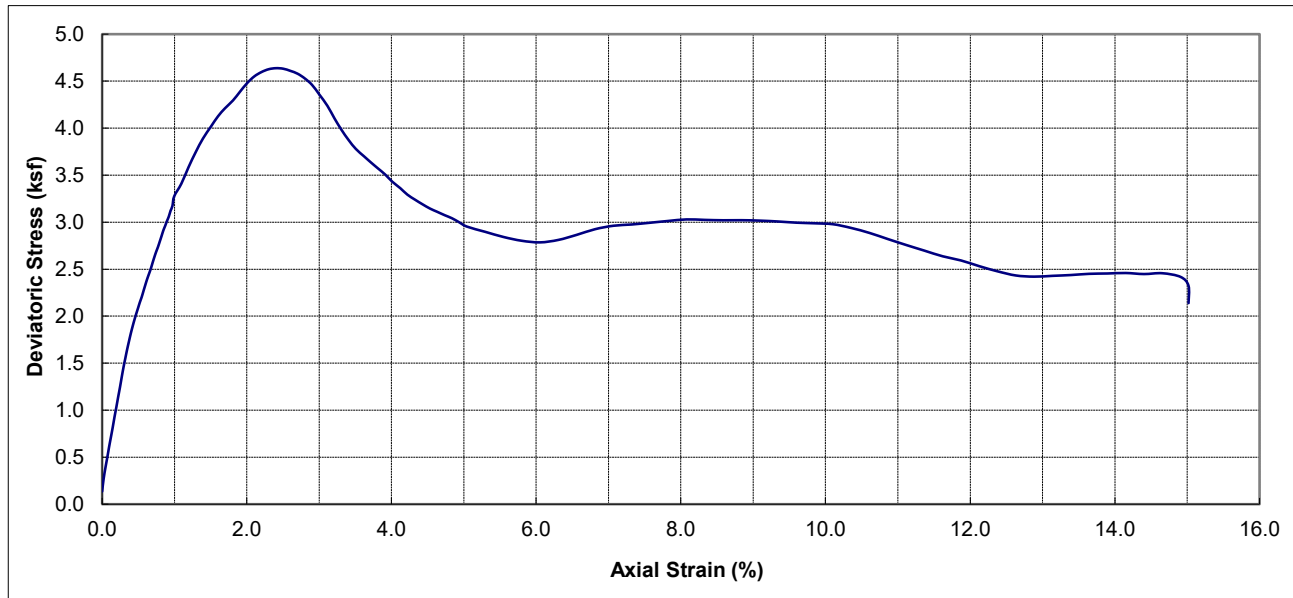
Date : *05/22/24*

Figure No.




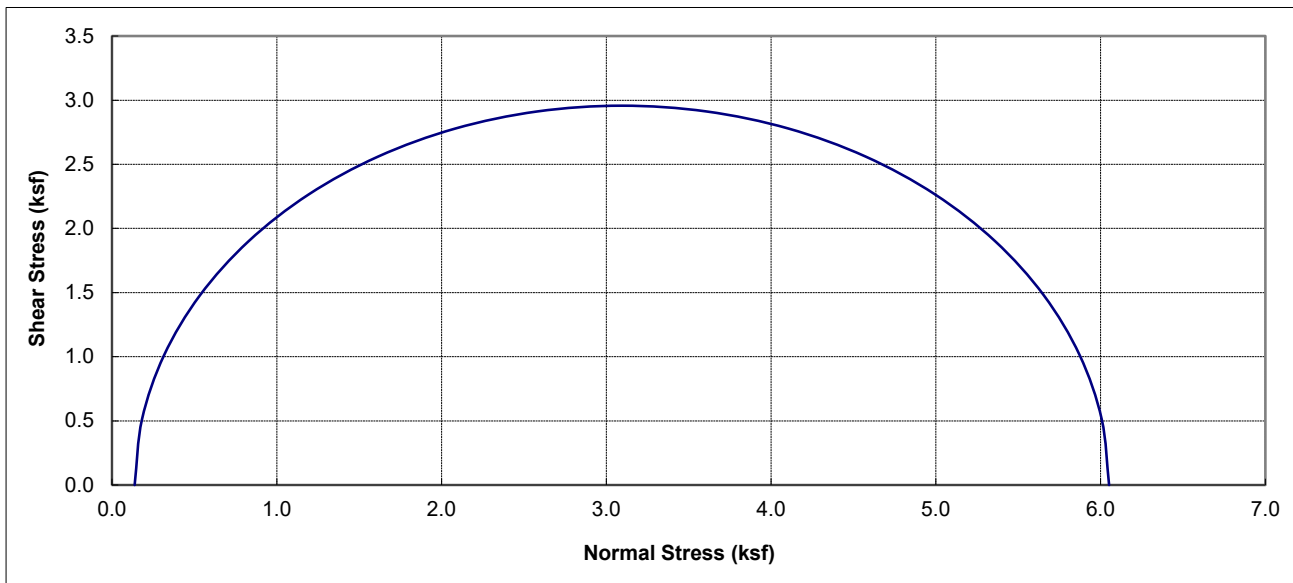
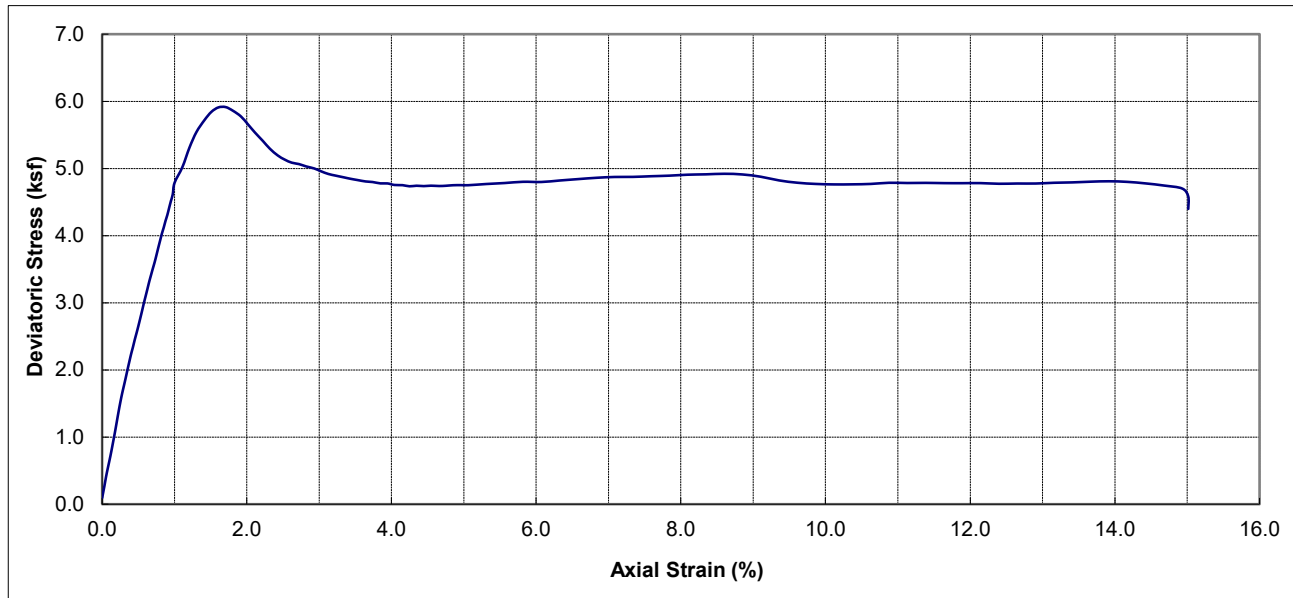
Boring No.	Sample No.	Depth (ft)	Soil Type	Dry Density (pcf)	Moisture Content (%)	Conf. Stress (ksf)	Max Dev. Stress (ksf)	Initial Saturation (%)
BH-1	D-3	5	Yellowish brown with brown, CLAYEY SAND (SC)	112.6	13.64	0.45	3.72	74.3

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		UNCONSOLIDATED UNDRAINED TEST	
Project No. : 21-601		Date : 05/13/24	
		(ASTM D2850) Figure No. :	




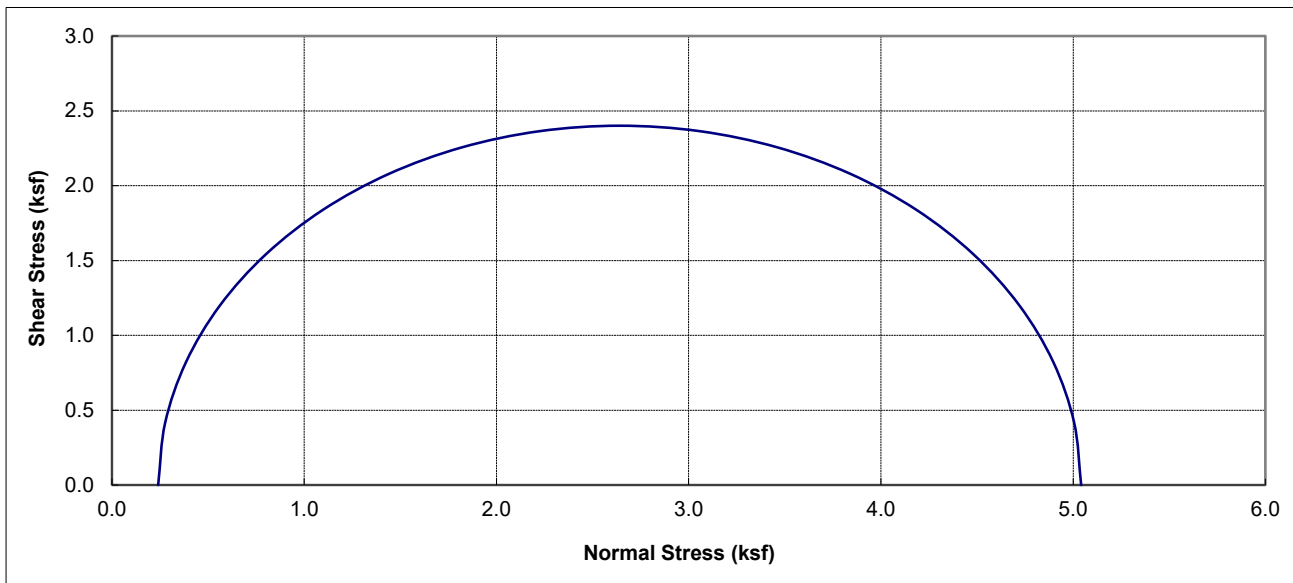
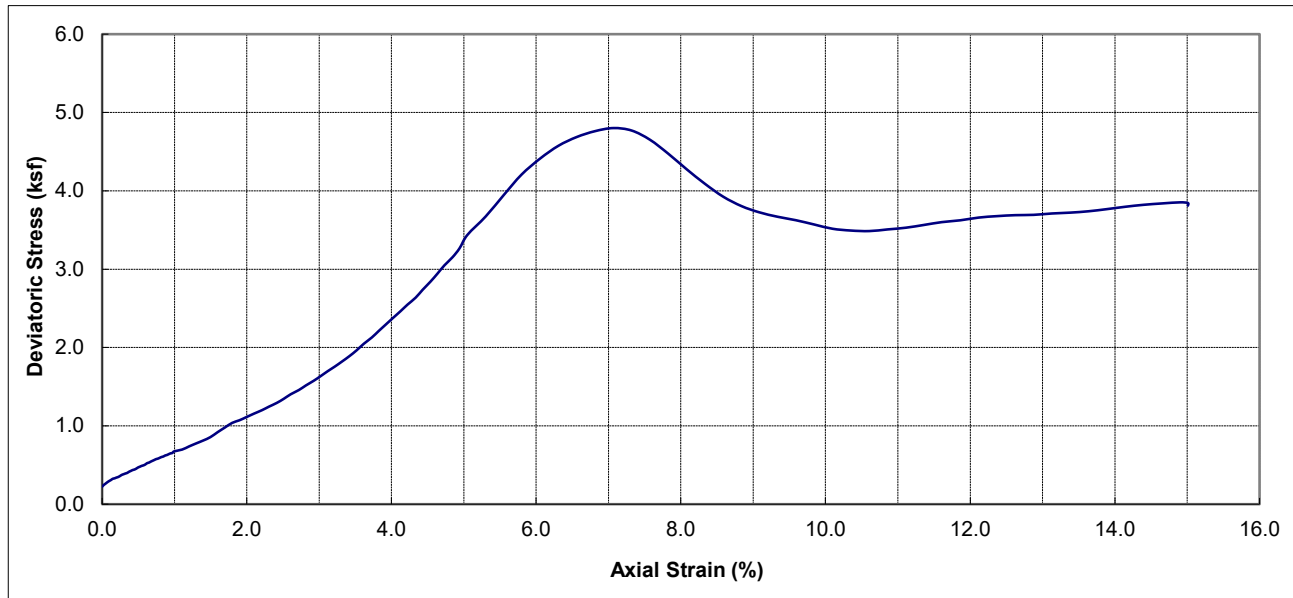
Boring No.	Sample No.	Depth (ft)	Soil Type	Dry Density (pcf)	Moisture Content (%)	Conf. Stress (ksf)	Max Dev. Stress (ksf)	Initial Saturation (%)
BH-1	D-5	10	Yellowish brown, SILTY CLAYEY SAND (SC-SM)	112.7	15.31	0.85	4.64	83.5

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		UNCONSOLIDATED UNDRAINED TEST	
Project No. : 21-601		Date : 05/13/24	(ASTM D2850)
			Figure No. :




Boring No.	Sample No.	Depth (ft)	Soil Type	Dry Density (pcf)	Moisture Content (%)	Conf. Stress (ksf)	Max Dev. Stress (ksf)	Initial Saturation (%)
BH-2	D-1	0	Yellowish brown, CLAYEY SAND (SC)	114.7	13.42	0.14	5.91	77.2

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	UNCONSOLIDATED UNDRAINED TEST (ASTM D2850)				
Project No. : 21-601		Date : 05/13/24		Figure No. :	



Boring No.	Sample No.	Depth (ft)	Soil Type	Dry Density (pcf)	Moisture Content (%)	Conf. Stress (ksf)	Max Dev. Stress (ksf)	Initial Saturation (%)
BH-2	T-2	2.5	Yellowish brown, CLAYEY SAND (SC)	115.1	11.82	0.24	4.80	68.7

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	UNCONSOLIDATED UNDRAINED TEST (ASTM D2850)				
Project No. : 21-601		Date : 05/17/24		Figure No. :	