

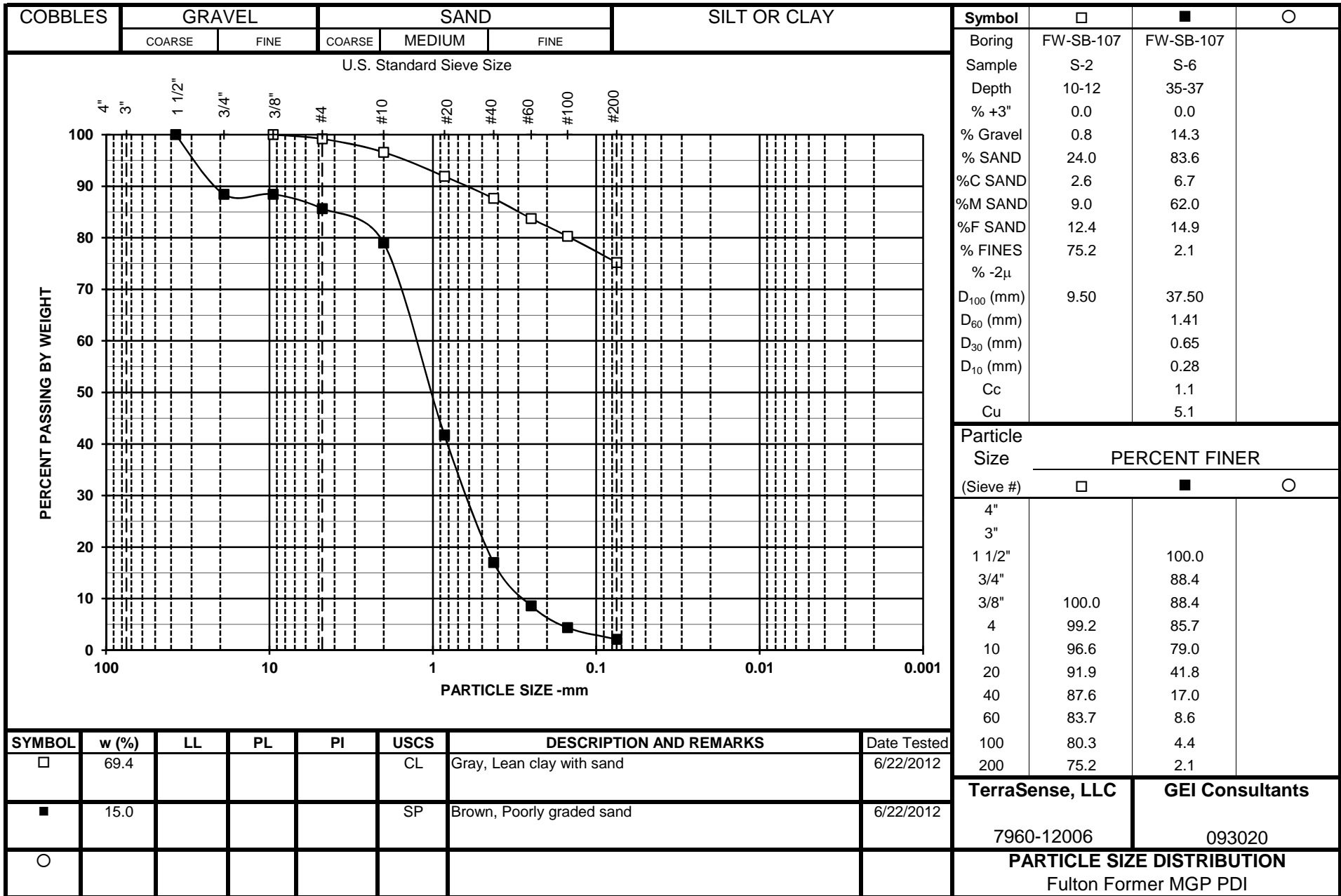
Appendix E

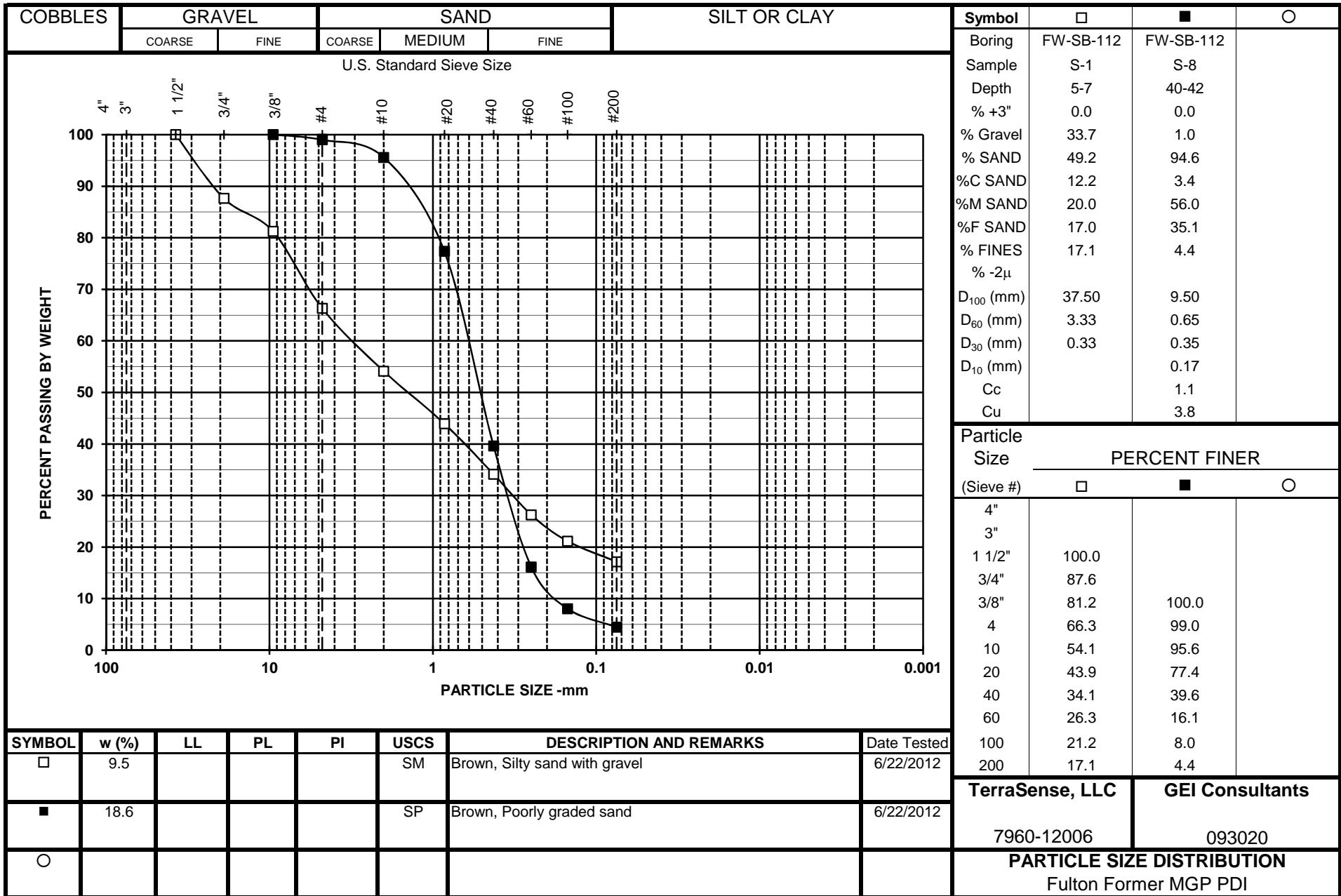
Geotechnical Laboratory Data

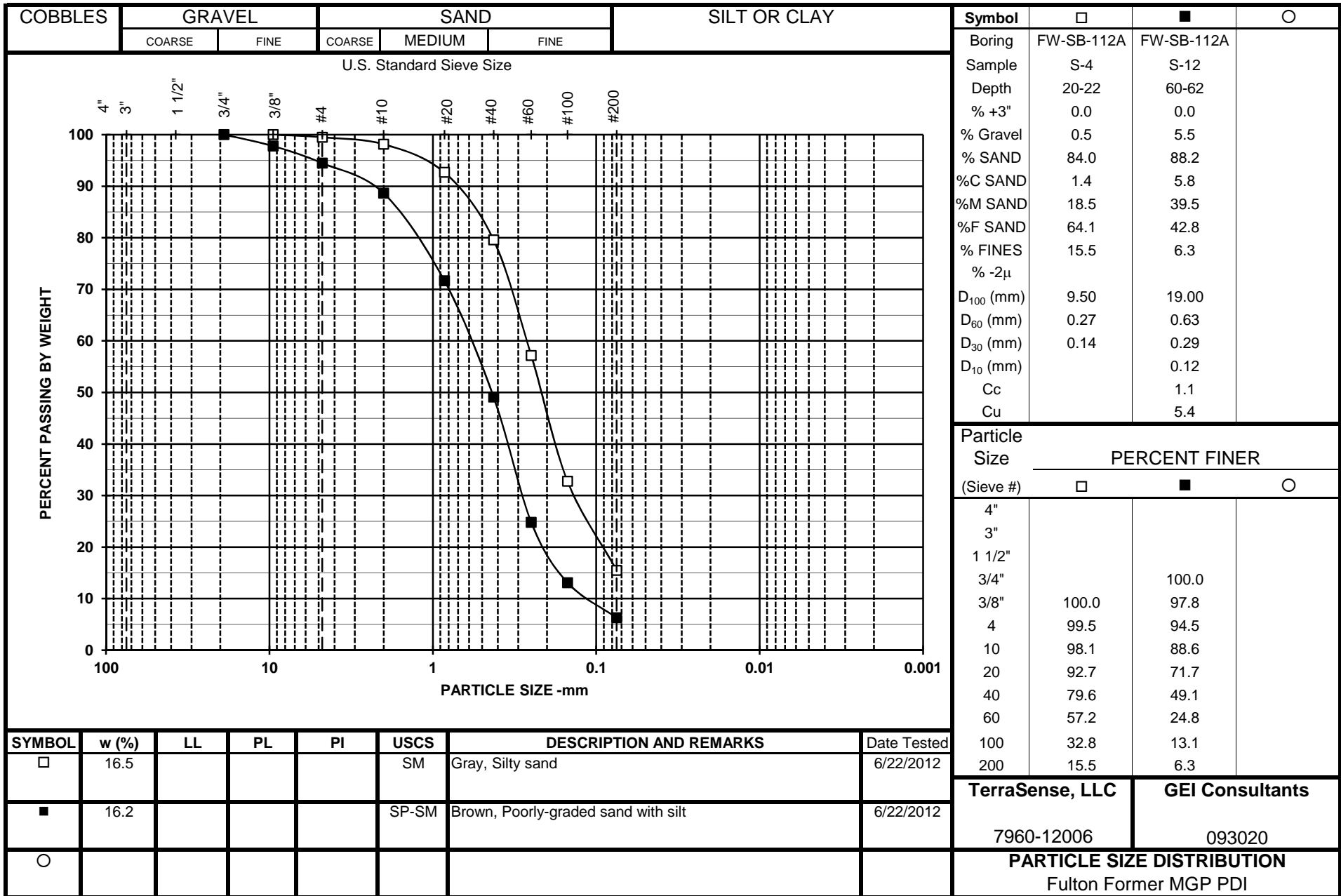
**GEI Consultants #093020
Fulton Former MGP PDI
LABORATORY TESTING DATA SUMMARY**

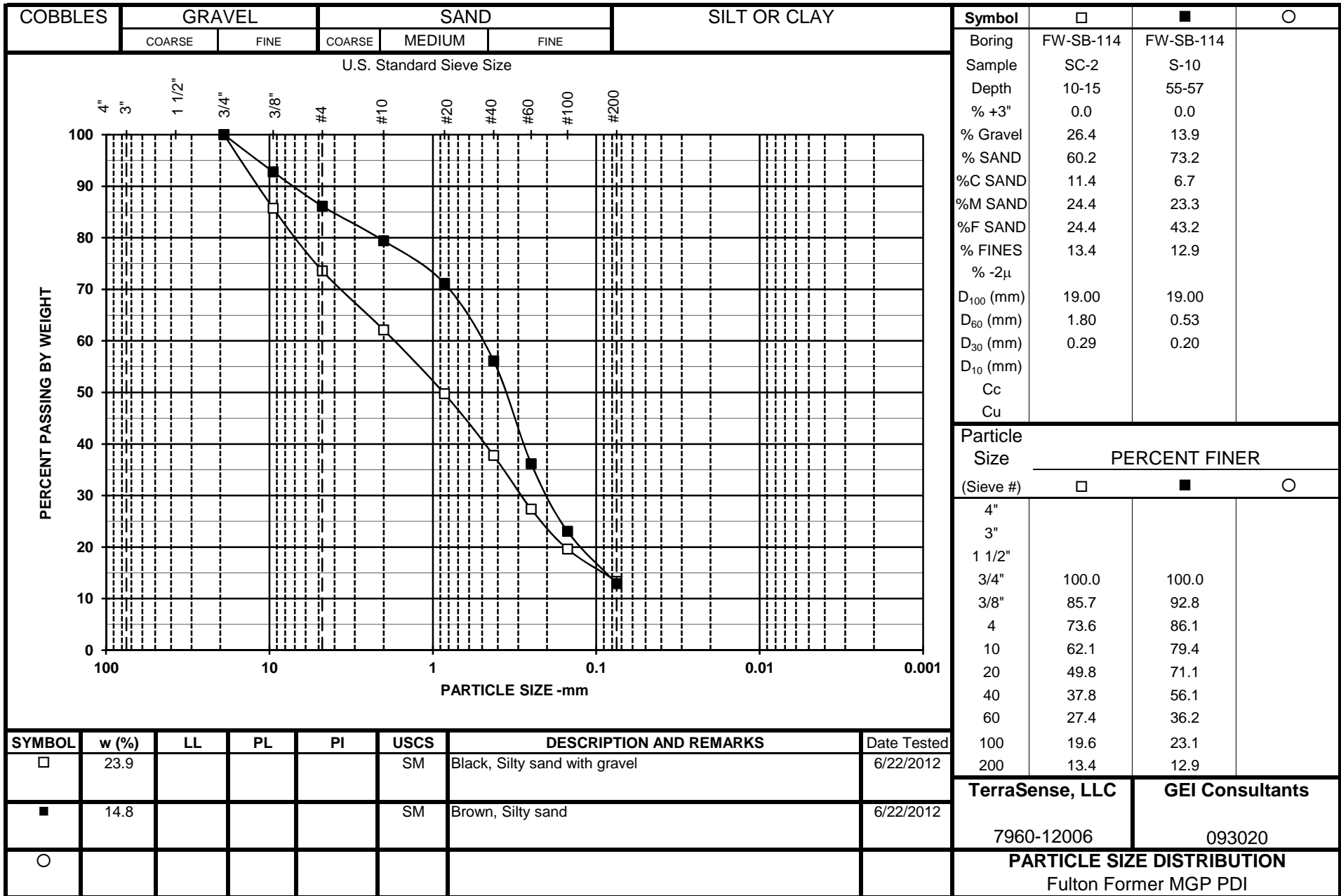
BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS			REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	
FW-SB-107	S-2	10-12	69.4	CL	75.2	
FW-SB-107	S-6	35-37	15.0	SP	2.1	
FW-SB-112	S-1	5-7	9.5	SM	17.1	
FW-SB-112	S-8	40-42	18.6	SP	4.4	
FW-SB-112A	S-4	20-22	16.5	SM	15.5	
FW-SB-112A	S-12	60-62	16.2	SP-SM	6.3	
FW-SB-114	SC-2	10-15	23.9	SM	13.4	
FW-SB-114	S-10	55-57	14.8	SM	12.9	
FW-SB-114A	S-1	5-7	20.0	SM	12.8	
FW-SB-114A	S-4	25-27	17.5	SM	31.7	

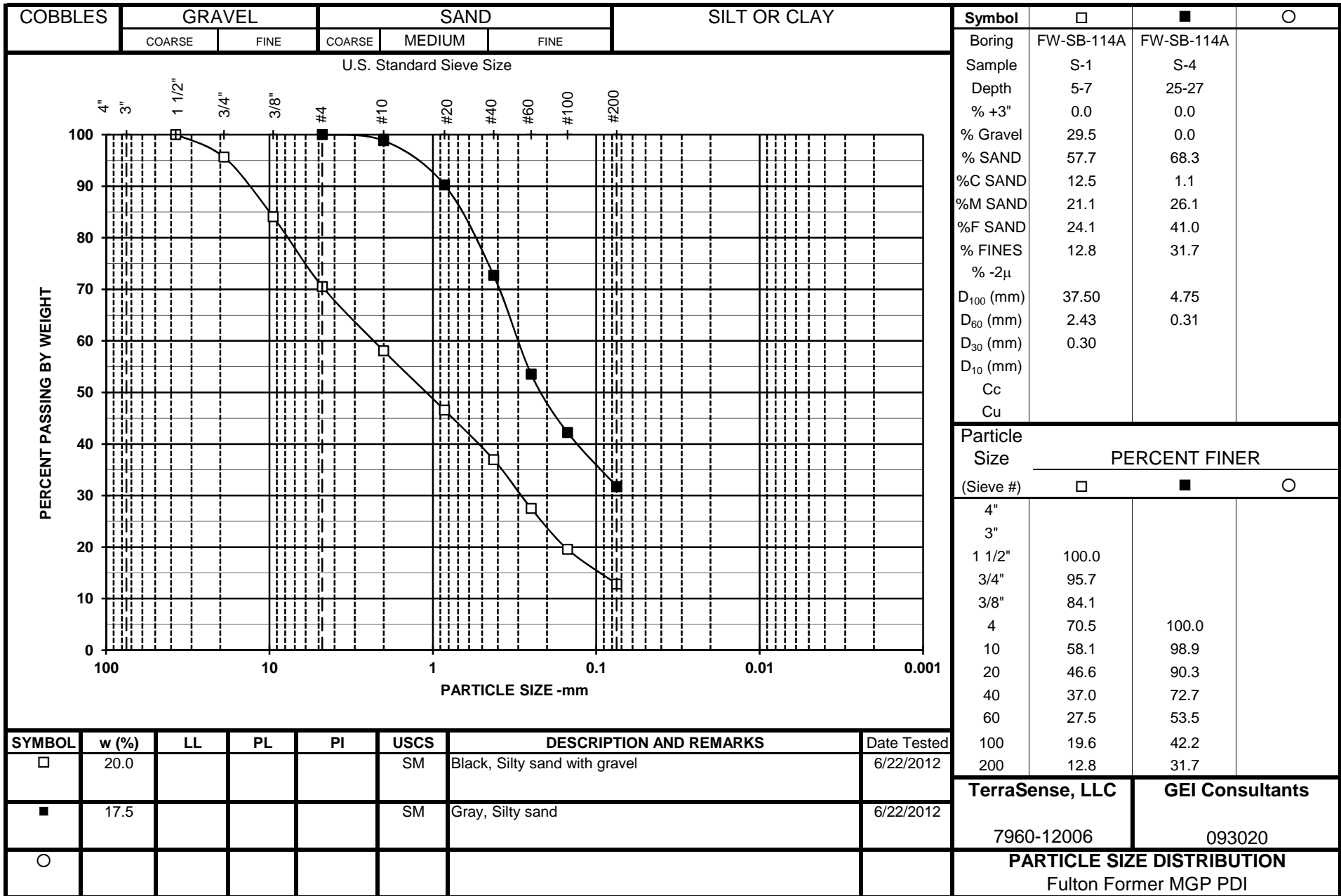
Note: (1) USCS symbol based on visual observation and Sieve reported.









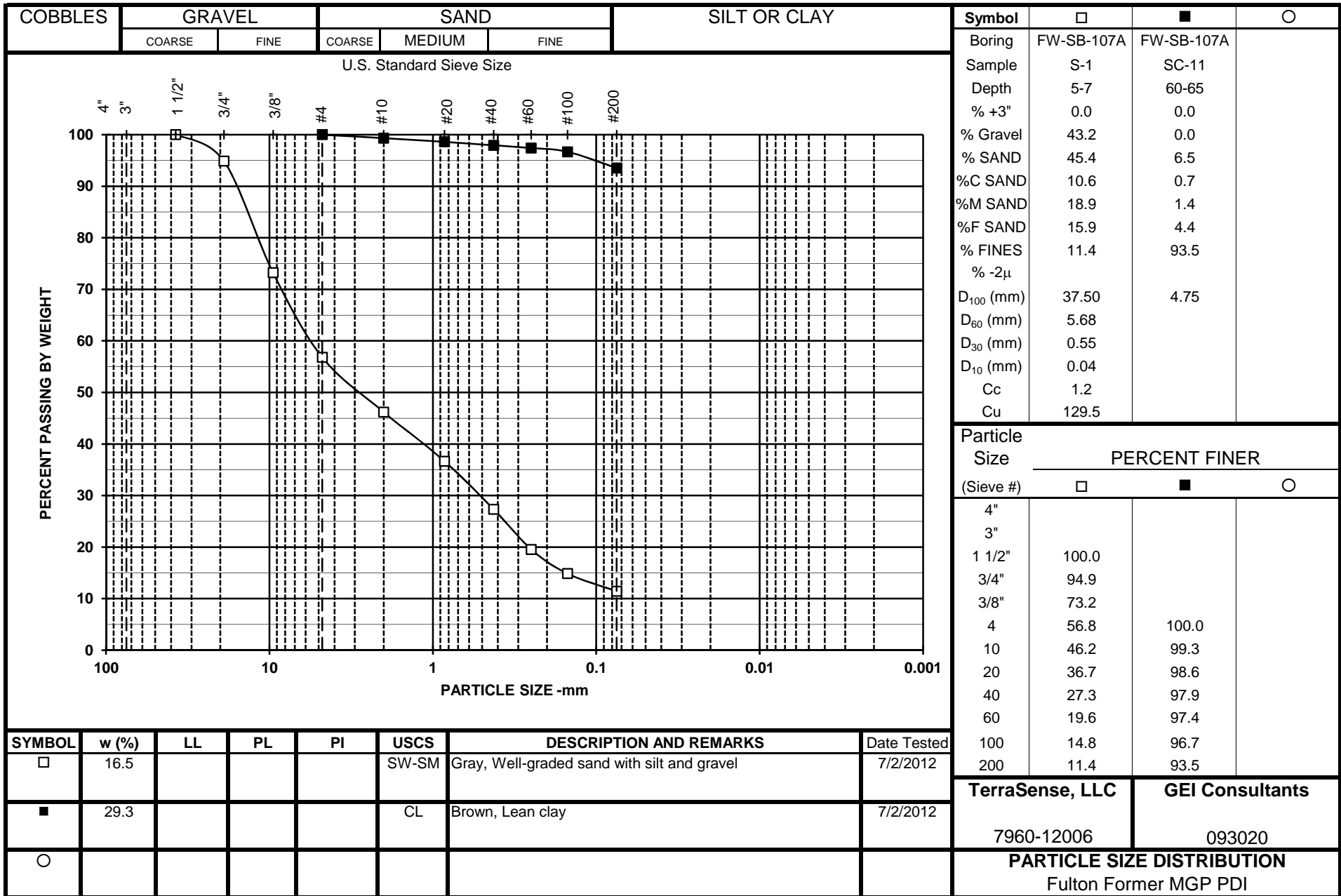


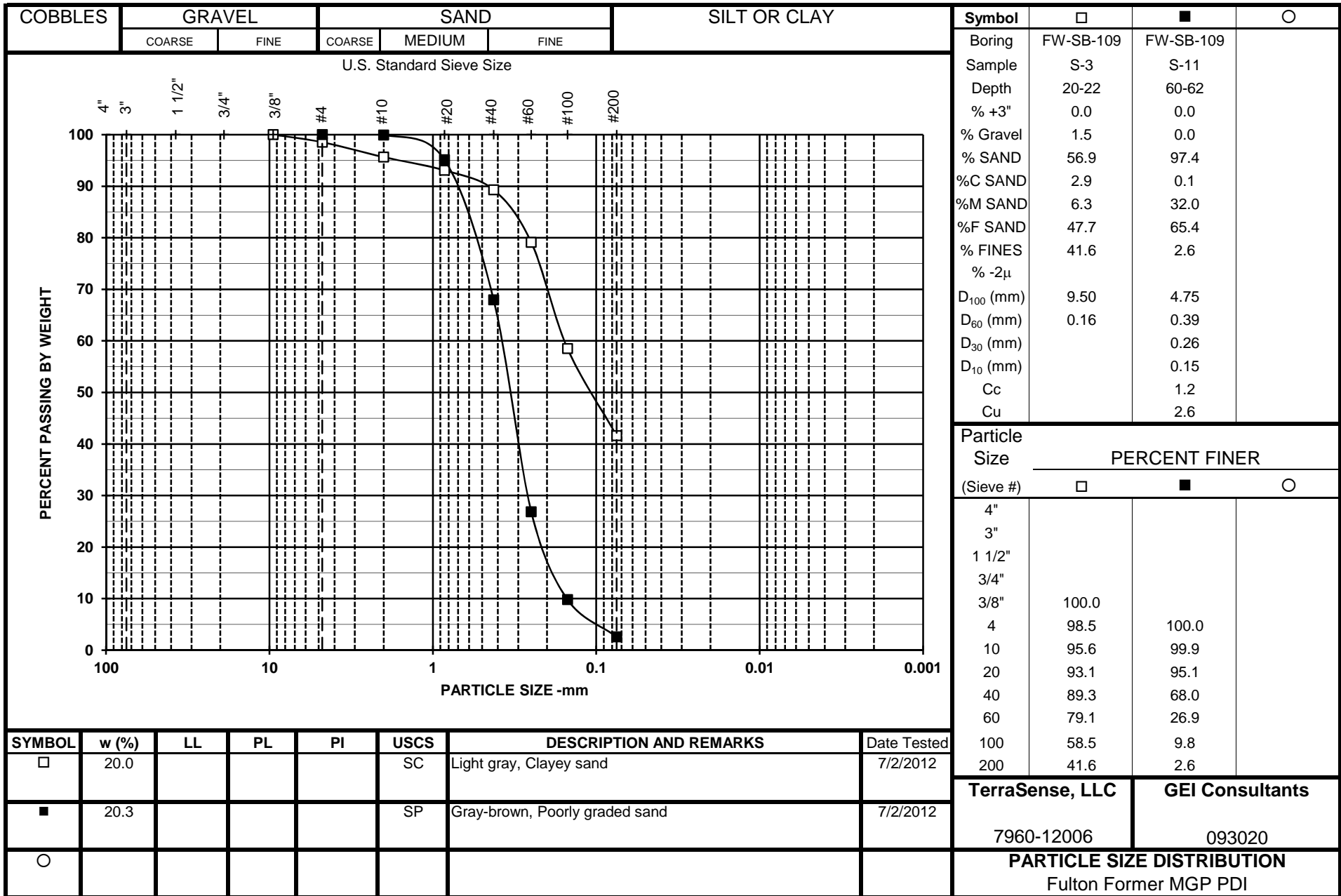
TerraSense, LLC	GEI Consultants
7960-12006	093020
PARTICLE SIZE DISTRIBUTION	
Fulton Former MGP PDI	

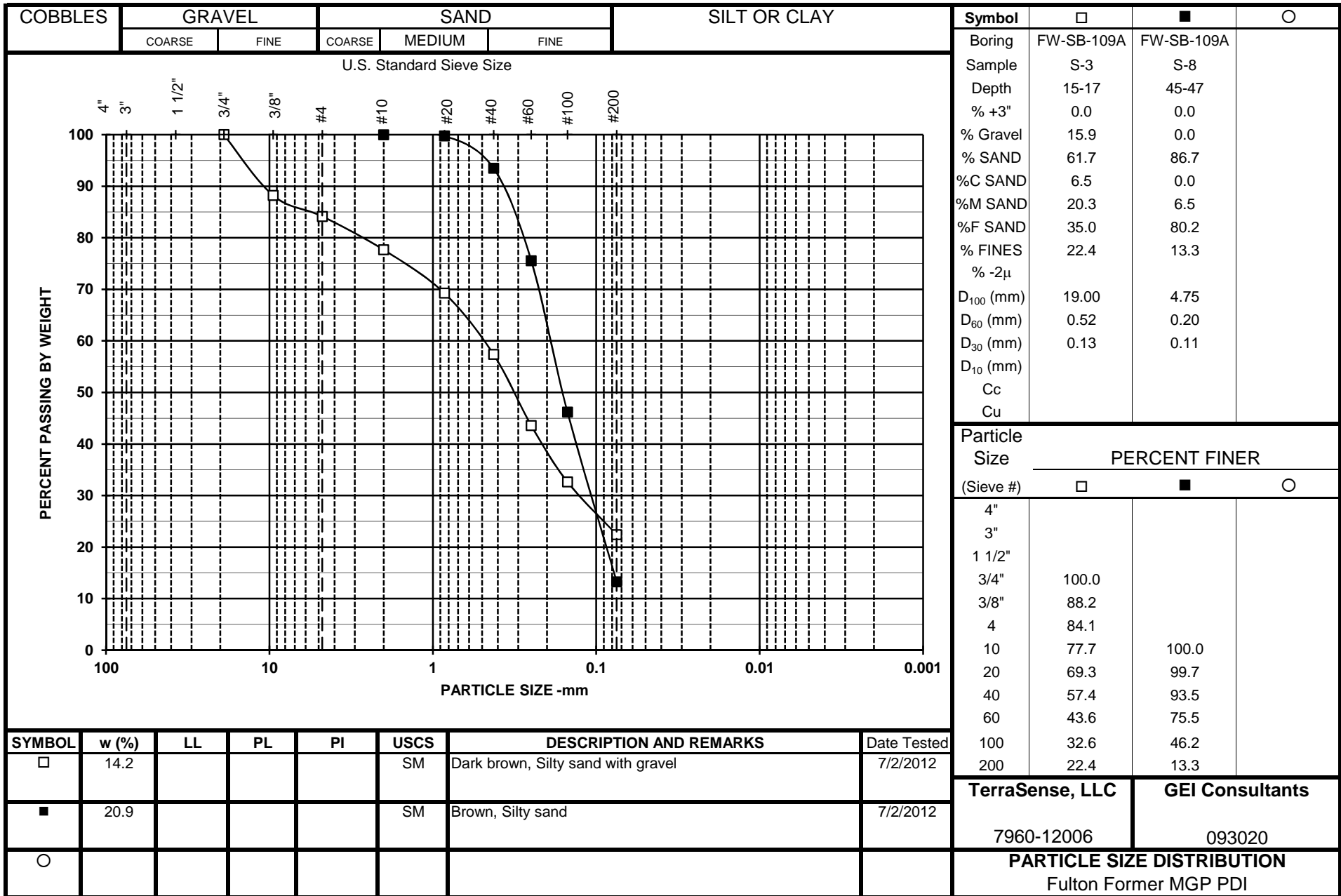
**GEI Consultants #093020
Fulton Former MGP PDI
LABORATORY TESTING DATA SUMMARY**

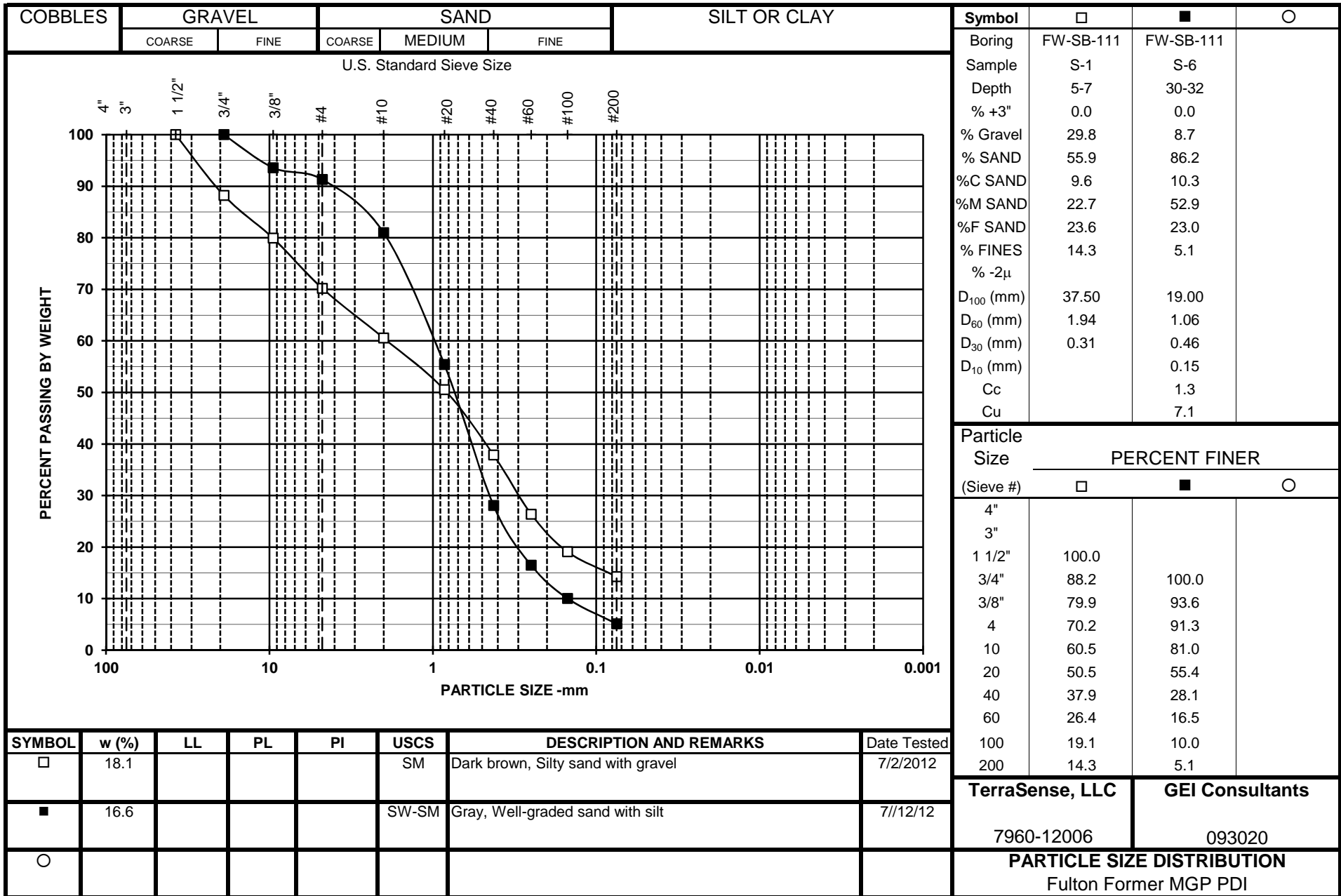
BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS			REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	
FW-SB-107A	S-1	5-7	16.5	SW-SM	11.4	
FW-SB-107A	SC-11	60-65	29.3	CL	93.5	
FW-SB-109	S-3	20-22	20.0	SC	41.6	
FW-SB-109	S-11	60-62	20.3	SP	2.6	
FW-SB-109A	S-3	15-17	14.2	SM	22.4	
FW-SB-109A	S-8	45-47	20.9	SM	13.3	
FW-SB-111	S-1	5-7	18.1	SM	14.3	
FW-SB-111	S-6	30-32	16.6	SW-SM	5.1	
FW-SB-111A	S-1	5-7	7.3	SM	16.8	
FW-SB-111A	S-11	55-57	8.0	GP-GM	7.1	
FW-SB-113	S-1	5-7	29.9	SC	17.8	
FW-SB-113	S-6	35-37	18.6	SP-SM	9.4	
FW-SB-113A	S-3	20-22	18.1	SP	4.7	
FW-SB-113A	S-9	50-52	15.6	SP	3.2	

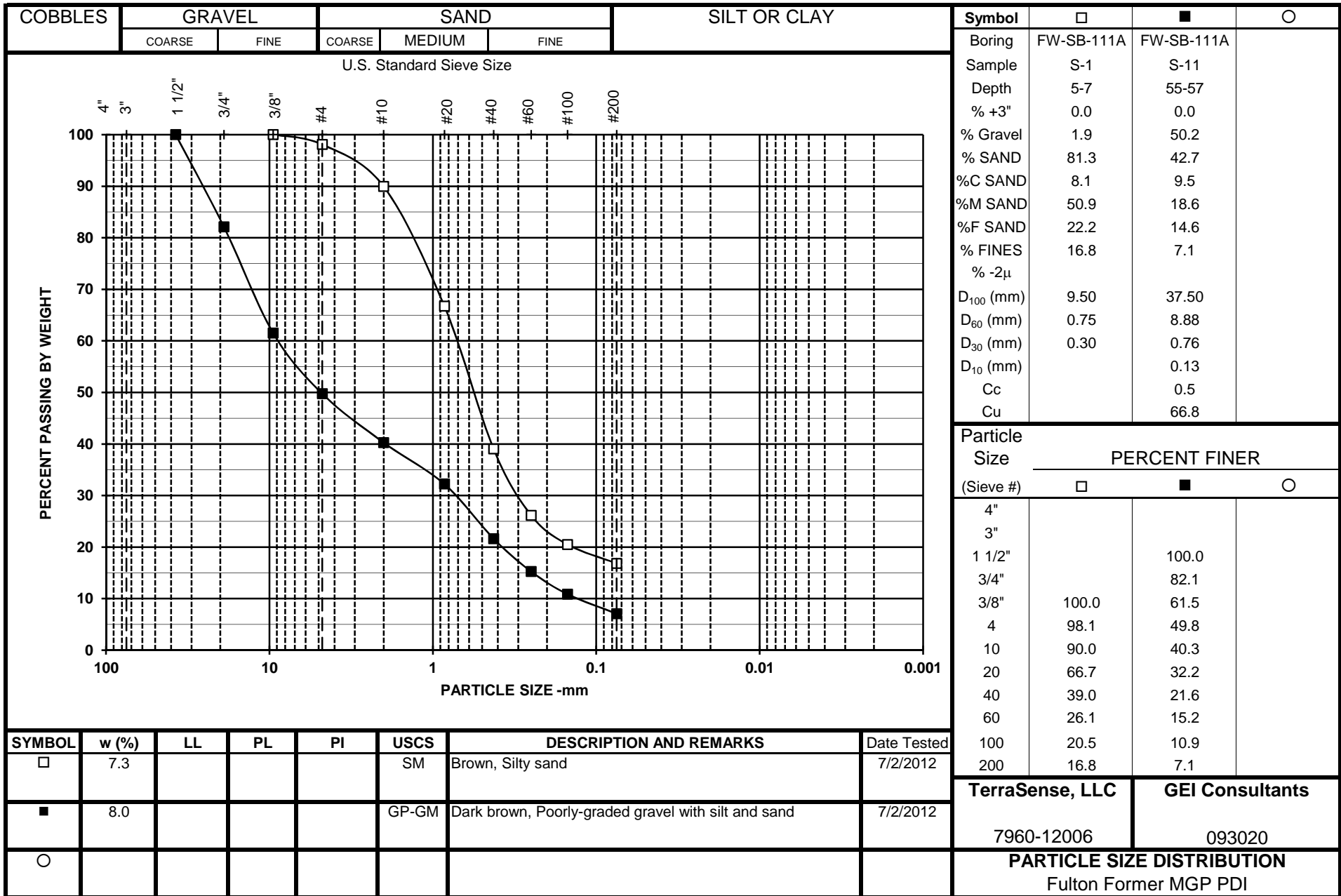
Note: (1) USCS symbol based on visual observation and Sieve reported.

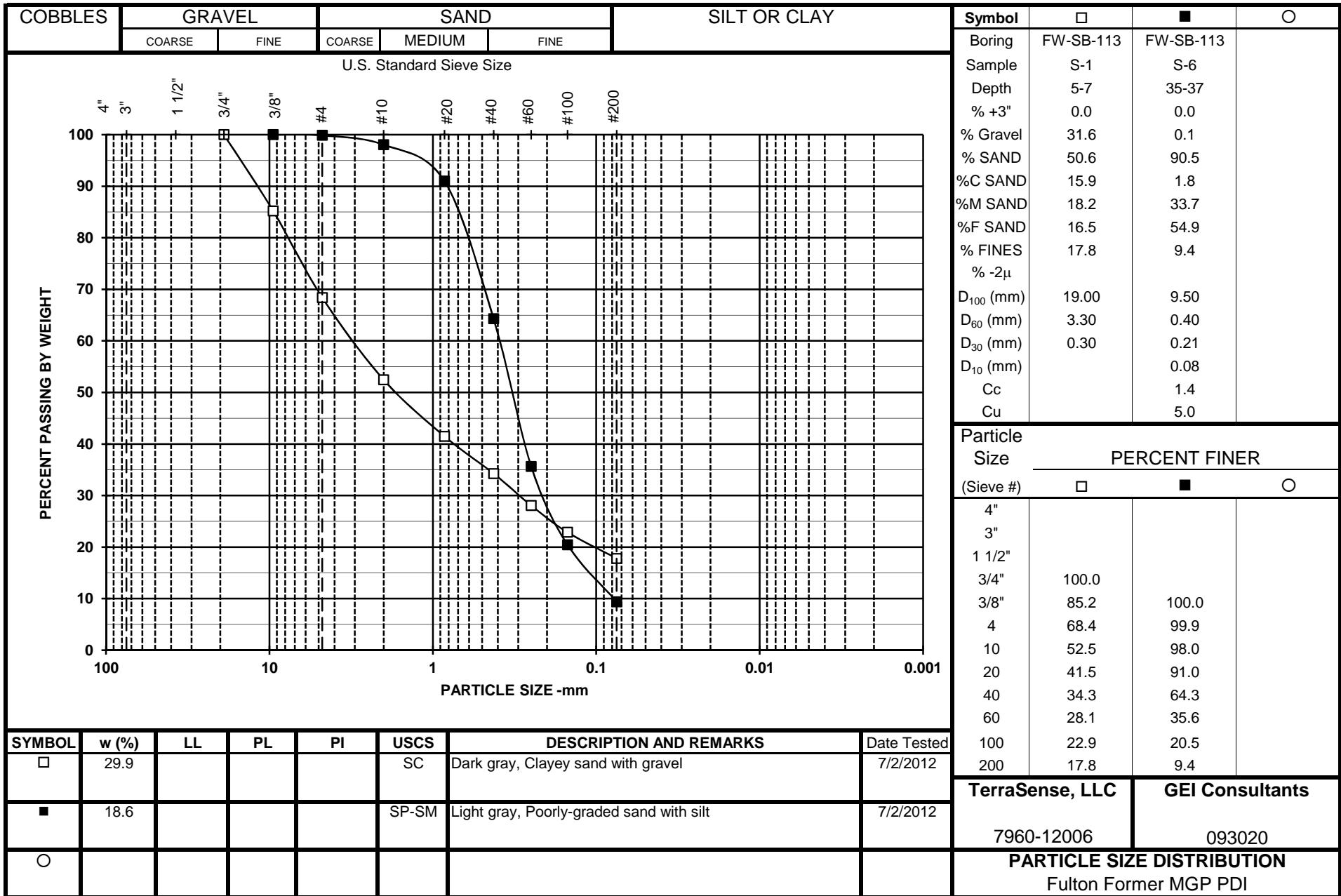


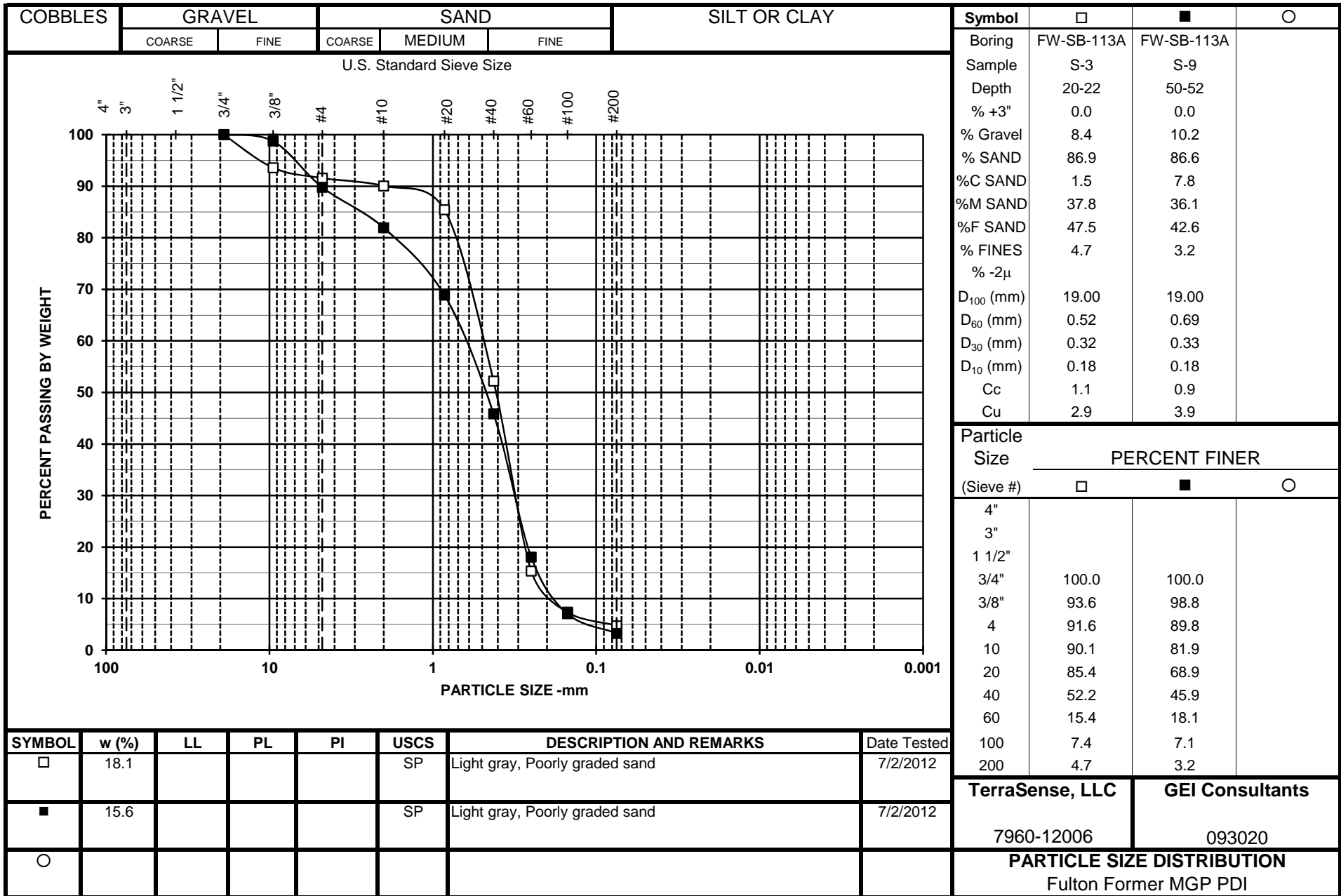












**GEI Consultants #093020
Fulton Former MGP PDI
LABORATORY TESTING DATA SUMMARY**

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS				STRENGTH			REMARKS
			WATER CONTENT (%)	USCS SYMB. (1)	TOTAL UNIT WEIGHT (pcf)	DRY UNIT WEIGHT (pcf)	Type Test	PEAK DEVIATOR STRESS (psi)	AXIAL STRAIN @ PEAK STRESS (%)	
FW-SB-107	T-1	13-15			97.6					
FW-SB-107	T-1B	13.3	98.2	CH-OH	91.6	46.2	UU@4.0	0.8	15.0	UU230h
FW-SB-107	T-1C	14.4	47.9	CH-OH	107.6	72.8	UU@23	18.6	9.0	UU230i
FW-SB-107A	T-2	12-14			98.9					
FW-SB-107A	T-2B	13.1	70.5	CH-OH	98.4	57.7	UU@9.0	2.1	13.1	UU234b
FW-SB-113	T-2	19-21			95.7					
FW-SB-113	T-2	19.45	69.1							
FW-SB-113	T-2B	19.7	65.9	CH-OH	96.6	58.2	CIU@5.0	3.5	15.5	T3300
FW-SB-113	T-2	20	63.1							
FW-SB-113	T-2C	20.25	70.8	CH-OH	98.7	57.8	CIU@10	5.8	12.2	T3301
FW-SB-113	T-2	20.55	68.0							
FW-SB-113	T-2D	20.8	63.4	CH-OH	99.8	61.1	CIU@30	14.0	15.3	T3307
FW-SB-113A	T-2	13-15			93.1					
FW-SB-113A	T-2	13.4	97.3							
FW-SB-113A	T-2B	13.65	82.1	CH-OH	92.8	50.9	CIU@4.0	1.8	16.9	T3306
FW-SB-113A	T-2	13.95	75.1							
FW-SB-113A	T-2C	14.2	71.3	CH-OH	96.9	56.6	CIU@8.0	6.8	6.3	T3302
FW-SB-113A	T-2	14.5	66.3							
FW-SB-113A	T-2D	14.75	63.7	CH-OH	102.0	62.3	CIU@23	10.8	9.2	T3308
FW-SB-114	T-1	25-27			105.2					
FW-SB-114	T-1	25.25	43.6							
FW-SB-114	T-1A	25.5	29.0	CL	119.3	92.5	UU@9.0	9.2	15.0	UU230a
FW-SB-114	T-1	25.8	26.6							
FW-SB-114	T-1B	26.05	22.4	ML	129.0	105.4	UU@56	27.3	15.0	UU230b

Note: (1) USCS symbol based on visual observation.

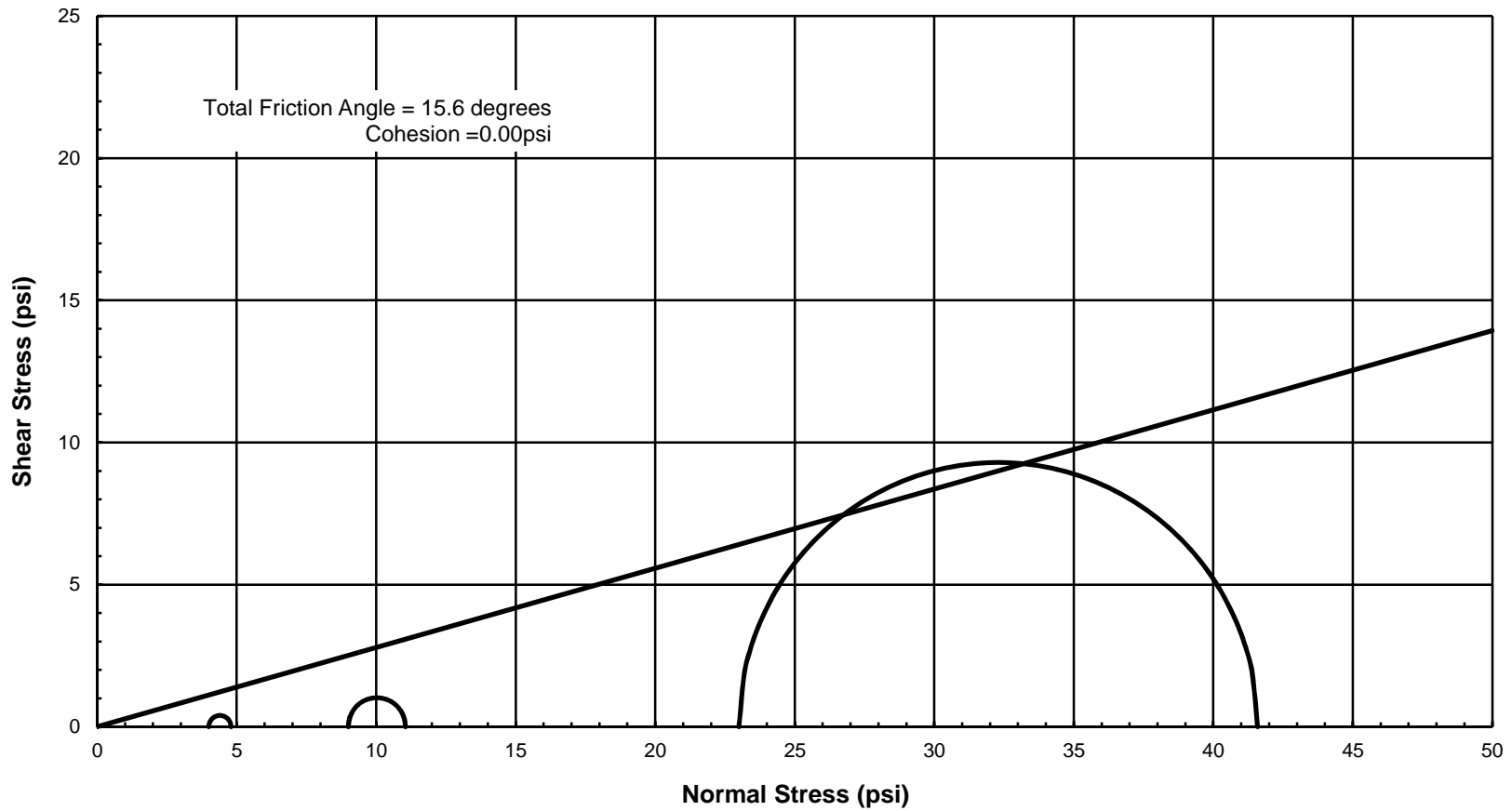
**Fulton Former MGP PDI
 GEI Consultants
 SUMMARY FOR UU TRIAXIAL TESTS
 FW-SB-107 & FW-SB-107A Summary**

Test No	Boring No	Depth (ft)	w _o (%)	γ _{t,o} (pcf)	γ _{d,o} (pcf)	σ _c (psi)	ε _{rate} (%/min)	at Peak Deviator Stress	
								ε _a (%)	σ ₁ - σ ₃ (psi)
112J230h	FW-SB-107	13.3	98.2	91.6	46.2	4.00	0.7	15.0	0.80
112J234b	FW-SB-107A	13.1	70.5	98.4	57.7	9.00	0.7	13.1	2.05
112J230i	FW-SB-107	14.4	47.9	107.6	72.8	23.00	0.7	9.0	18.59

Test No	Description of Material Tested and Remarks
112J230h	CH-OH, gray organic clay; roots and wood noted, top soft
112J234b	CH-OH, gray organic clay
112J230i	CH-OH, gray organic clay

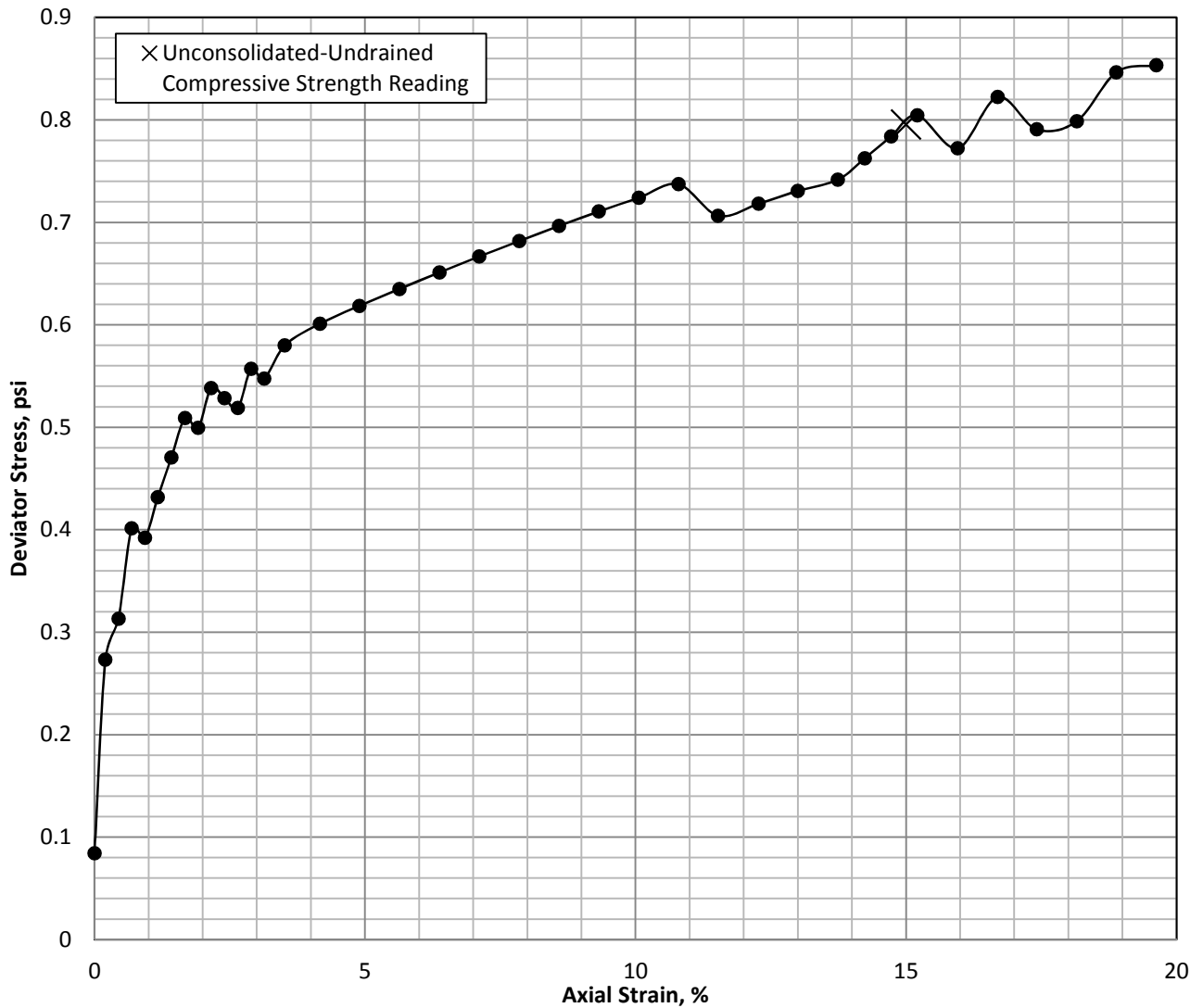
Series Strength Envelope Summary		
φ	15.6	(deg)
c	0.0	(psi)

Fulton Former MGP PDI		Samples: FW-SB-107 & FW-SB-107A
GEI Consultants	# 093020	Unconsolidated Undrained Triaxial Test Series Summary
TerraSense, LLC	#: 7960-12006	



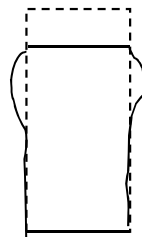
Project No. 7960-12006	Fulton Former MGP PDI GEI Consultants	Mohr Circles of Total Stresses at Peak	
TerraSense, LLC		UU Triaxial Test FW-SB-107 & FW-SB-107A Summary	August 2012

UNCONSOLIDATED-UNDRAINED COMPRESSIVE STRENGTH TEST, ASTM METHOD D2850



Specimen and Material Property Information											
Sample Type: Intact tube sample											
Description and/or Classification: CH-OH, gray organic clay; roots and wood noted, top soft											
Cell Pressure (psi)	Water Content (%) ⁽¹⁾	Wet Unit Weight (pcf)	Dry Unit Weight (pcf) ⁽¹⁾	Void Ratio (-)	Saturation (%) ⁽²⁾	Length (inch)	Diameter (inch)	L/D (-)	LL/PL (-)	PI (-)	Specific Gravity (-) ⁽²⁾
0 (Initial)	98.2	91.6	46.2	2.71	99.6	5.985	2.889	2.1			2.75
4.0	98.2	91.8	46.3	2.71	99.8	5.982	2.887	2.1			

Failure Summary			
U-U Compressive Strength (psi)	U-U Shear Strength, s _u (psi)	Strain to Peak (%)	Strain Rate (%/min)
0.8	0.4	15.0	0.73



FAILURE SKETCH

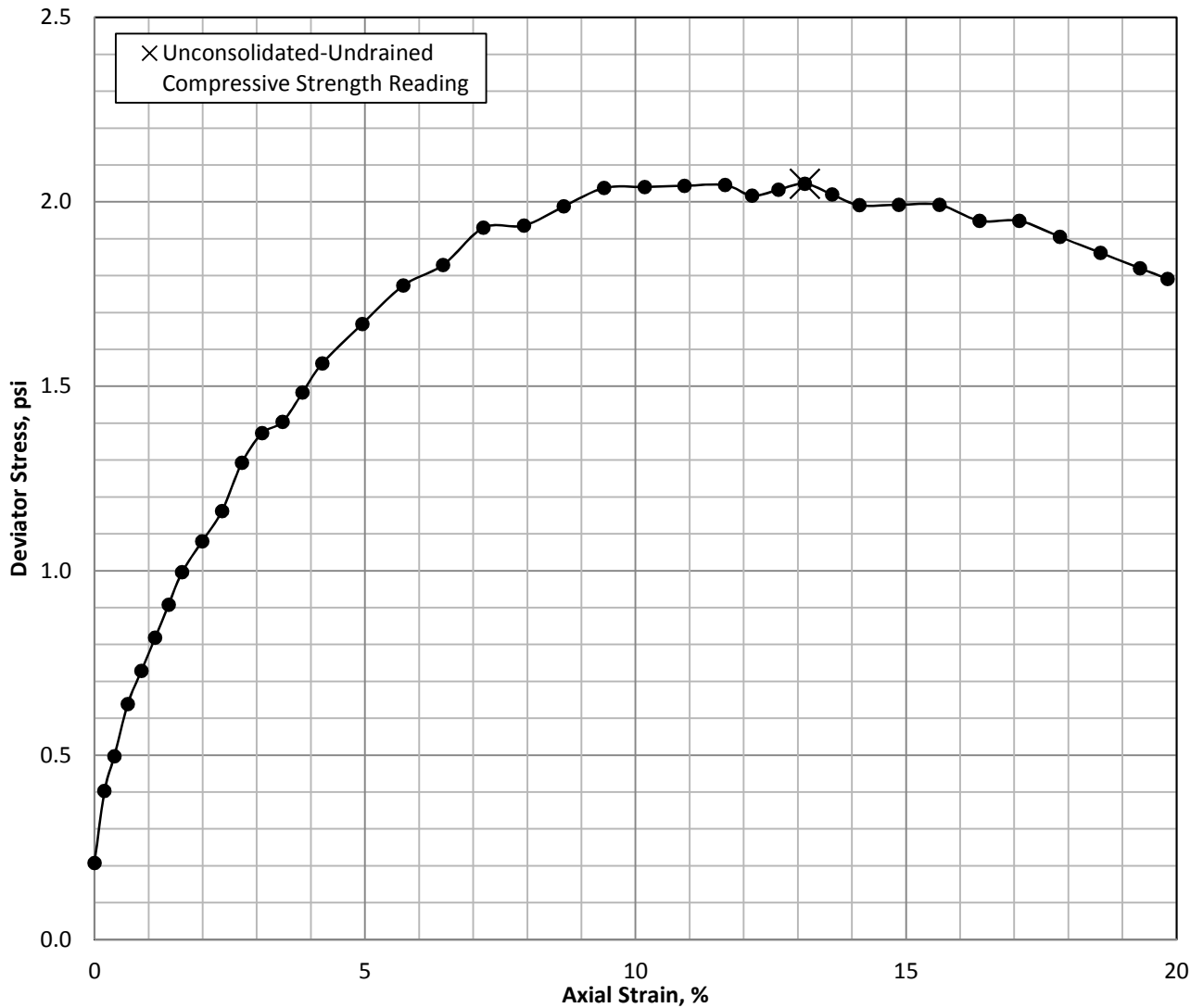
Remarks and Notes:
 (1) Water Content determined after shear from partial specimen.
 (2) Assumed specific gravity

Tested by: DT
 Test Date: 8/17/2012

Reviewed by: GET
 Review Date: 8/28/2012

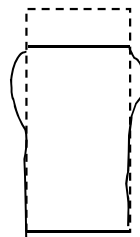
GEI Consultants Project # 093020	Fulton Former MGP PDI	UNCONSOLIDATED-UNDRAINED COMPRESSION TEST
TerraSense, LLC Project # 7960-12006		Boring: FW-SB-107 Sample: T-1 Section: B Depth: 13.3 ft.

UNCONSOLIDATED-UNDRAINED COMPRESSIVE STRENGTH TEST, ASTM METHOD D2850



Specimen and Material Property Information											
Sample Type: Intact tube sample											
Description and/or Classification: CH-OH, gray organic clay											
Cell Pressure (psi)	Water Content (%) ⁽¹⁾	Wet Unit Weight (pcf)	Dry Unit Weight (pcf) ⁽¹⁾	Void Ratio (-)	Saturation (%) ⁽²⁾	Length (inch)	Diameter (inch)	L/D (-)	LL/PL (-)	PI (-)	Specific Gravity (-) ⁽²⁾
0 (Initial)	70.5	98.4	57.7	1.97	98.3	5.987	2.847	2.1			2.75
9.0	70.5	99.1	58.1	1.95	99.4	5.973	2.840	2.1			

Failure Summary			
U-U Compressive Strength (psi)	U-U Shear Strength, s_u (psi)	Strain to Peak (%)	Strain Rate (%/min)
2.05	1.025	13.1	0.74



FAILURE SKETCH

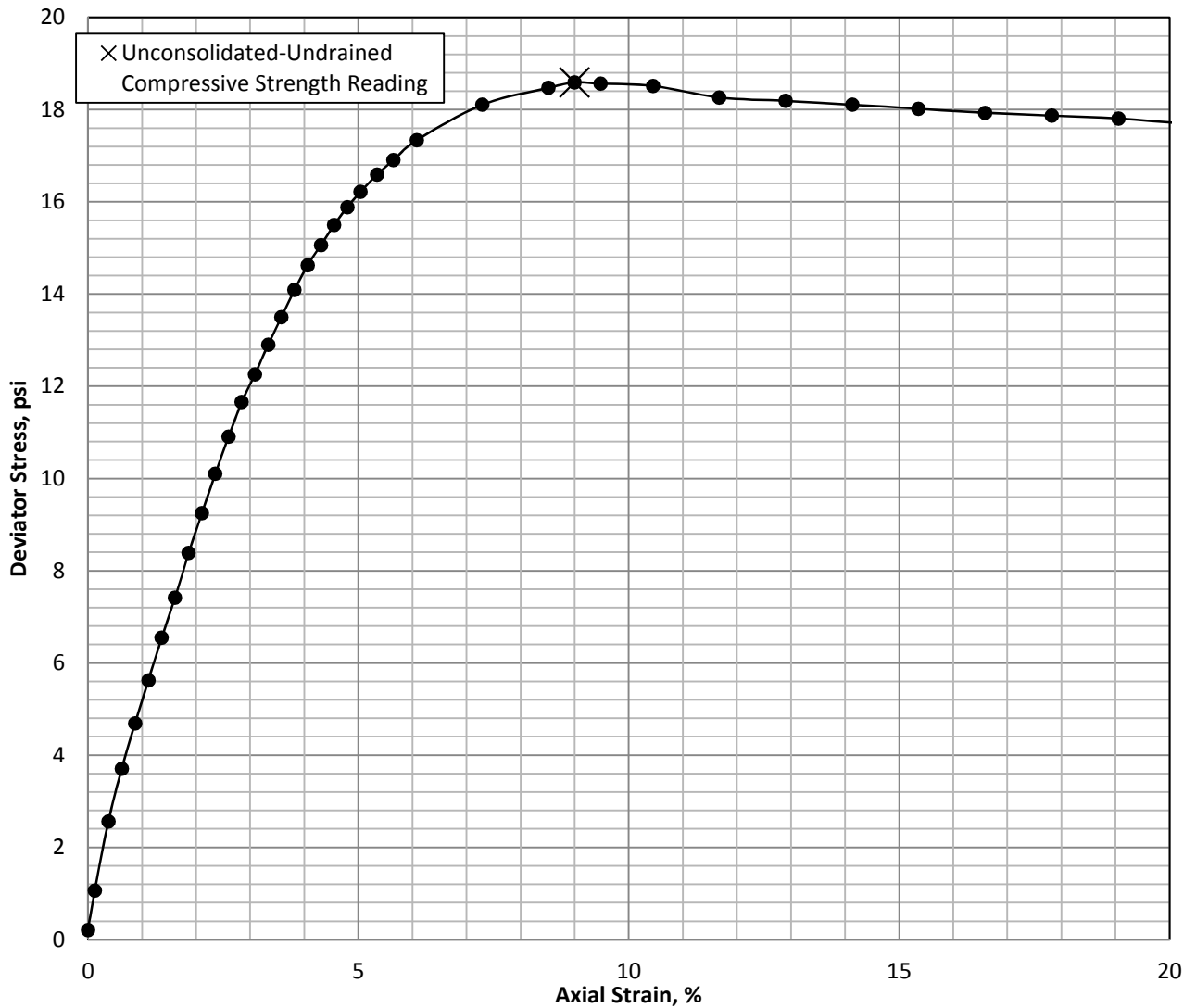
Remarks and Notes:
 (1) Water Content determined after shear from partial specimen.
 (2) Assumed specific gravity

Tested by: DT
 Test Date: 8/21/2012

Reviewed by: GET
 Review Date: 8/28/2012

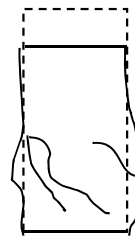
GEI Consultants Project # 093020	Fulton Former MGP PDI	UNCONSOLIDATED-UNDRAINED COMPRESSION TEST
TerraSense, LLC Project # 7960-12006		Boring: FW-SB-107A Sample: T-2 Section: B Depth: 13.1 ft.

UNCONSOLIDATED-UNDRAINED COMPRESSIVE STRENGTH TEST, ASTM METHOD D2850



Specimen and Material Property Information											
Sample Type: Intact tube sample											
Description and/or Classification: CH-OH, gray organic clay											
Cell Pressure (psi)	Water Content (%) ⁽¹⁾	Wet Unit Weight (pcf)	Dry Unit Weight (pcf) ⁽¹⁾	Void Ratio (-)	Saturation (%) ⁽²⁾	Length (inch)	Diameter (inch)	L/D (-)	LL/PL (-)	PI (-)	Specific Gravity (-) ⁽²⁾
0 (Initial)	47.9	107.6	72.8	1.36	97.0	6.005	2.846	2.1			2.75
23.0	47.9	108.0	73.0	1.35	97.6	5.998	2.842	2.1			

Failure Summary			
U-U Compressive Strength (psi)	U-U Shear Strength, s_u (psi)	Strain to Peak (%)	Strain Rate (%/min)
18.6	9.3	9.0	0.74



FAILURE SKETCH

Remarks and Notes:
 (1) Water Content determined after shear from partial specimen.
 (2) Assumed specific gravity

Tested by: DT
 Test Date: 8/17/2012

Reviewed by: GET
 Review Date: 8/28/2012

GEI Consultants Project # 093020	Fulton Former MGP PDI	UNCONSOLIDATED-UNDRAINED COMPRESSION TEST Boring: FW-SB-107 Sample: T-1 Section: C Depth: 14.4 ft.
TerraSense, LLC Project # 7960-12006		

**Fulton Former MGP PDI
 GEI Consultants
 SUMMARY FOR UU TRIAXIAL TESTS
 FW-SB-114 Series Summary**

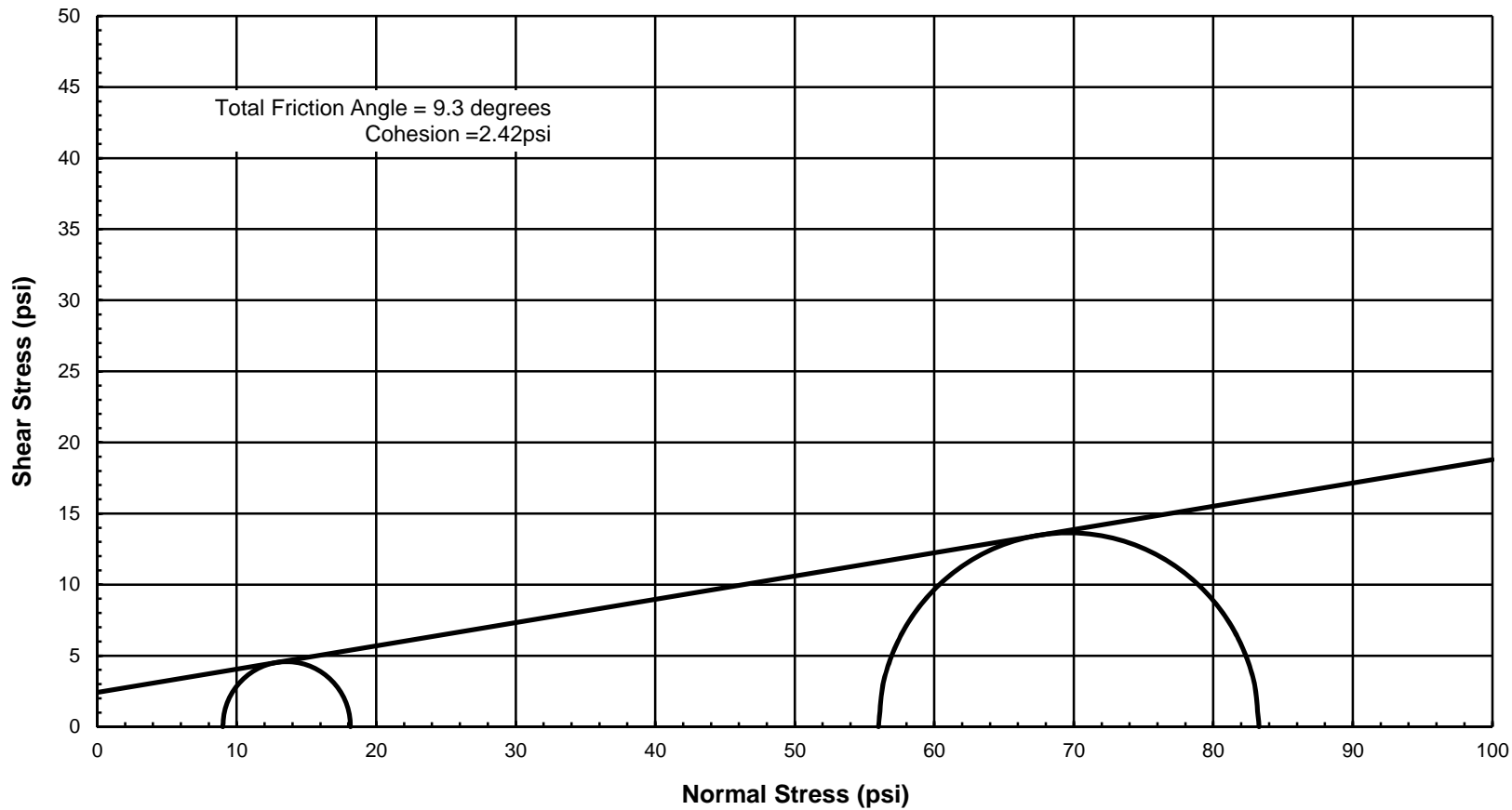
Test No	Boring No	Depth (ft)	w _o (%)	γ _{t,o} (pcf)	γ _{d,o} (pcf)	σ _c (psi)	ε _{rate} (%/min)	at Peak Deviator Stress	
								ε _a (%)	σ ₁ - σ ₃ (psi)
112J230a	FW-SB-114	25.5	29.0	119.3	92.5	9.00	0.7	15.0	9.16
112J230b	FW-SB-114	26.05	22.4	129.0	105.4	56.00	0.7	15.0	27.28

Test No	Description of Material Tested and Remarks
112J230a	CL, dark gray silty clay with mica
112J230b	ML, dark gray clayey silt with mica

Series Strength Envelope Summary		
φ	9.3	(deg)
c	2.4	(psi)

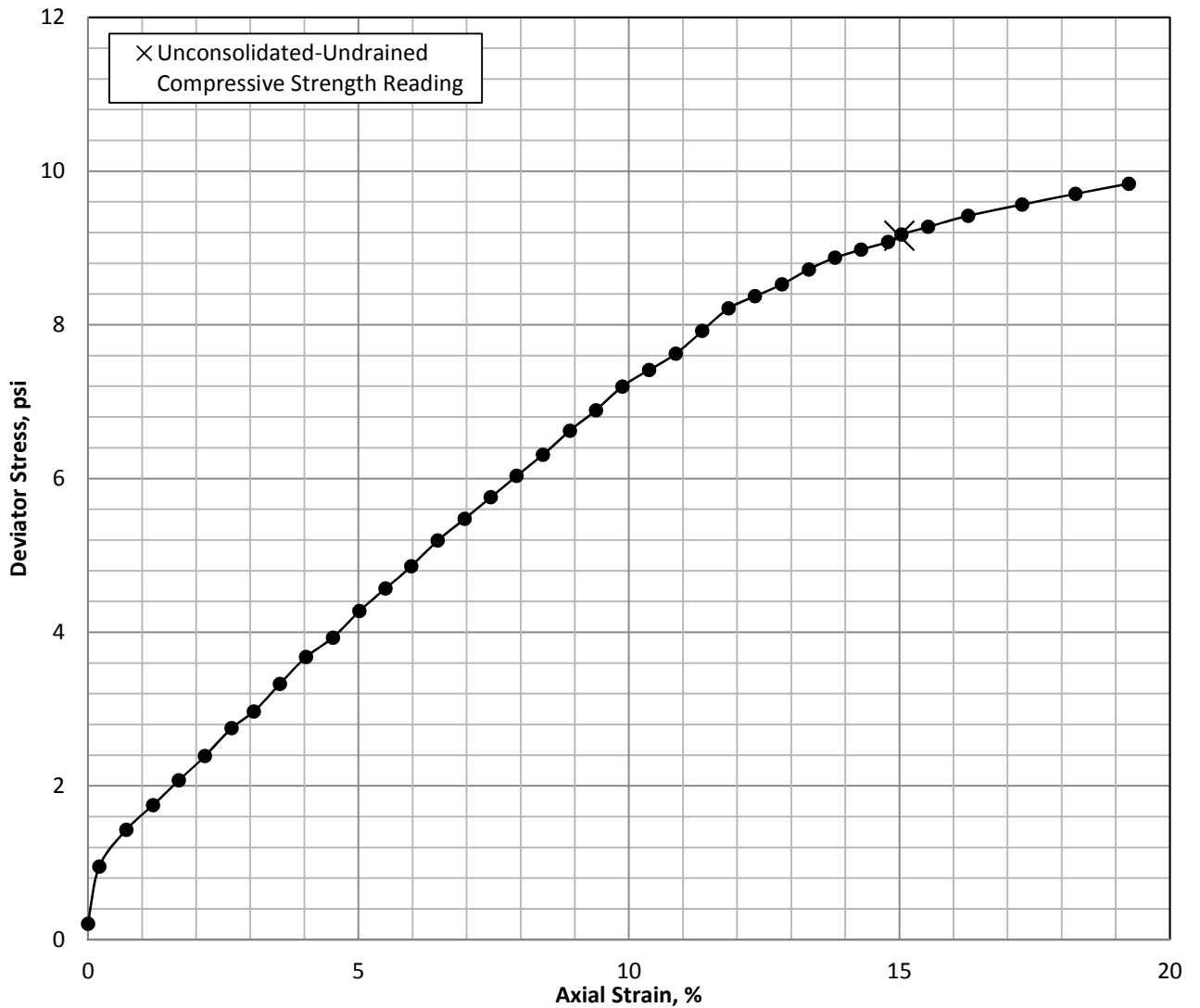
Fulton Former MGP PDI		Sample: FW-SB-114 T-1
GEI Consultants TerraSense, LLC	# 093020 # 7960-12006	Unconsolidated Undrained Triaxial Test Series Summary

Reviewed By: GET



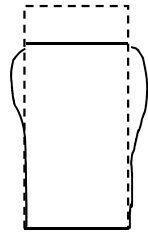
Project No. 7960-12006	Fulton Former MGP PDI GEI Consultants	Mohr Circles of Total Stresses at Peak	
TerraSense, LLC		UU Triaxial Test FW-SB-114 Series Summary	August 2012

UNCONSOLIDATED-UNDRAINED COMPRESSIVE STRENGTH TEST, ASTM METHOD D2850



Specimen and Material Property Information											
Sample Type: Intact tube sample											
Description and/or Classification: CL, dark gray silty clay with mica											
Cell Pressure (psi)	Water Content (%) ⁽¹⁾	Wet Unit Weight (pcf)	Dry Unit Weight (pcf) ⁽¹⁾	Void Ratio (-)	Saturation (%) ⁽²⁾	Length (inch)	Diameter (inch)	L/D (-)	LL/PL (-)	PI (-)	Specific Gravity (-) ⁽²⁾
0 (Initial)	29.0	119.3	92.5	0.86	93.3	5.988	2.855	2.1			2.75
9.0	29.0	119.6	92.7	0.85	93.8	5.983	2.853	2.1			

Failure Summary			
U-U Compressive Strength (psi)	U-U Shear Strength, s_u (psi)	Strain to Peak (%)	Strain Rate (%/min)
9.16	4.58	15.0	0.73



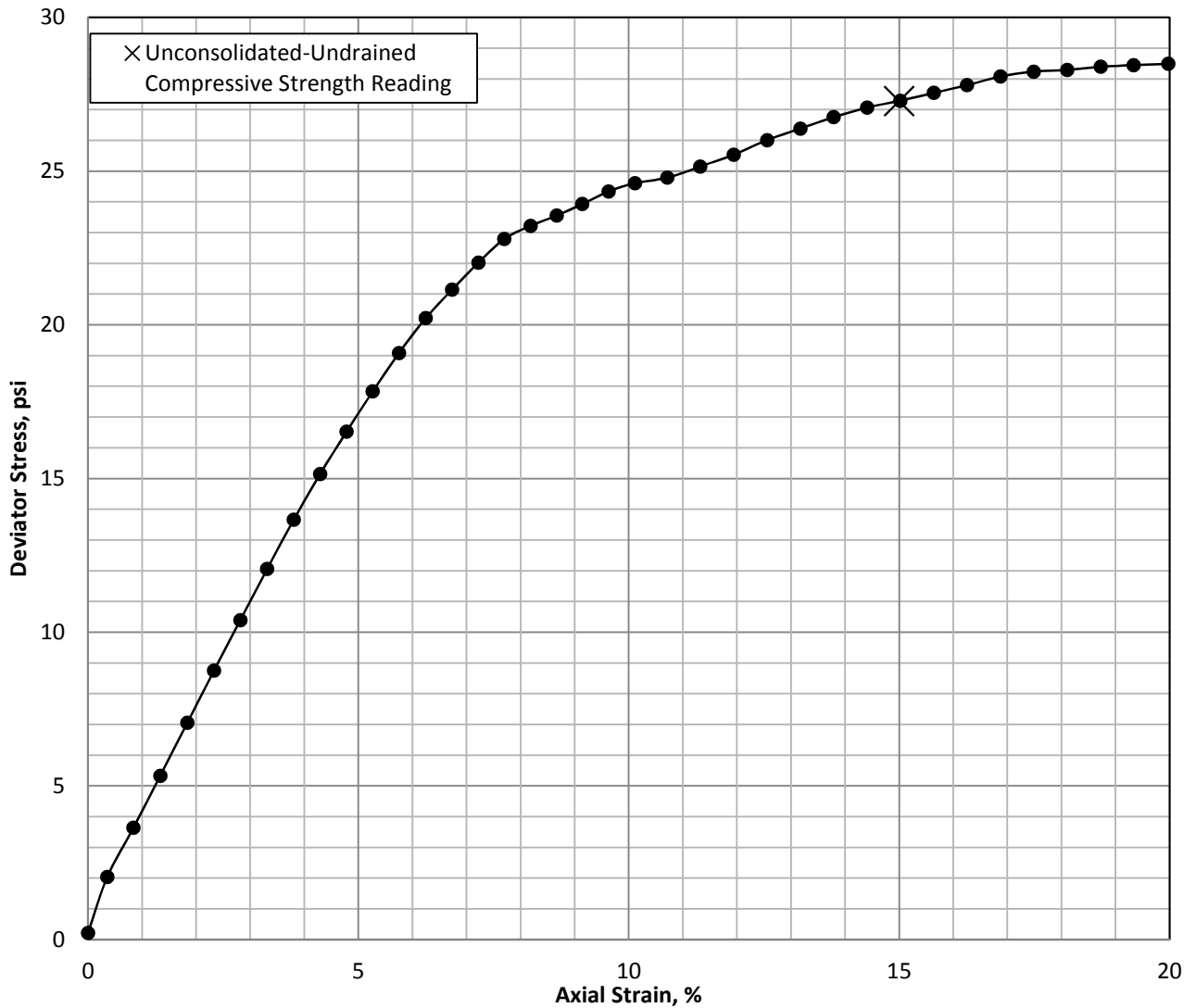
FAILURE SKETCH

Remarks and Notes:
 (1) Water Content determined after shear from partial specimen.
 (2) Assumed specific gravity

Tested by: DT Reviewed by: GET
 Test Date: 8/17/2012 Review Date: 8/28/2012

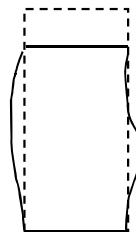
GEI Consultants Project # 093020	Fulton Former MGP PDI	UNCONSOLIDATED-UNDRAINED COMPRESSION TEST
TerraSense, LLC Project # 7960-12006		Boring: FW-SB-114 Sample: T-1 Section: A Depth: 25.5 ft.

UNCONSOLIDATED-UNDRAINED COMPRESSIVE STRENGTH TEST, ASTM METHOD D2850



Specimen and Material Property Information											
Sample Type: Intact tube sample											
Description and/or Classification: ML, dark gray clayey silt with mica											
Cell Pressure (psi)	Water Content (%) ⁽¹⁾	Wet Unit Weight (pcf)	Dry Unit Weight (pcf) ⁽¹⁾	Void Ratio (-)	Saturation (%) ⁽²⁾	Length (inch)	Diameter (inch)	L/D (-)	LL/PL (-)	PI (-)	Specific Gravity (-) ⁽²⁾
0 (Initial)	22.4	129.0	105.4	0.63	98.1	5.934	2.824	2.1			2.75
56.0	22.4	129.5	105.8	0.62	99.1	5.927	2.821	2.1			

Failure Summary			
U-U Compressive Strength (psi)	U-U Shear Strength, s_u (psi)	Strain to Peak (%)	Strain Rate (%/min)
27.3	13.65	15.0	0.73



FAILURE SKETCH

Remarks and Notes:
 (1) Water Content determined after shear from partial specimen.
 (2) Assumed specific gravity

Tested by: DT
 Test Date: 8/17/2012

Reviewed by: GET
 Review Date: 8/28/2012

GEI Consultants Project # 093020	Fulton Former MGP PDI	UNCONSOLIDATED-UNDRAINED COMPRESSION TEST Boring: FW-SB-114 Sample: T-1 Section: B Depth: 26.05 ft.
TerraSense, LLC Project # 7960-12006		

SUMMARY FOR STATIC CIU' TRIAXIAL TESTS SPECIMENS

Test No	Boring No	Sample Section No	Depth	USCS Group Symbol	w _o	γ _{t,o}	γ _{d,o}	σ' _{c,max} (psi)	σ' _{v,c} (psi)	ε _{a,c}	B factor (%)	at Peak Deviator Stress													
												Elev (ft)	Gs	w _c (%)	γ _{t,c} (pcf)	γ _{d,c} (pcf)	OCR	K _c = σ' _{v,c} / σ' _{h,c}	ε _{v,c} (%)	ε _{rate} (%/hr)	at Peak Obliquity				
																					ε _a (%)	σ ₁ - σ ₃ 2 (psi)	σ' ₁ + σ' ₃ 2 (psi)	σ' ₁ / σ' ₃	A factor
T3300	FW-SB-113	T-2B	19.7	CH-OH	65.9	96.6	58.2	5.00	5.00	2.7		15.5	3.52	5.76	4.15	0.393	37.7								
				(2.45)	55.8	100.7	64.6	1.0	1.00	9.9	0.6	7.6	3.26	5.31	4.18	0.453	37.9								
T3301	FW-SB-113	T-2C	20.25	CH-OH	70.8	98.7	57.8	10.0	10.0	2.6		12.2	5.79	9.89	3.83	0.510	35.9								
				(2.70)	61.4	102.4	63.4	1.0	1.00	8.9	0.6	11.6	5.78	9.82	3.86	0.515	36.0								
T3307	FW-SB-113	T-2D	20.8	CH-OH	63.4	99.8	61.1	30.0	30.0	5.1	100	15.3	14.0	21.7	4.63	0.798	40.1								
				(2.70)	49.6	107.8	72.0	1.0	1.00	15.2	1.3	15.3	14.0	21.7	4.63	0.798	40.1								

Test No	Description of Material Tested and Remarks
T3300	CH-OH, gray organic clay; peat, phragmites noted
T3301	CH-OH, gray organic clay; peat noted
T3307	CH-OH, gray organic clay; sand zone noted at bottom

Strength Envelope Summary						
Test Series	Failure Criteria	φ' (deg)	c' (psi)	α' (deg)	a' (psi)	Correlation Coefficient
1	1	39.3	0.000	32.3	0.000	--
	2	39.4	0.000	32.4	0.000	--
Failure Criteria: 1 - Peak Deviator Stress 2 - Peak Obliquity						

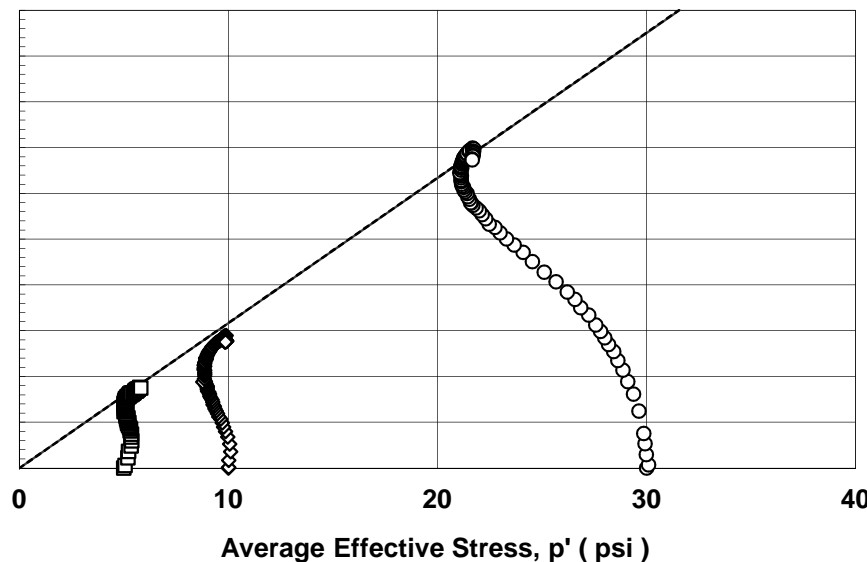
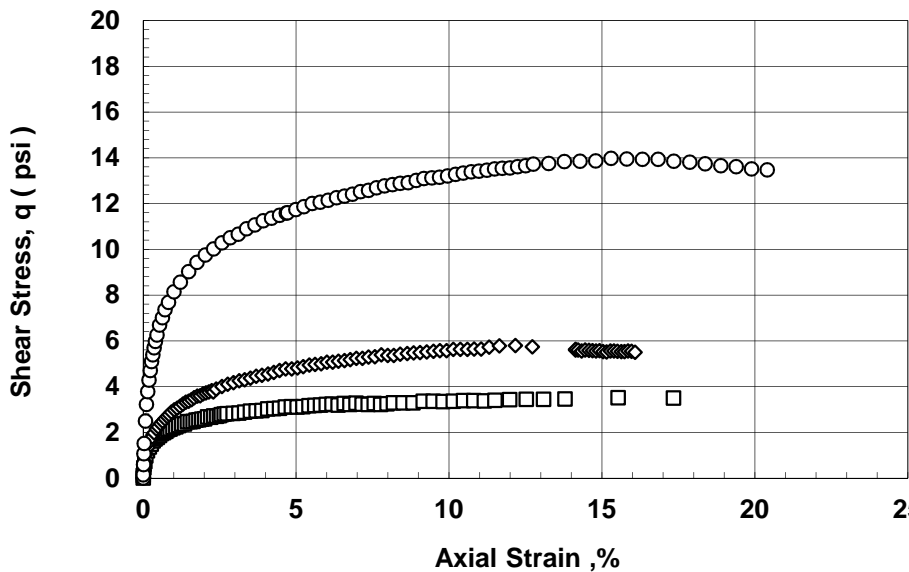
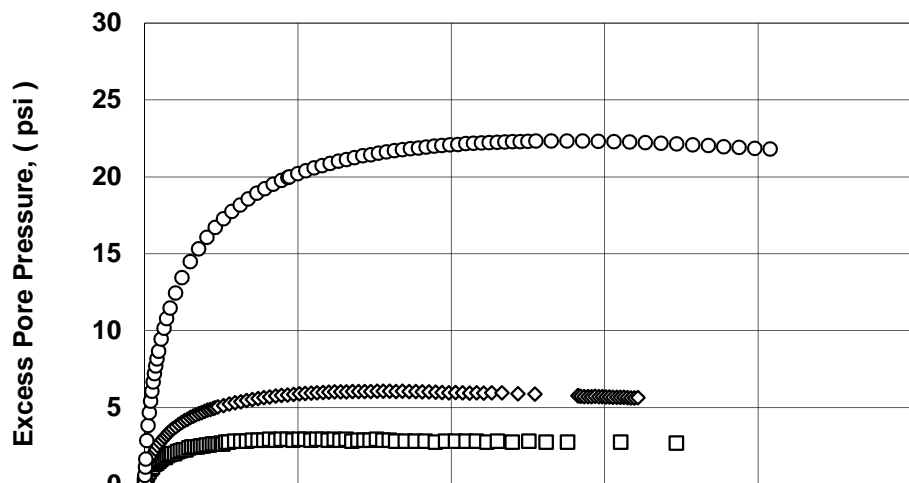
Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAxIAL COMPRESSION with Pore Pressure Measurements SUMMARY	August 2012
TerraSense, LLC			

LEGEND AND SUMMARY INFORMATION

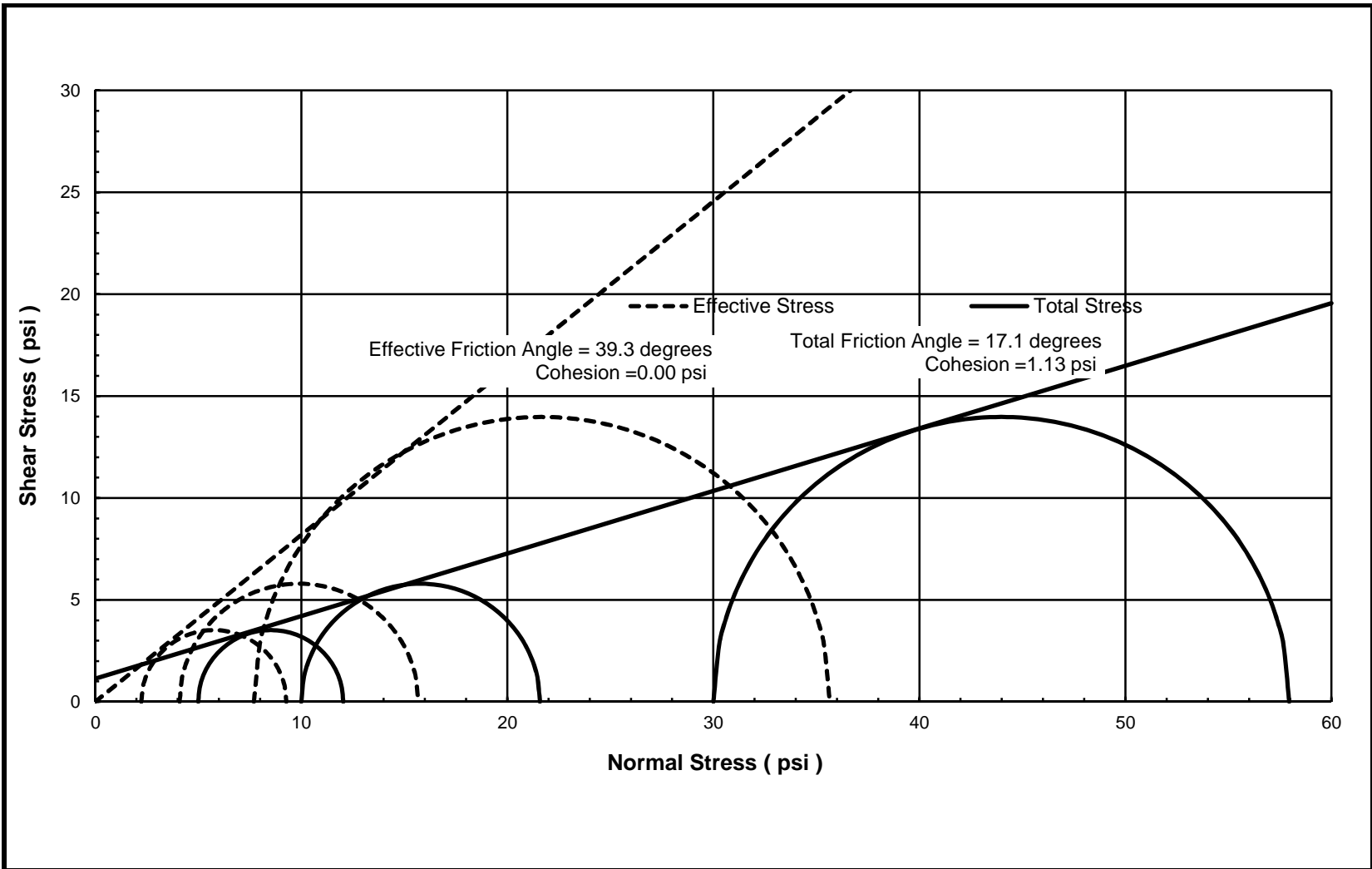
Symbol	Test	Boring	Sample	Depth (ft)	w _o (%)	γ _{to} (pcf)	σ' _c (psi)
□	T3300	FW-SB-113	T-2B	19.7	65.9	96.6	5.00
◇	T3301	FW-SB-113	T-2C	20.3	70.8	98.7	10.00
○	T3307	FW-SB-113	T-2D	20.8	63.4	99.8	30.00

SERIES SUMMARY

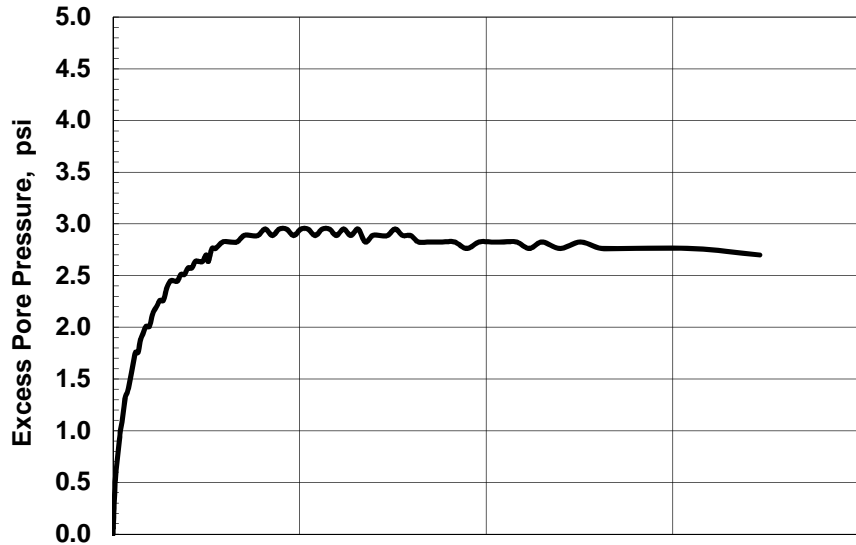
Notation	Failure Criteria	c' (psi)	Φ' (degrees)
—	Peak Deviator Stress	0.00	39.3
—	Peak Obliquity	0.00	39.4



Prepared by: CMJ Checked by: G. Thomas	Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements SUMMARY	Figure 1
	TerraSense, LLC			August 2012



Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	Mohr Circles of Total and Effective Stresses at Peak CIU' Triaxial Test	Figure 2
TerraSense, LLC		SUMMARY	August 2012

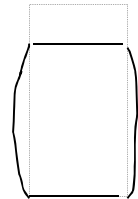


SAMPLE INFORMATION

Boring: FW-SB-113 Sample: T-2B Depth: 19.7ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; peat, phragmites noted

SPECIMEN INFORMATION (Initial)

Height: 5.97 inch Diameter: 2.83 inch Area: 6.27 in²
 Water Content: 65.9 % Total Unit Weight: 96.6 pcf

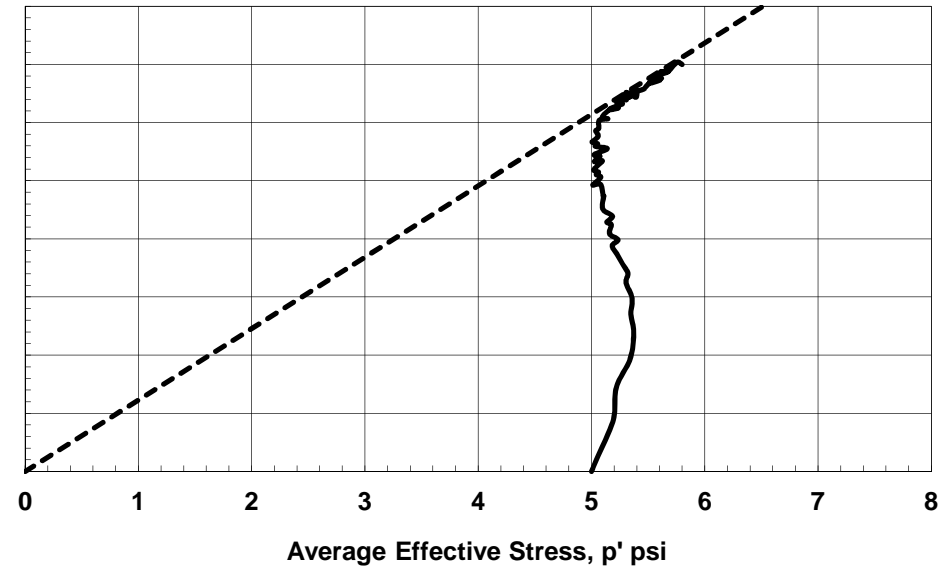
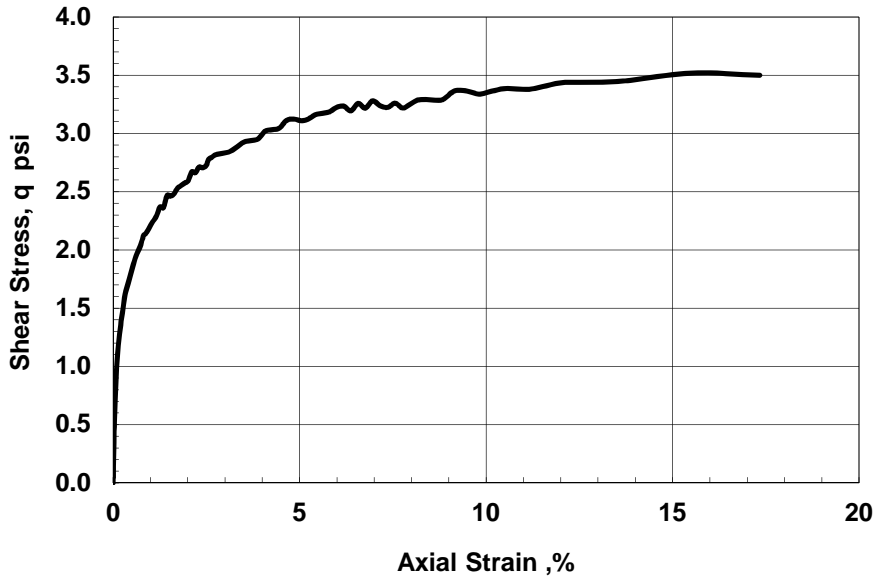


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 5.00 psi vertical, 5.00 psi lateral
 Water Content: 55.8 % Total Unit Weight: 100.7 pcf
 B Coefficient: Strain Rate: 0.010 %/min
 Peak Shear Strength: 3.52 psi @ 15.5 % Strain
 Peak Effective Friction Angle: 37.9°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAxIAL COMPRESSION

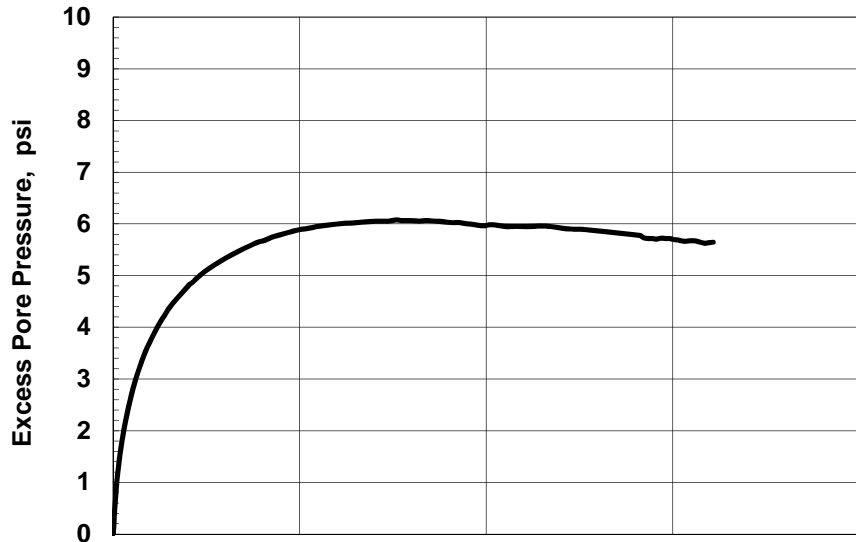
with Pore Pressure Measurements

Boring: FW-SB-113 Sample: T-2B

August-12

Checked by: GET

TerraSense, LLC

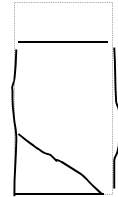


SAMPLE INFORMATION

Boring: FW-SB-113 Sample: T-2C Depth: 20.25ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; peat noted

SPECIMEN INFORMATION (Initial)

Height: 6.01 inch Diameter: 2.81 inch Area: 6.20 in²
 Water Content: 70.8 % Total Unit Weight: 98.7 pcf

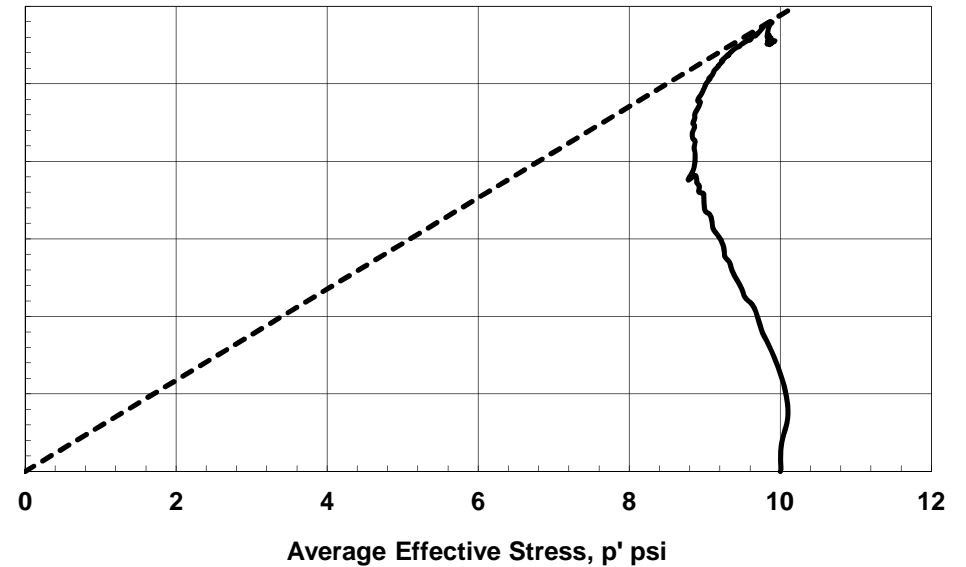
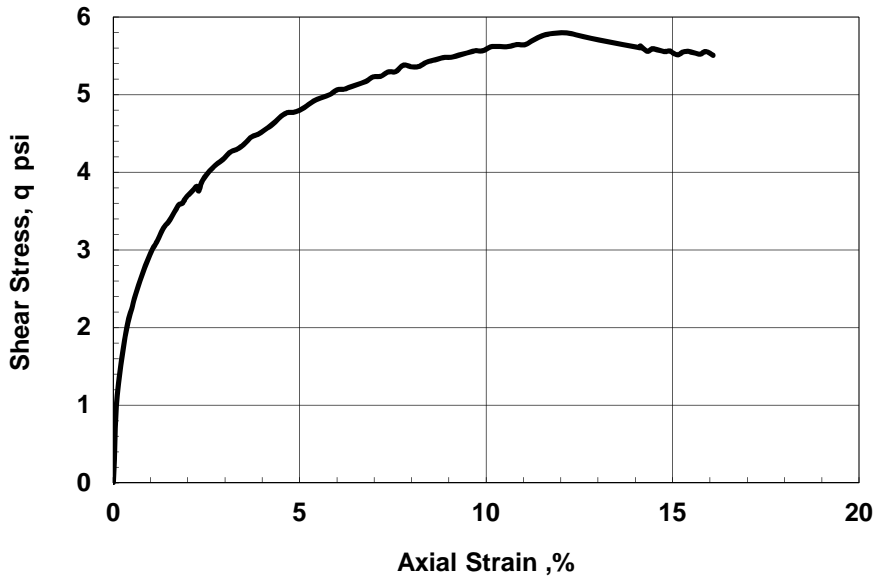


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 10.00 psi vertical, 10.00 psi lateral
 Water Content: 61.4 % Total Unit Weight: 102.4 pcf
 B Coefficient: Strain Rate: 0.011 %/min
 Peak Shear Strength: 5.79 psi @ 12.2 % Strain
 Peak Effective Friction Angle: 36.0°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION

with Pore Pressure Measurements

Boring: FW-SB-113 Sample: T-2C

August-12

Checked by: GET

TerraSense, LLC

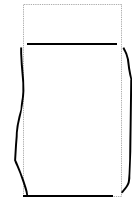


SAMPLE INFORMATION

Boring: FW-SB-113 Sample: T-2D Depth: 20.8ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; sand zone noted at bottom

SPECIMEN INFORMATION (Initial)

Height: 6.02 inch Diameter: 2.87 inch Area: 6.47 in²
 Water Content: 63.4 % Total Unit Weight: 99.8 pcf

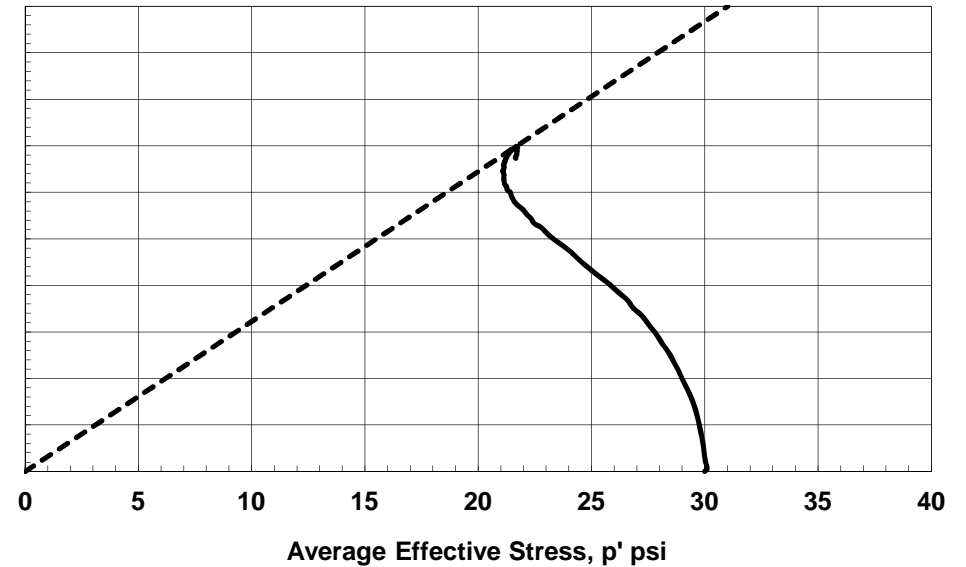
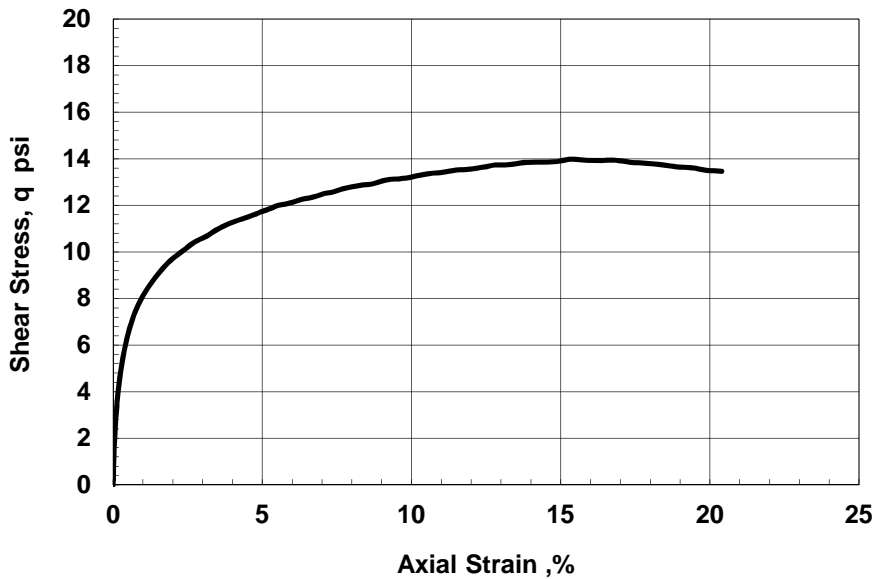


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 30.00 psi vertical, 30.00 psi lateral
 Water Content: 49.6 % Total Unit Weight: 107.8 pcf
 B Coefficient: 100 Strain Rate: 0.022 %/min
 Peak Shear Strength: 13.98 psi @ 15.3 % Strain
 Peak Effective Friction Angle: 40.1°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION

with Pore Pressure Measurements

Boring: FW-SB-113 Sample: T-2D

August-12

Checked by: GET

TerraSense, LLC

SUMMARY FOR STATIC CIU' TRIAXIAL TESTS SPECIMENS

Test No	Boring No	Sample Section No	Depth Elev (ft)	USCS Group Symbol Gs	w _o w _c (%)	γ _{t,o} γ _{t,c} (pcf)	γ _{d,o} γ _{d,c} (pcf)	σ' _{c,max} (psi) OCR	σ' _{v,c} (psi) K _c = σ' _{v,c} / σ' _{h,c}	ε _{a,c} ε _{v,c} (%)	B factor (%) ε _{rate} (%/hr)	at Peak Deviator Stress					
												at Peak Obliquity					
												ε _a (%)	σ ₁ - σ ₃ 2 (psi)	σ' ₁ + σ' ₃ 2 (psi)	σ' ₁ / σ' ₃	A factor	φ' for c'=0
T3306	FW-SB-113A	T-2A	13.65	CH-OH	82.1	92.8	50.9	4.00	4.00	3.9		16.9	1.83	3.07	3.96	0.755	36.6
				(2.55)	69.1	97.5	57.6	1.0	1.00	11.6	1.2	12.1	1.79	2.97	4.05	0.788	37.2
T3302	FW-SB-113A	T-2C	14.2	CH-OH	71.3	96.9	56.6	8.0	8.0	1.3		6.3	6.77	9.03	7.01	0.424	48.6
				(2.75)	69.7	99.9	58.9	1.0	1.00	3.9	1.2	7.0	6.75	8.99	7.01	0.426	48.6
T3308	FW-SB-113A	T-2D	14.75	CH-OH	63.7	102.0	62.3	23.0	23.0	2.6		9.2	10.8	16.2	5.00	0.815	41.8
				(2.75)	54.5	106.1	68.7	1.0	1.00	9.3	1.3	12.5	10.8	15.9	5.21	0.831	42.7

Test No	Description of Material Tested and Remarks
T3306	CH-OH, gray organic clay; peat and shell fragments noted
T3302	CH-OH, gray organic clay; peat noted
T3308	CH-OH, gray organic clay; shell fragments noted

Strength Envelope Summary						
Test Series	Failure Criteria	φ' (deg)	c' (psi)	α' (deg)	a' (psi)	Correlation Coefficient
1	1	42.8	0.087	34.2	0.064	0.994
	2	43.8	0.016	34.7	0.012	0.995
Failure Criteria: 1 - Peak Deviator Stress 2 - Peak Obliquity						

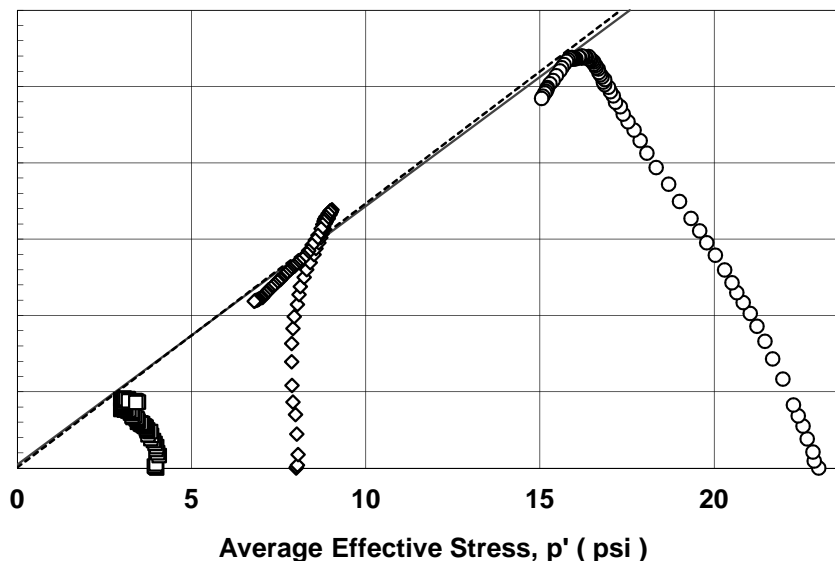
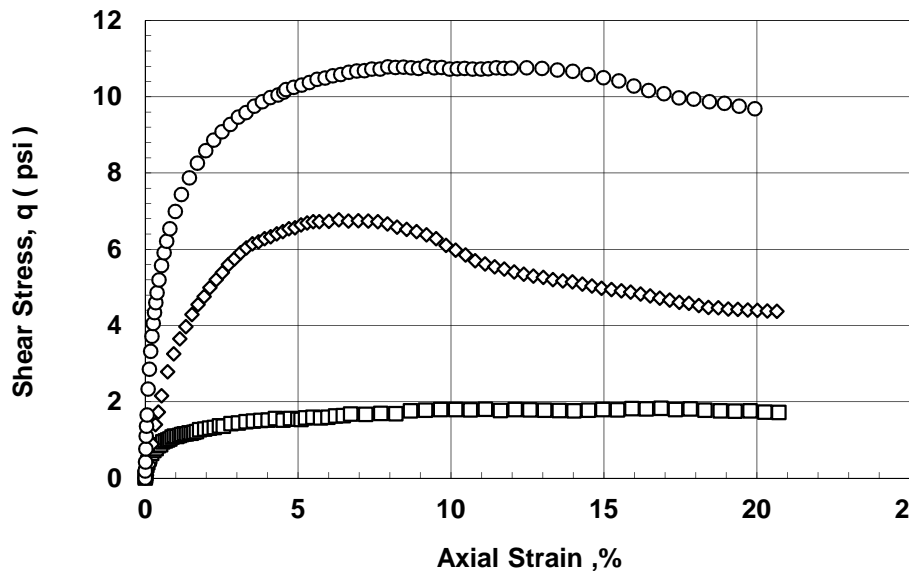
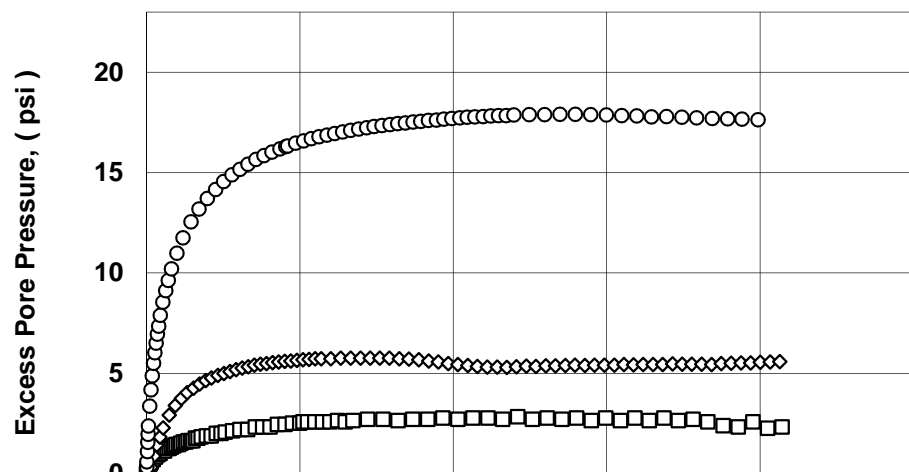
Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements SUMMARY	August 2012
TerraSense, LLC			

LEGEND AND SUMMARY INFORMATION

Symbol	Test	Boring	Sample	Depth (ft)	w _o (%)	γ _{to} (pcf)	σ' _c (psi)
□	T3306	FW-SB-113A	T-2A	13.7	82.1	92.8	4.00
◇	T3302	FW-SB-113A	T-2C	14.2	71.3	96.9	8.00
○	T3308	FW-SB-113A	T-2D	14.8	63.7	102.0	23.00

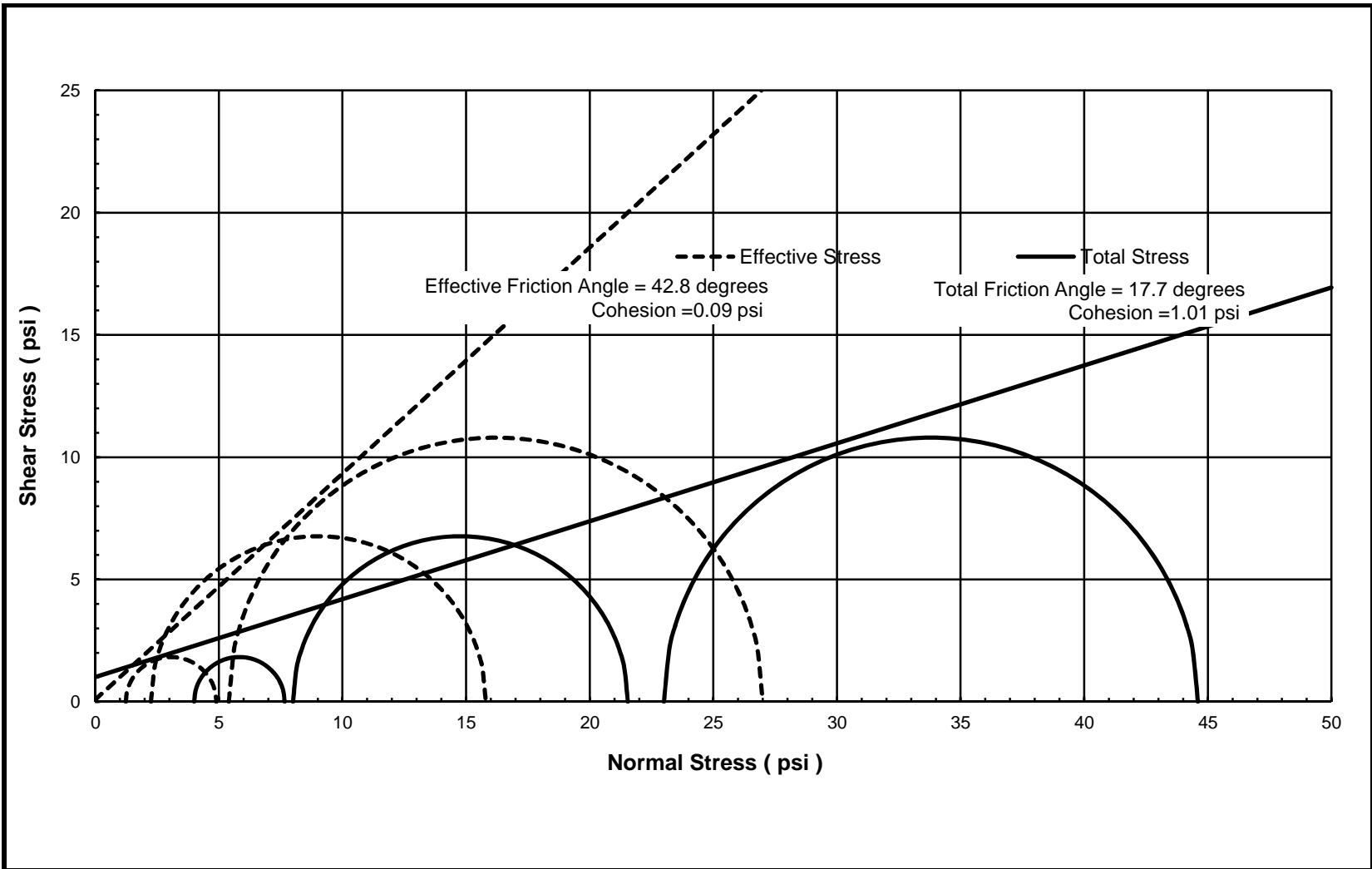
SERIES SUMMARY

Notation	Failure Criteria	c' (psi)	Φ' (degrees)
—	Peak Deviator Stress	0.09	42.8
.....	Peak Obliquity	0.02	43.8

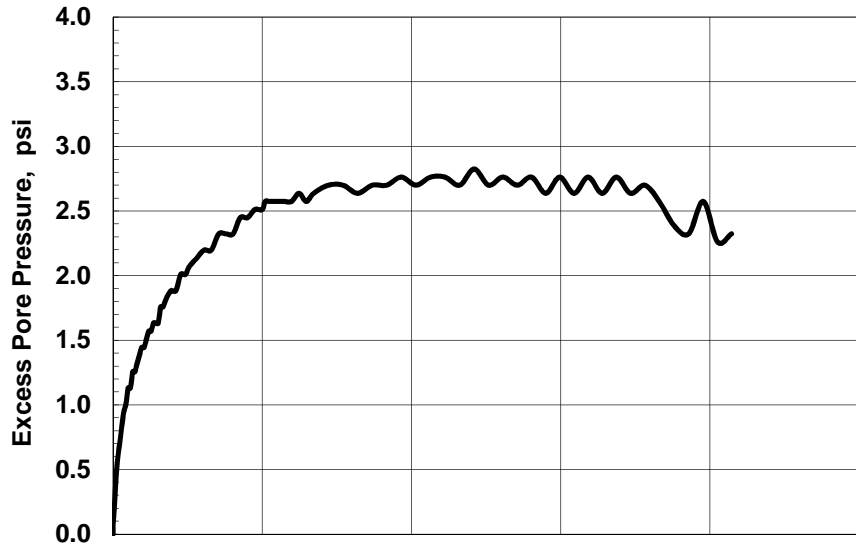


Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements SUMMARY	Figure 1
TerraSense, LLC			August 2012

Prepared by: CMJ
Checked by: G. Thomas



Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	Mohr Circles of Total and Effective Stresses at Peak CIU' Triaxial Test	Figure 2
TerraSense, LLC		SUMMARY	August 2012

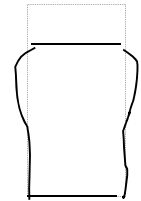


SAMPLE INFORMATION

Boring: FW-SB-113A Sample: T-2A Depth: 13.65ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; peat and shell fragments noted

SPECIMEN INFORMATION (Initial)

Height: 5.98 inch Diameter: 2.86 inch Area: 6.45 in²
 Water Content: 82.1 % Total Unit Weight: 92.8 pcf

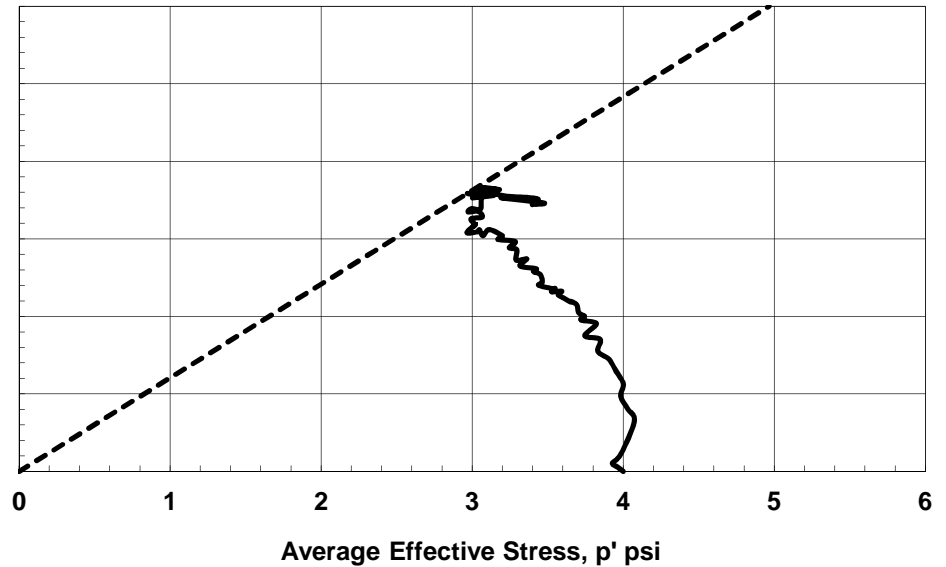
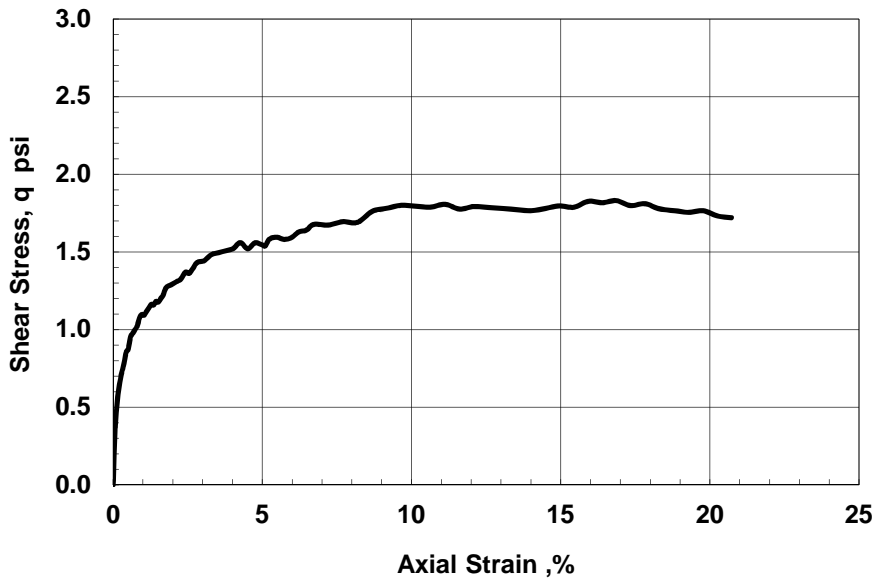


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 4.00 psi vertical, 4.00 psi lateral
 Water Content: 69.1 % Total Unit Weight: 97.5 pcf
 B Coefficient: Strain Rate: 0.020 %/min
 Peak Shear Stress: 1.83 psi @ 16.9 % Strain
 Peak Effective Friction Angle: 37.2°

REMARKS:



Test by: DT

Project No.
7960-12006

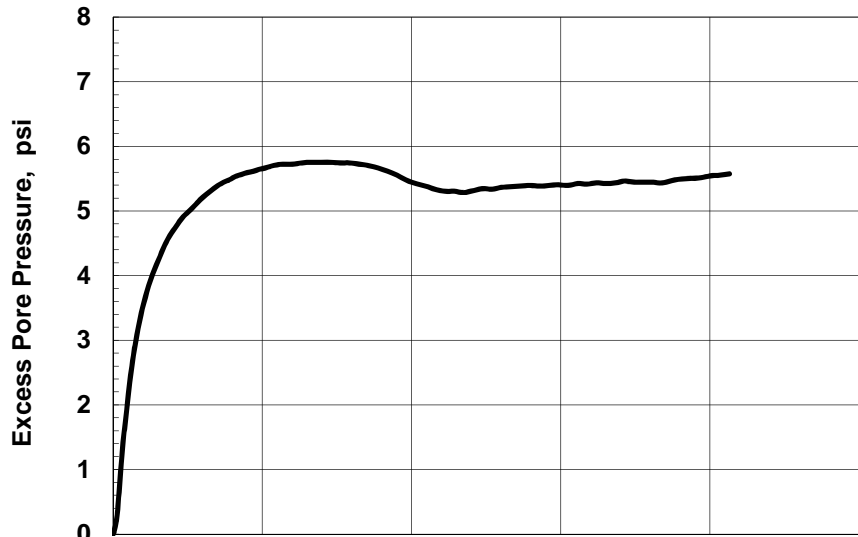
GEI Consultants #093020
Fulton Former MGP PDI

**CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION**
 with Pore Pressure Measurements
 Boring: FW-SB-113A Sample: T-2A

August-12

Checked by: GET

TerraSense, LLC



SAMPLE INFORMATION

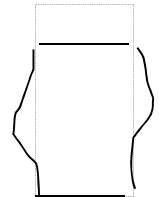
Boring: FW-SB-113A Sample: T-2C Depth: 14.2ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; peat noted

SPECIMEN INFORMATION (Initial)

Height: 6.02 inch Diameter: 2.85 inch Area: 6.40 in²
 Water Content: 71.3 % Total Unit Weight: 96.9 pcf

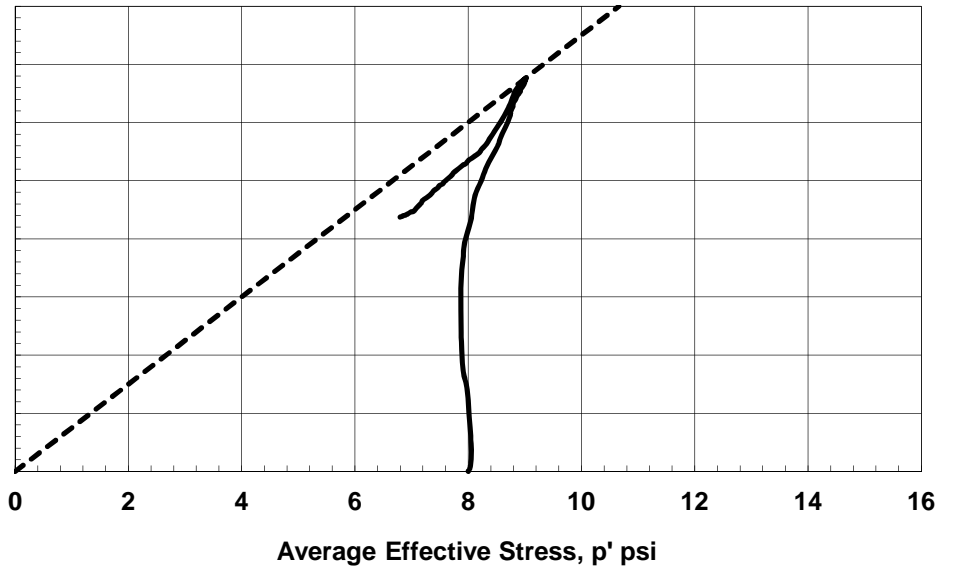
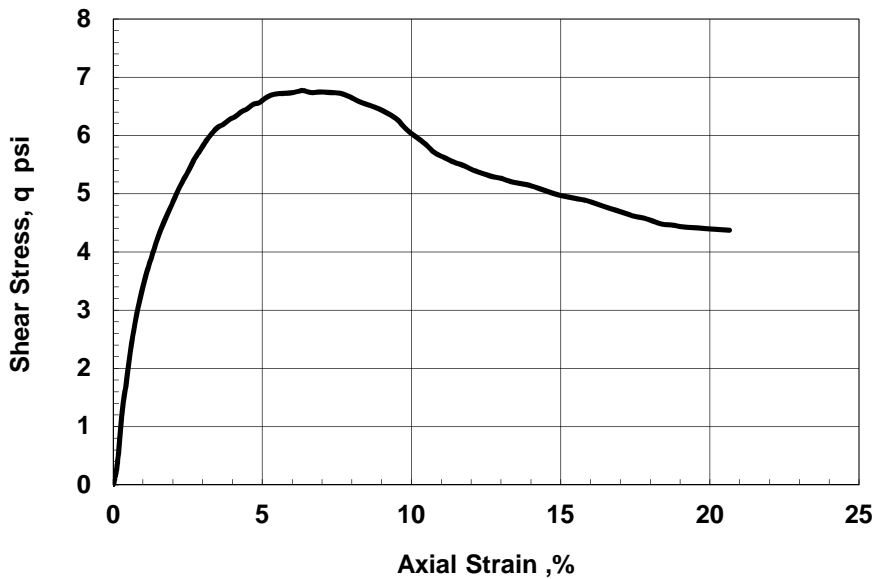
TEST SUMMARY

Consolidation Stresses: 8.00 psi vertical, 8.00 psi lateral
 Water Content: 69.7 % Total Unit Weight: 99.9 pcf
 B Coefficient: Strain Rate: 0.020 %/min
 Peak Shear Strength: 6.77 psi @ 6.3 % Strain
 Peak Effective Friction Angle: 48.6°



Failure Sketch

REMARKS:



Test by: DT

Project No.
7960-12006

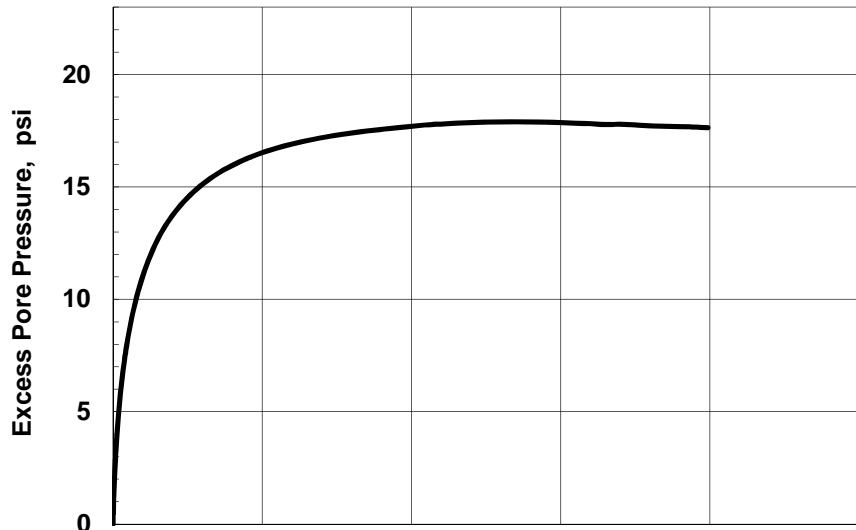
GEI Consultants #093020
Fulton Former MGP PDI

**CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION**
 with Pore Pressure Measurements
 Boring: FW-SB-113A Sample: T-2C

August-12

Checked by: GET

TerraSense, LLC

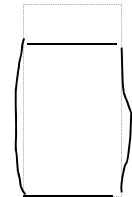


SAMPLE INFORMATION

Boring: FW-SB-113A Sample: T-2D Depth: 14.75ft
 Type: Intact tube sample
 Description: CH-OH, gray organic clay; shell fragments noted

SPECIMEN INFORMATION (Initial)

Height: 6.01 inch Diameter: 2.84 inch Area: 6.33 in²
 Water Content: 63.7 % Total Unit Weight: 102.0 pcf

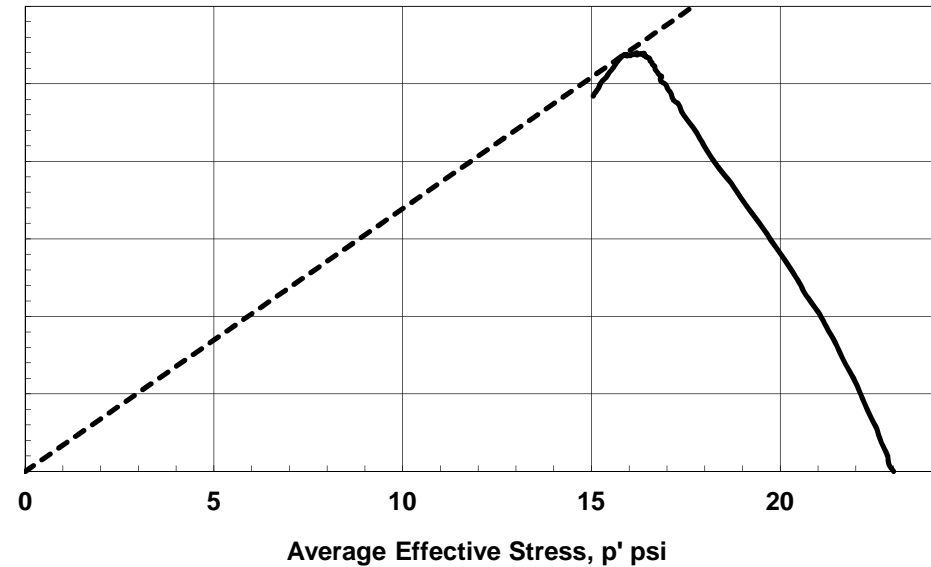
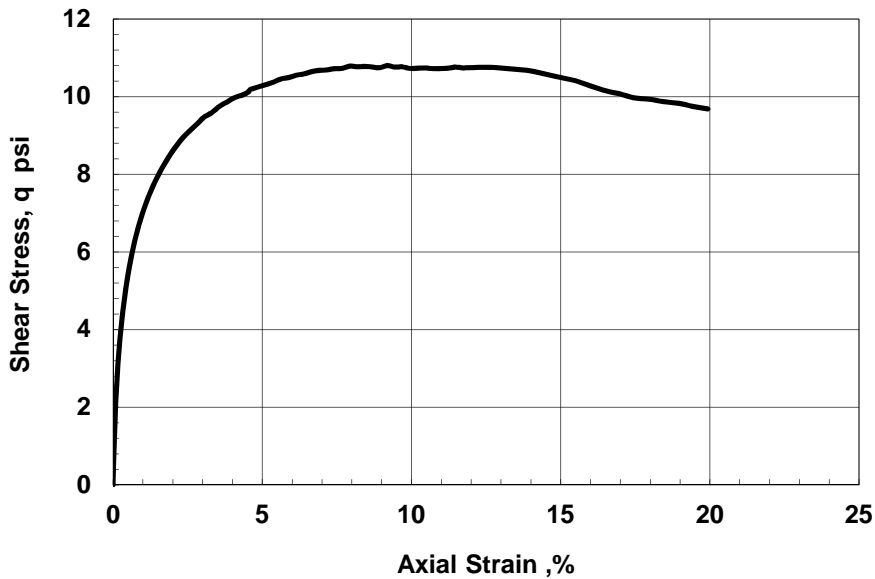


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 23.00 psi vertical, 23.00 psi lateral
 Water Content: 54.5 % Total Unit Weight: 106.1 pcf
 B Coefficient: Strain Rate: 0.021 %/min
 Peak Shear Strength: 10.80 psi @ 9.2 % Strain
 Peak Effective Friction Angle: 42.7°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

**CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION**
 with Pore Pressure Measurements
 Boring: FW-SB-113A Sample: T-2D

August-12

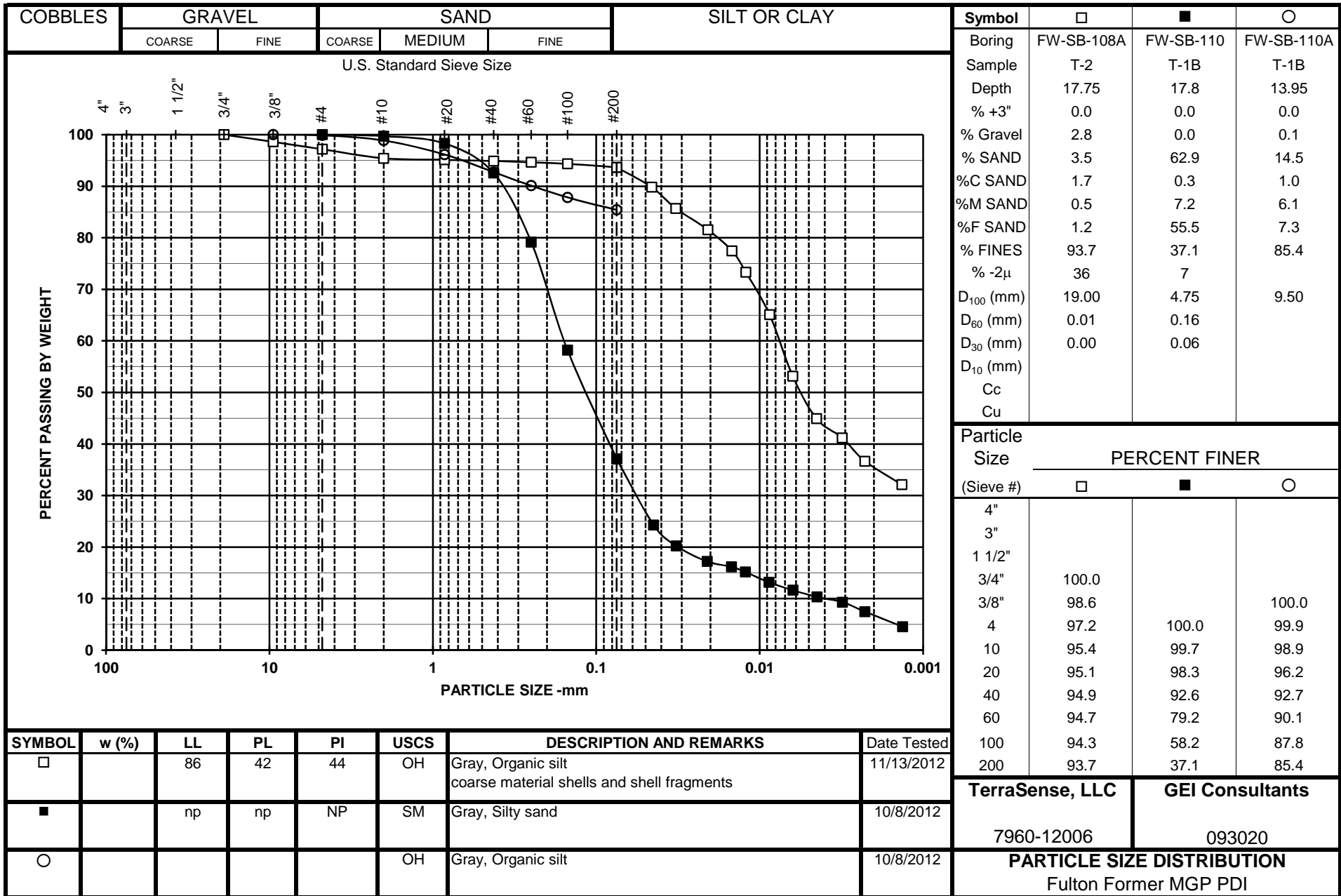
Checked by: GET

TerraSense, LLC

**GEI Consultants #093020
Fulton Former MGP PDI
LABORATORY TESTING DATA SUMMARY**

BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS									PERMEABILITY (cm/sec)	STRENGTH			REMARKS	
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	HYDRO. % MINUS 2 μm (%)	TOTAL UNIT WEIGHT (pcf)	DRY UNIT WEIGHT (pcf)		Type Test @ STRESS (psi)	PEAK SHEAR STRESS (psi)	AXIAL STRAIN @ PEAK STRESS (%)		
FW-SB-108A	T-2	17-19								94.8							
FW-SB-108A	T-2	17.5	75.9														
FW-SB-108A	T-2B	17.75	71.1	86	42	44	OH	93.7	36	95.7	55.9		CIU@4	2.8	19.0	T3337	
FW-SB-108A	T-2	18.05	71.2														
FW-SB-108A	T-2C	18.3	66.9				OH			100.7	60.3		CIU@7	3.5	12.6	T3338	
FW-SB-108A	T-2	18.6	68.2														
FW-SB-108A	T-2D	18.85	74.1				OH			98.9	56.8		CIU@22	9.0	11.9	T3339	
FW-SB-110	T-1	17-19								131.9							
FW-SB-110	T-1B	17.8	15.7	np	np	np	SM	37.1	7	135.7	117.3	2.8E-6					P9527
FW-SB-110A	T-1	13-15								89.3							
FW-SB-110A	T-1	13.15	66.8														
FW-SB-110A	T-1A	13.4	73.3				OH			94.5	54.5		CIU@7	4.2	6.8	T3318	
FW-SB-110A	T-1	13.7	73.7														
FW-SB-110A	T-1B	13.95	72.8				OH	85.4		95.9	55.5		CIU@3	2.7	10.1	T3319	
FW-SB-110A	T-1	14.25	69.9														
FW-SB-110A	T-1C	14.5	73.1				OH			96.1	55.5		CIU@20	8.0	8.4	T3320	

Note: (1) USCS symbol based on visual observation, Sieve results, and Atterberg limits reported.



TerraSense, LLC **GEI Consultants**
 7960-12006 093020
PARTICLE SIZE DISTRIBUTION
 Fulton Former MGP PDI

PERMEABILITY TEST: FALLING HEAD - CONSTANT VOLUME U-TUBE														
ASTM D 5084 - Method F														
Project No.: 7960-12006			BORING: FW-SB-110				Test No.: P9527							
Project Name: Fulton Former MGP PDI			SAMPLE: T-1B			DEPTH (ft): 17.8								
Specimen - Apparatus set-up - Test Information			Cell No. C		Apparatus No. 1			Stage No.: 3						
Preliminary Length/Area Calculations Lo = 3.975 in Lo= 10.097 cm dLc= 0.014 in Ao = 42.10 cm ² Lc= 3.961 in Vo = 425.05 cm ³ Lc= 10.061 cm dVc = 3 Vo * (dLc/Lo) dVc= 4.49 cm ³ Vc = 420.56 cm ³ Sc = 0.241 cm ⁻¹ Ac= 41.799 cm ²			1) Specimen Tested in :		<input checked="" type="checkbox"/>	Triaxial Cell or		Compaction Mold or						
			<input checked="" type="checkbox"/>	with stones or		Stones with filter paper or top + bottom								
2) Specimen orientation for:		<input checked="" type="checkbox"/>	Vertical or		Horizontal permeability determination									
3) During saturation: Water flushed up sides of specimen to remove air		<input checked="" type="checkbox"/>	No		Yes									
4) During consolidation:		<input checked="" type="checkbox"/>	Top and bottom drainage or		Top		Bottom only							
5) Direction of permeant :		<input checked="" type="checkbox"/>	Up during or		Down during permeation									
6) Permeant: water used		<input checked="" type="checkbox"/>	Tap		Distilled									
or		<input type="checkbox"/>	Demineralized		0.005 N calcium sulfate (CaSO4)					Permeability				
Equations Used Kt = - 0.0000757 * Sc/dT(min) * ln (ho/hf) RT = (-0.02452*(ave. temp in C) + 1.495) K @ 20 °C = RT * Kt TubeC= 1.3127			Consol	Temp.	Date	Time			Initial		U-tube Reading		Preliminary	
			Stage-Trial No.	° C		hr	min	sec	σ _c	U _b	Head (cm)	Tail (cm)	Flow in/out gradient	Final at 20°C cm/sec
TEST SUMMARY Final Specimen and Test Conditions Lc = 10.061 cm ε _{axial} = 0.4% Ac = 41.872 cm ² Vc = 421.29 cm ³ ε _{vol} = 0.9% Sc = 0.240 cm ⁻¹ Sc = Lc / Ac , final w γ _t γ _d S (%) (pcf) (pcf) (%) Initial 15.72 135.7 117.3 98.7 PreTest 15.46 136.6 118.3 100.0			initial	22.0	10/8/12	09	54	00	107.0	100.0	50.00	40.50	0.98	2.94E-06
			final	22.0	10/8/12	10	02	30			44.60	42.23		
			1	RT = 0.956		dT = 8.50 min		σ' _c = 1.0 ksf	0.405	0.414	io= 11.9	-1%		
			initial	22.0	10/8/12	10	04	00	107.0	100.0	50.00	40.50	0.97	2.98E-06
			initial	22.0	10/8/12	10	09	00			45.96	41.80		2.84E-06
			final	22.0	10/8/12	10	09	00						
			2	RT = 0.956		dT = 5.00 min		σ' _c = 1.0 ksf	0.303	0.311	io= 11.9	1%		
			initial	22.0	10/8/12	10	10	00	107.0	100.0	50.00	40.50	0.97	2.97E-06
			initial	22.1	10/8/12	10	19	00			44.43	42.30		2.83E-06
			final	22.1	10/8/12	10	19	00						
			3	RT = 0.954		dT = 9.00 min		σ' _c = 1.0 ksf	0.417	0.431	io= 11.9	0%		
			initial	22.1	10/8/12	10	20	00	107.0	100.0	50.00	40.50	1.00	2.94E-06
			initial	22.2	10/8/12	10	30	00			44.20	42.32		2.80E-06
			final	22.2	10/8/12	10	30	00						
			4	RT = 0.952		dT = 10.00 min		σ' _c = 1.0 ksf	0.435	0.436	io= 11.9	-1%		
			initial											
			initial											
			final											
			5	dT =				σ' _c =						
			initial											
			initial											
			final											
			6	dT =				σ' _c =						
			initial											
			initial											
			final											
Tested By: DT Reviewed By: G. Thomas														

SUMMARY FOR STATIC CIU' TRIAXIAL TESTS SPECIMENS

Test No	Boring No	Sample Section No	Depth Elev (ft)	USCS Group Symbol Gs	w _o w _c (%)	γ _{t,o} γ _{t,c} (pcf)	γ _{d,o} γ _{d,c} (pcf)	σ' _{c,max} (psi) OCR	σ' _{v,c} (psi) K _c = σ' _{v,c} / σ' _{h,c}	ε _{a,c} ε _{v,c} (%)	B factor (%) ε _{rate} (%/hr)	at Peak Deviator Stress					
												at Peak Obliquity					
												ε _a (%)	σ ₁ - σ ₃ 2 (psi)	σ' ₁ + σ' ₃ 2 (psi)	σ' ₁ / σ' ₃	A factor	φ' for c'=0
T3337	FW-SB-108A	B	17.75	OH	71.1	95.7	55.9	4.00	4.00	3.1		19.0	2.77	3.89	5.94	0.521	45.4
				(2.78)	65.3	101.9	61.7	1.0	1.00	9.3	1.3	16.0	2.71	3.80	5.98	0.536	45.5
T3338	FW-SB-108A	C	18.3	OH	66.9	100.7	60.3	7.0	7.0	2.7	98.5	12.6	3.52	5.32	4.91	0.739	41.4
				(2.80)	60.1	104.3	65.2	1.0	1.00	7.4	1.3	8.9	3.43	5.03	5.28	0.787	43.0
T3339	FW-SB-108A	D	18.85	OH	74.1	98.9	56.8	22.0	22.0	4.7	99.1	11.9	9.0	14.6	4.24	0.913	38.2
				(2.80)	60.1	104.3	65.2	1.0	1.00	12.8	1.2	13.6	9.0	14.5	4.27	0.921	38.3

Test No	Description of Material Tested and Remarks
T3337	OH, gray organic Silt
T3338	OH, gray organic Silt; shell fragment layer present
T3339	OH, gray organic Silt; shell fragment layer present

Strength Envelope Summary						
Test Series	Failure Criteria	φ' (deg)	c' (psi)	α' (deg)	a' (psi)	Correlation Coefficient
1	1	36.0	0.543	30.5	0.440	1.000
	2	36.0	0.590	30.4	0.478	1.000
Failure Criteria: 1 - Peak Deviator Stress 2 - Peak Obliquity						

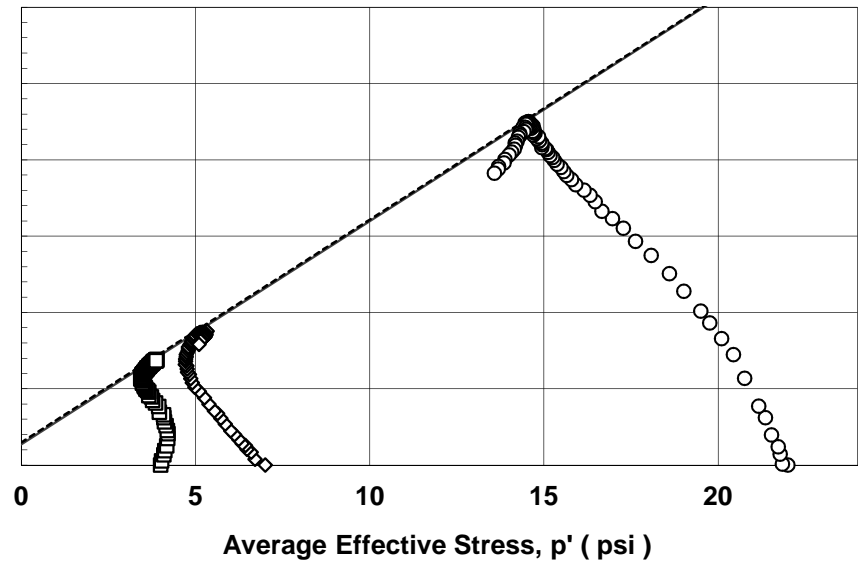
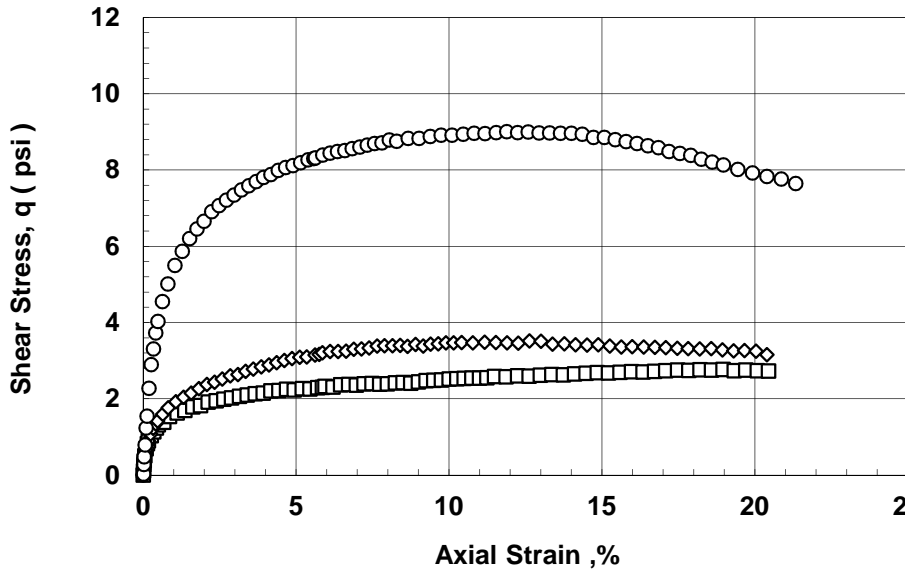
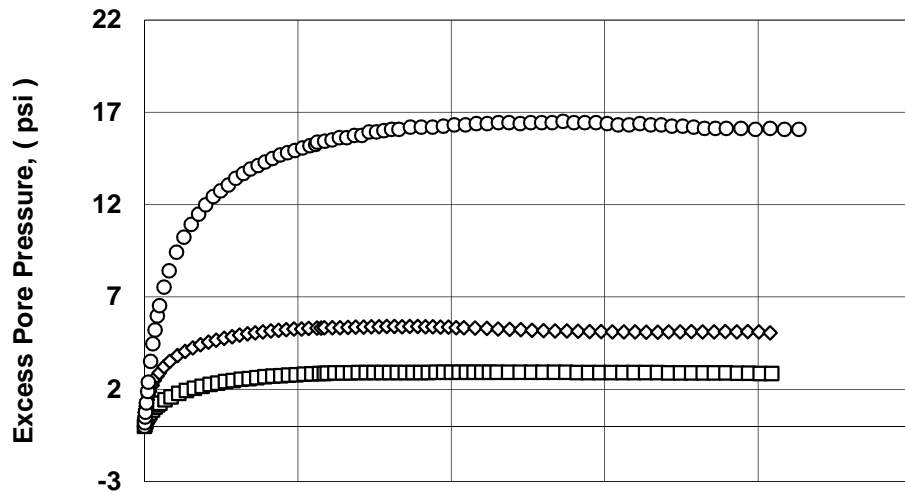
Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements FW-SB-108A SUMMARY	November 2012
TerraSense, LLC			

LEGEND AND SUMMARY INFORMATION

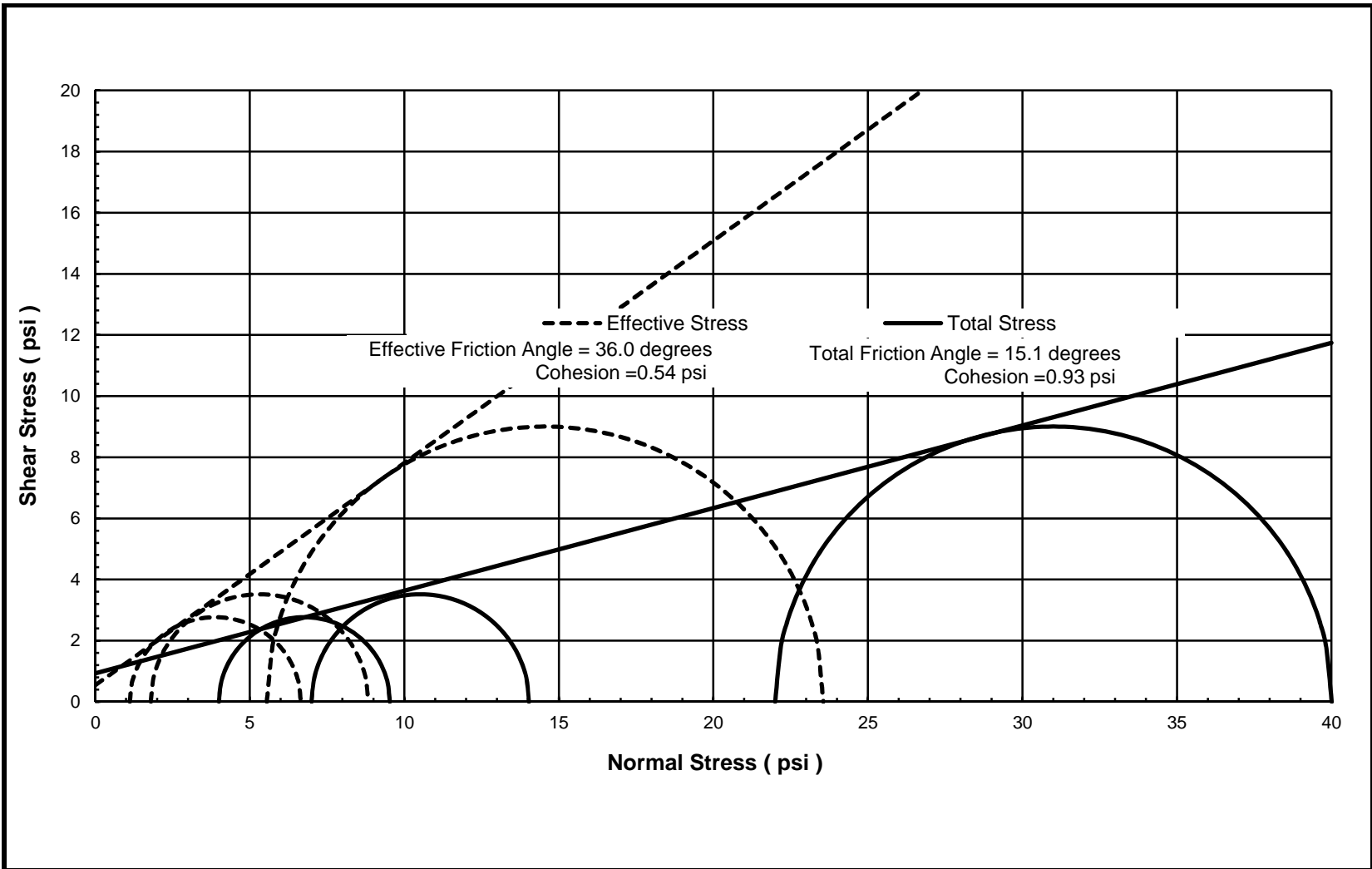
Symbol	Test	Boring	Sample	Depth (ft)	w _o (%)	γ _{to} (pcf)	σ' _c (psi)
□	T3337	FW-SB-108A	B	17.8	71.1	95.7	4.00
◇	T3338	FW-SB-108A	C	18.3	66.9	100.7	7.00
○	T3339	FW-SB-108A	D	18.9	74.1	98.9	22.00

SERIES SUMMARY

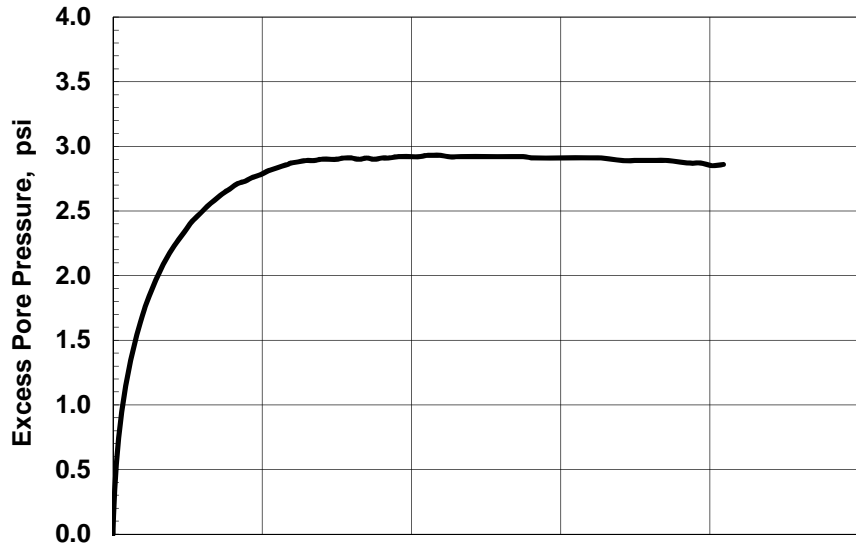
Notation	Failure Criteria	c' (psi)	Φ' (degrees)
—	Peak Deviator Stress	0.54	36.0
.....	Peak Obliquity	0.59	36.0



Prepared by: CMJ Checked by: G. Thomas	Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements FW-SB-108A SUMMARY	Figure 1
	TerraSense, LLC			November 2012



Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	Mohr Circles of Total and Effective Stresses at Peak CIU' Triaxial Test	Figure 2
TerraSense, LLC		FW-SB-108A SUMMARY	November 2012

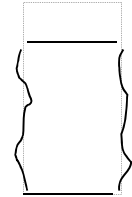


SAMPLE INFORMATION

Boring: FW-SB-108A Sample: B Depth: 17.75ft
 Type: Intact tube sample
 Description: OH, gray organic Silt

SPECIMEN INFORMATION (Initial)

Height: 6.04 inch Diameter: 2.87 inch Area: 6.48 in²
 Water Content: 71.1 % Total Unit Weight: 95.7 pcf

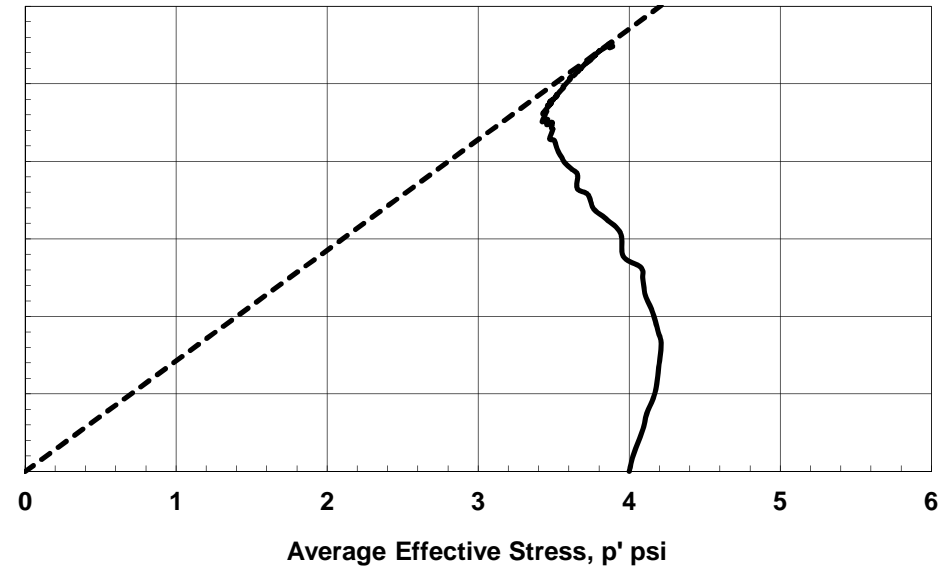
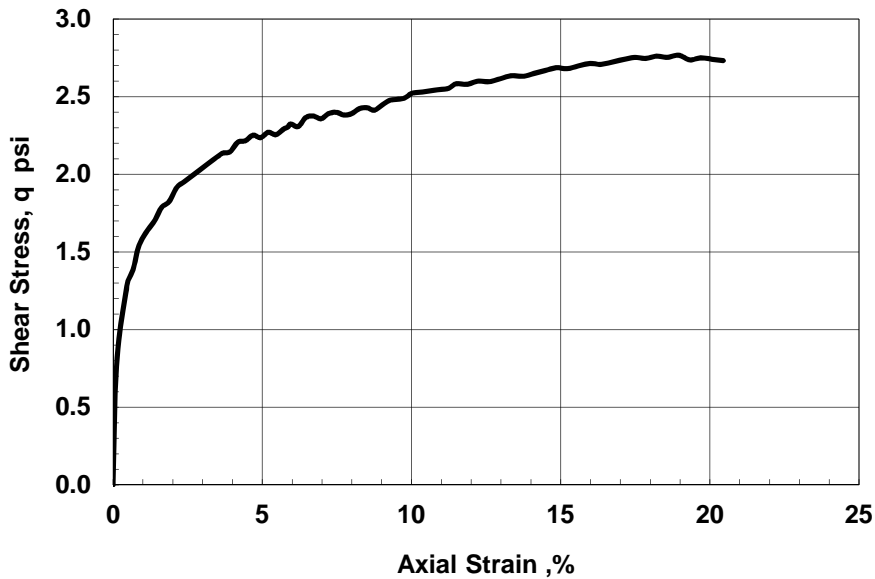


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 4.00 psi vertical, 4.00 psi lateral
 Water Content: 65.3 % Total Unit Weight: 101.9 pcf
 B Coefficient: Strain Rate: 0.021 %/min
 Peak Shear Strength: 2.77 psi @ 19.0 % Strain
 Peak Effective Friction Angle: 45.5°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION

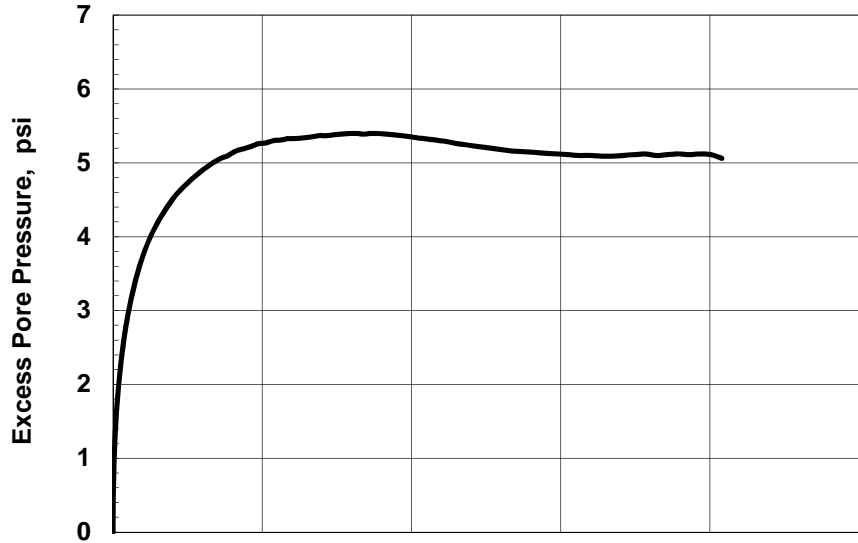
with Pore Pressure Measurements

Boring: FW-SB-108A Sample: B

November-12

Checked by: GET

TerraSense, LLC

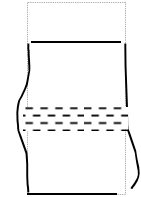


SAMPLE INFORMATION

Boring: FW-SB-108A Sample: C Depth: 18.3ft
 Type: Intact tube sample
 Description: OH, gray organic Silt; shell fragment layer present

SPECIMEN INFORMATION (Initial)

Height: 6.02 inch Diameter: 2.83 inch Area: 6.30 in²
 Water Content: 66.9 % Total Unit Weight: 100.7 pcf

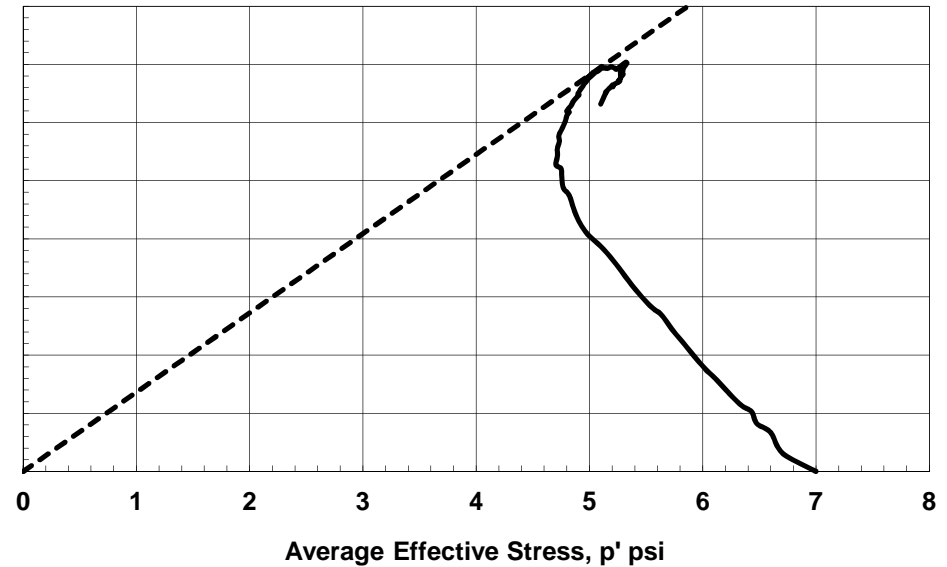
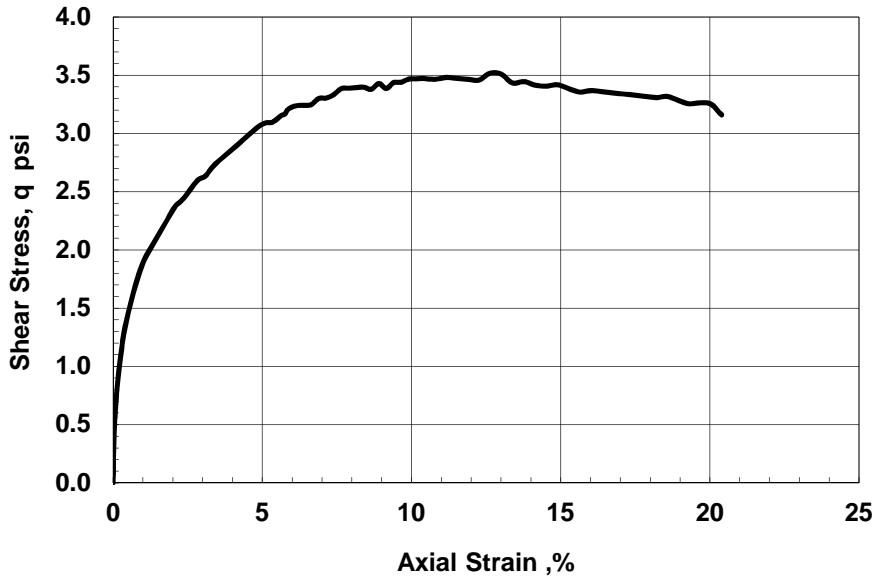


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 7.00 psi vertical, 7.00 psi lateral
 Water Content: 60.1 % Total Unit Weight: 104.3 pcf
 B Coefficient: 98.5 Strain Rate: 0.021 %/min
 Peak Shear Strength: 3.52 psi @ 12.6 % Strain
 Peak Effective Friction Angle: 43.0°

REMARKS:



Test by: DT

Project No.
7960-12006

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Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION

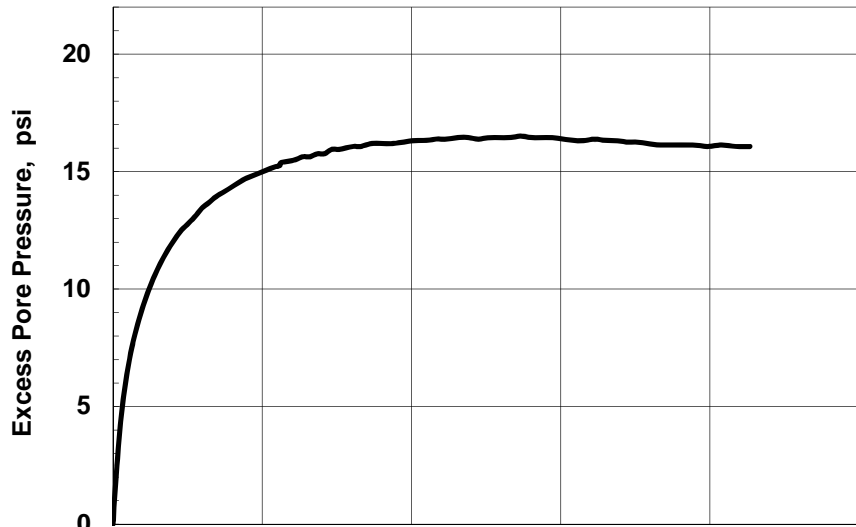
with Pore Pressure Measurements

Boring: FW-SB-108A Sample: C

November-12

Checked by: GET

TerraSense, LLC

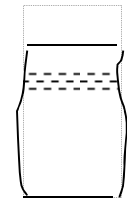


SAMPLE INFORMATION

Boring: FW-SB-108A Sample: DT Depth: 18.85ft
 Type: Intact tube sample
 Description: OH, gray organic Silt; shell fragment layer present

SPECIMEN INFORMATION (Initial)

Height: 6.01 inch Diameter: 2.82 inch Area: 6.25 in²
 Water Content: 74.1 % Total Unit Weight: 98.9 pcf

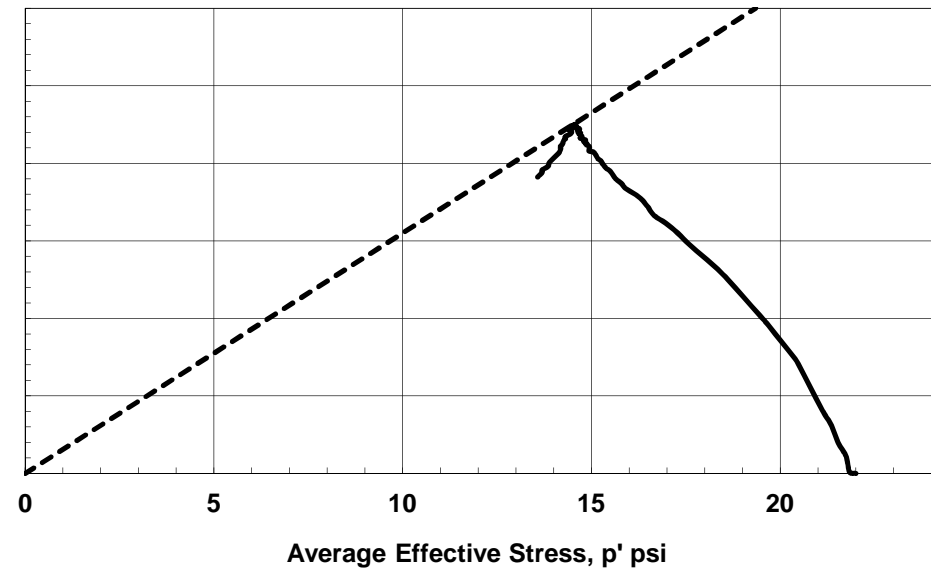
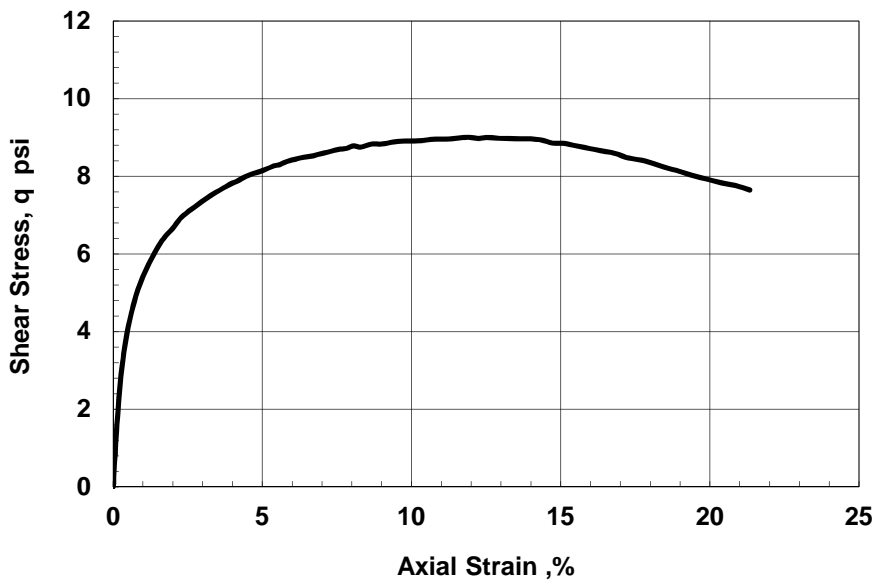


Failure Sketch

TEST SUMMARY

Consolidation Stresses: 22.00 psi vertical, 22.00 psi lateral
 Water Content: 60.1 % Total Unit Weight: 104.3 pcf
 B Coefficient: 99.1 Strain Rate: 0.020 %/min
 Peak Shear Strength: 9.00 psi @ 11.9 % Strain
 Peak Effective Friction Angle: 38.3°

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
TRIAXIAL COMPRESSION

with Pore Pressure Measurements

Boring: FW-SB-108A Sample: DT

November-12

Checked by: GET

TerraSense, LLC

SUMMARY FOR STATIC CIU' TRIAXIAL TESTS SPECIMENS

Test No	Boring No	Sample Section No	Depth Elev (ft)	USCS Group Symbol Gs	w _o w _c (%)	γ _{t,o} γ _{t,c} (pcf)	γ _{d,o} γ _{d,c} (pcf)	σ' _{c,max} (psi) OCR	σ' _{v,c} (psi) K _c = σ' _{v,c} / σ' _{h,c}	ε _{a,c} ε _{v,c} (%)	B factor (%) ε _{rate} (%/hr)	at Peak Deviator Stress					
												at Peak Obliquity					
												ε _a (%)	σ ₁ - σ ₃ 2 (psi)	σ' ₁ + σ' ₃ 2 (psi)	σ' ₁ / σ' ₃	A factor	φ' for c'=0
T3319	FW-SB-110A	T-1B	13.95	OH	72.8	95.9	55.5	3.00	3.00	1.5	99.14	10.1	2.70	3.30	10.09	0.445	55.0
				(2.68)	68.5	99.4	59.0	1.0	1.00	6.0	1.3	8.3	2.63	3.09	12.55	0.483	58.5
T3318	FW-SB-110A	T-1A	13.4	OH	73.3	94.5	54.5	7.0	7.0	2.0	99.2	6.8	4.20	6.74	4.30	0.531	38.5
				(2.68)	70.4	98.8	58.0	1.0	1.00	5.9	1.1	8.0	4.13	6.61	4.33	0.548	38.7
T3320	FW-SB-110A	T-1C	14.5	OH	73.1	96.1	55.5	20.0	20.0	6.8	99.7	8.4	8.0	13.1	4.12	0.929	37.5
				(2.68)	56.6	104.1	66.5	1.0	1.00	16.5	1.3	14.5	7.9	12.4	4.50	0.979	39.5

Test No	Description of Material Tested and Remarks
T3319	OH, gray organic silt
T3318	OH, gray organic silt
T3320	OH, gray organic silt

Strength Envelope Summary						
Test Series	Failure Criteria	φ' (deg)	c' (psi)	α' (deg)	a' (psi)	Correlation Coefficient
1	1	33.1	0.898	28.6	0.753	0.997
	2	35.0	0.808	29.8	0.662	0.995
Failure Criteria: 1 - Peak Deviator Stress 2 - Peak Obliquity						

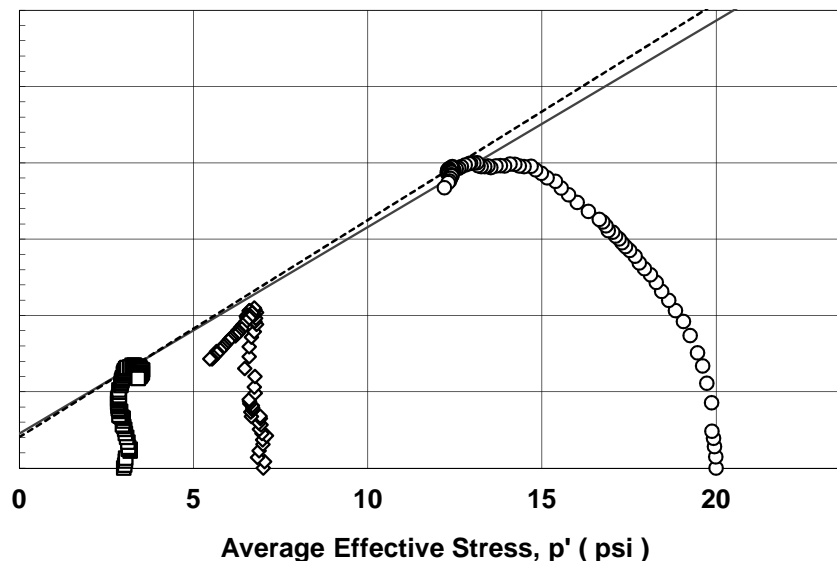
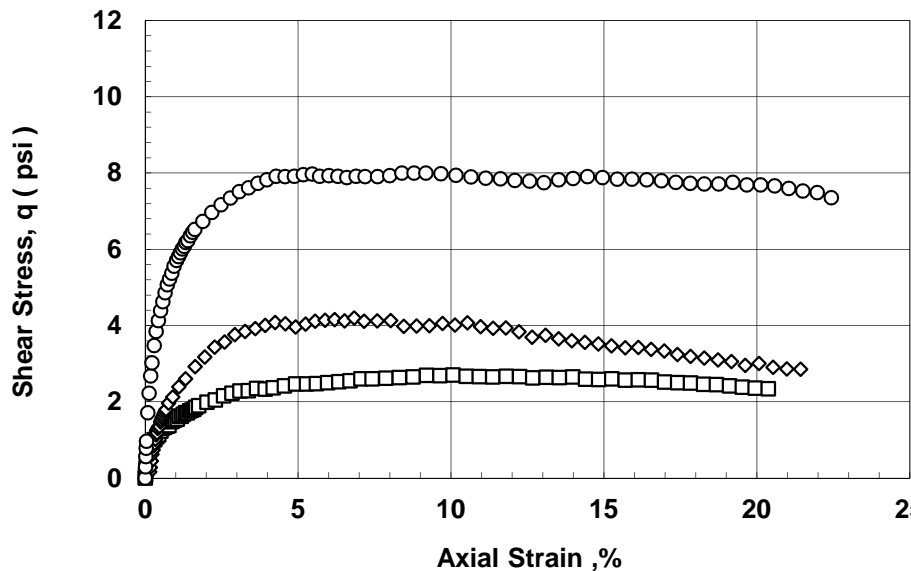
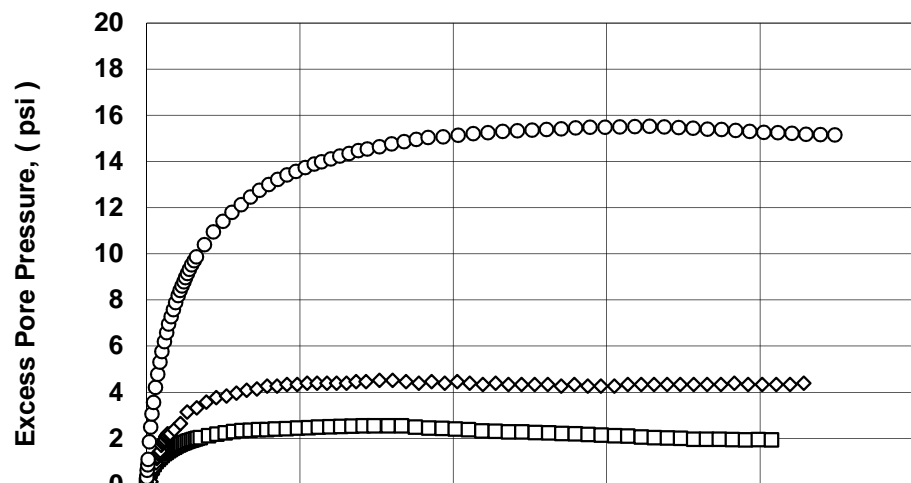
Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements SUMMARY	August 2012
TerraSense, LLC			

LEGEND AND SUMMARY INFORMATION

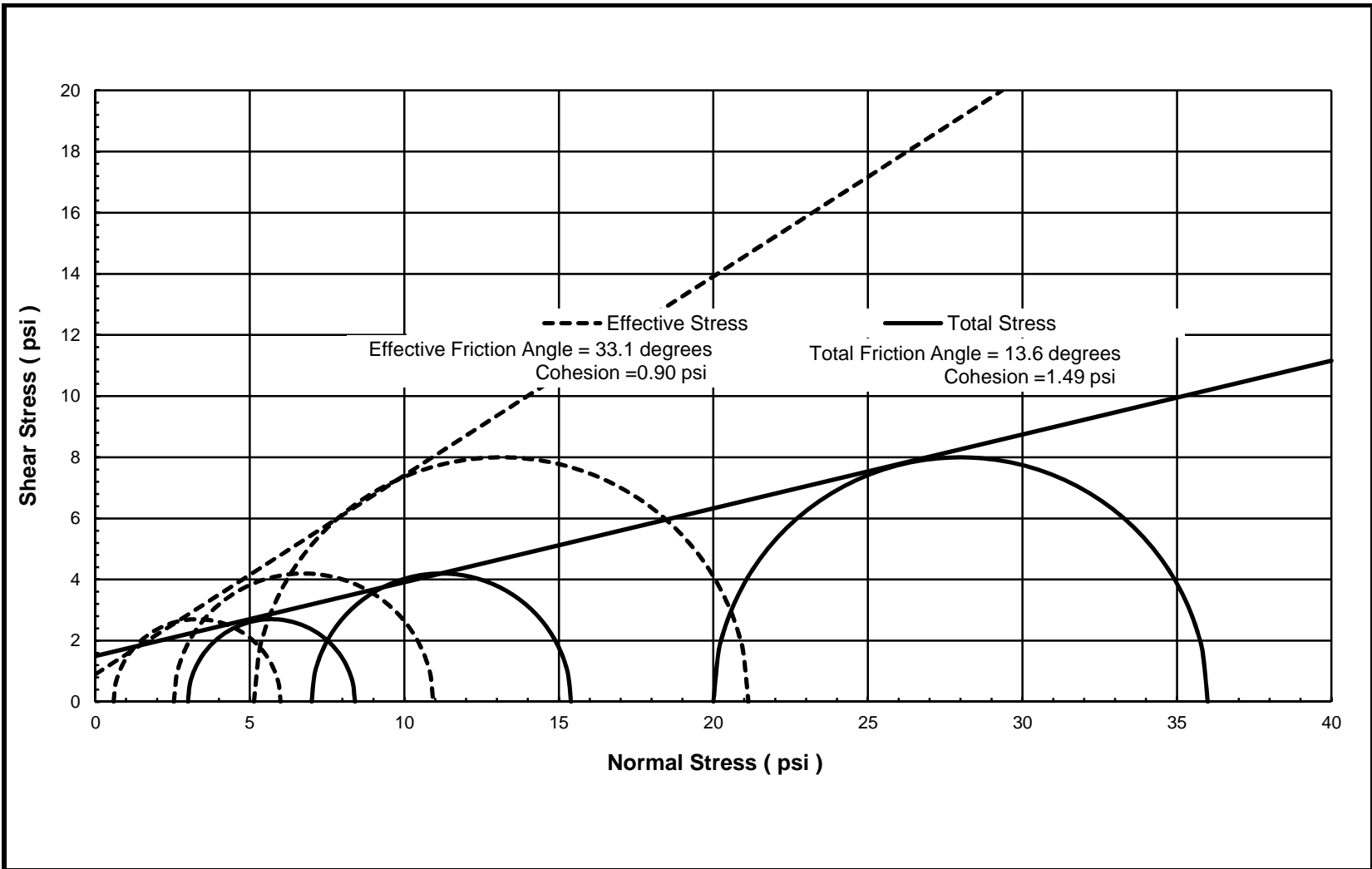
Symbol	Test	Boring	Sample	Depth (ft)	w _o (%)	γ _{to} (pcf)	σ' _c (psi)
□	T3319	FW-SB-110A	T-1B	14.0	72.8	95.9	3.00
◇	T3318	FW-SB-110A	T-1A	13.4	73.3	94.5	7.00
○	T3320	FW-SB-110A	T-1C	14.5	73.1	96.1	20.00

SERIES SUMMARY

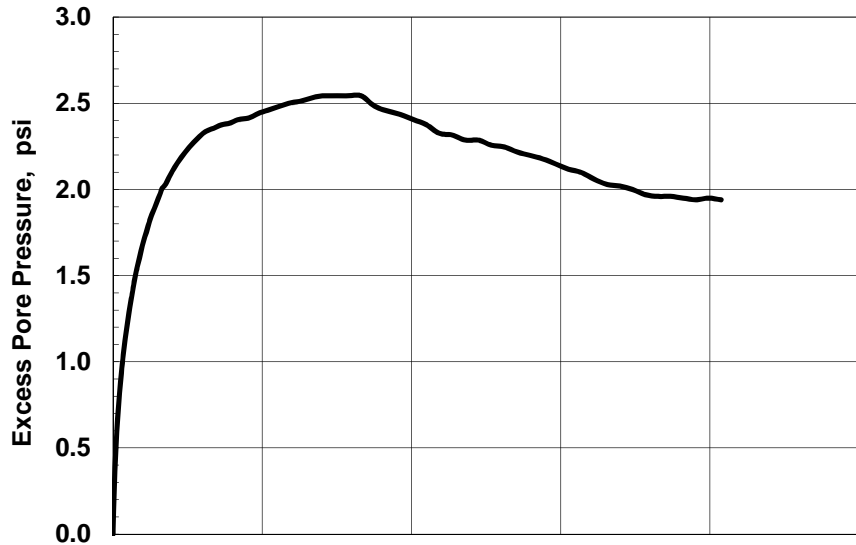
Notation	Failure Criteria	c' (psi)	Φ' (degrees)
—	Peak Deviator Stress	0.90	33.1
.....	Peak Obliquity	0.81	35.0



Prepared by: CMJ Checked by: G. Thomas	Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	CONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION with Pore Pressure Measurements SUMMARY	Figure 1
	TerraSense, LLC			August 2012



Project No. 7960-12006	GEI Consultants #093020 Fulton Former MGP PDI	Mohr Circles of Total and Effective Stresses at Peak CIU' Triaxial Test	Figure 2
TerraSense, LLC			SUMMARY



SAMPLE INFORMATION

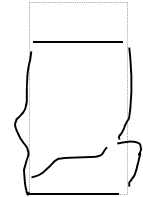
Boring: FW-SB-110A Sample: T-1B Depth: 13.95ft
 Type: Intact tube sample
 Description: OH, gray organic silt

SPECIMEN INFORMATION (Initial)

Height: 6.00 inch Diameter: 2.87 inch Area: 6.47 in²
 Water Content: 72.8 % Total Unit Weight: 95.9 pcf

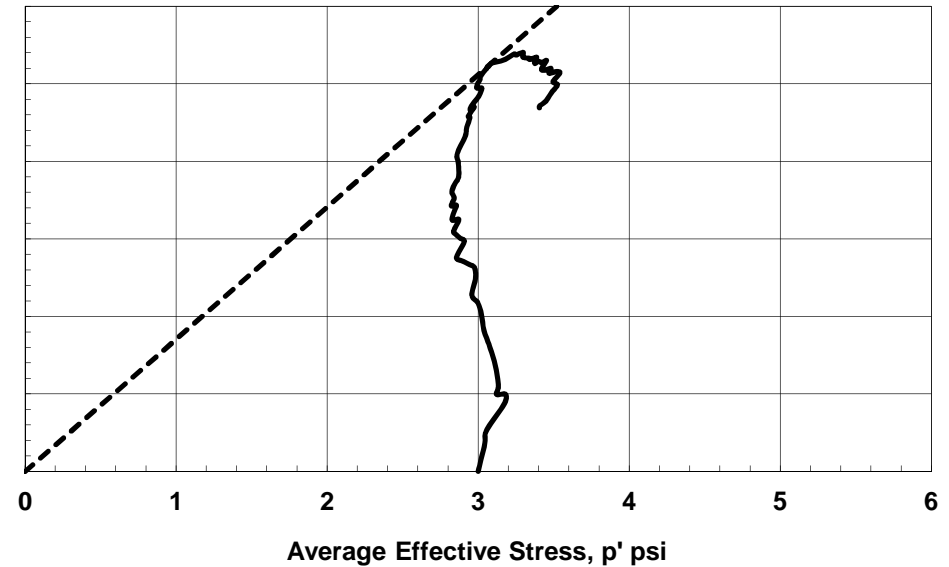
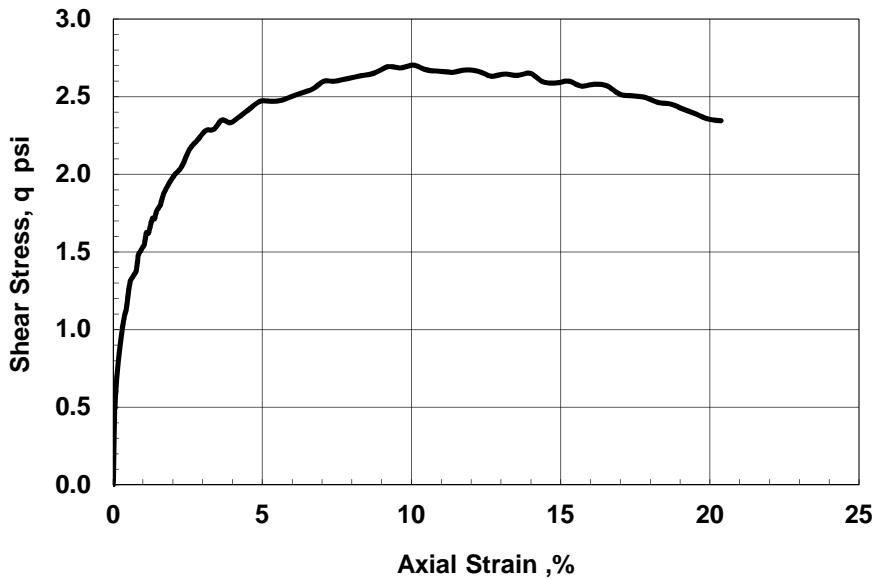
TEST SUMMARY

Consolidation Stresses: 3.00 psi vertical, 3.00 psi lateral
 Water Content: 68.5 % Total Unit Weight: 99.4 pcf
 B Coefficient: 99.14 Strain Rate: 0.022 %/min
 Peak Shear Strength: 2.70 psi @ 10.1 % Strain
 Peak Effective Friction Angle: 58.5°



Failure Sketch

REMARKS:



Test by: DT

Project No.
7960-12006

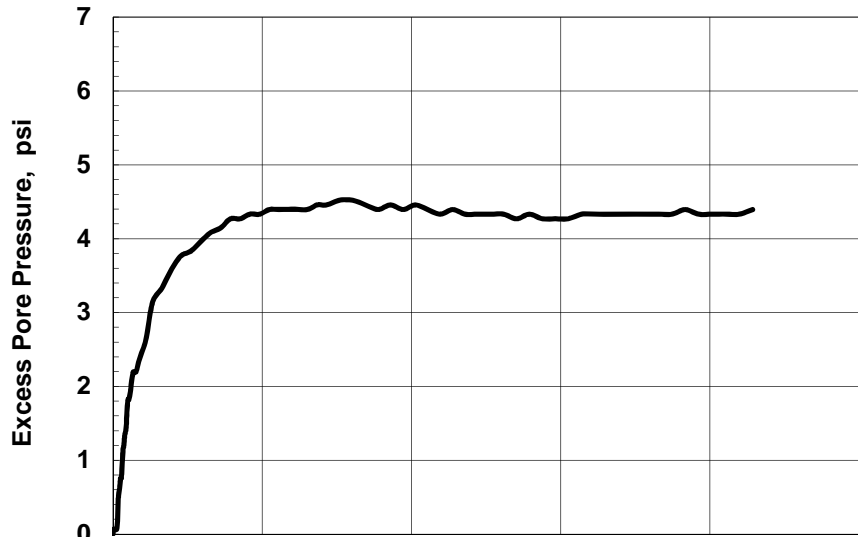
GEI Consultants #093020
Fulton Former MGP PDI

**CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION**
 with Pore Pressure Measurements
 Boring: FW-SB-110A Sample: T-1B

November-12

Checked by: GET

TerraSense, LLC



SAMPLE INFORMATION

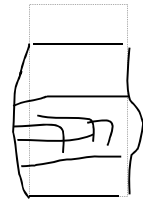
Boring: FW-SB-110A Sample: T-1A Depth: 13.4ft
 Type: Intact tube sample
 Description: OH, gray organic silt

SPECIMEN INFORMATION (Initial)

Height: 3.95 inch Diameter: 1.93 inch Area: 2.91 in²
 Water Content: 73.3 % Total Unit Weight: 94.5 pcf

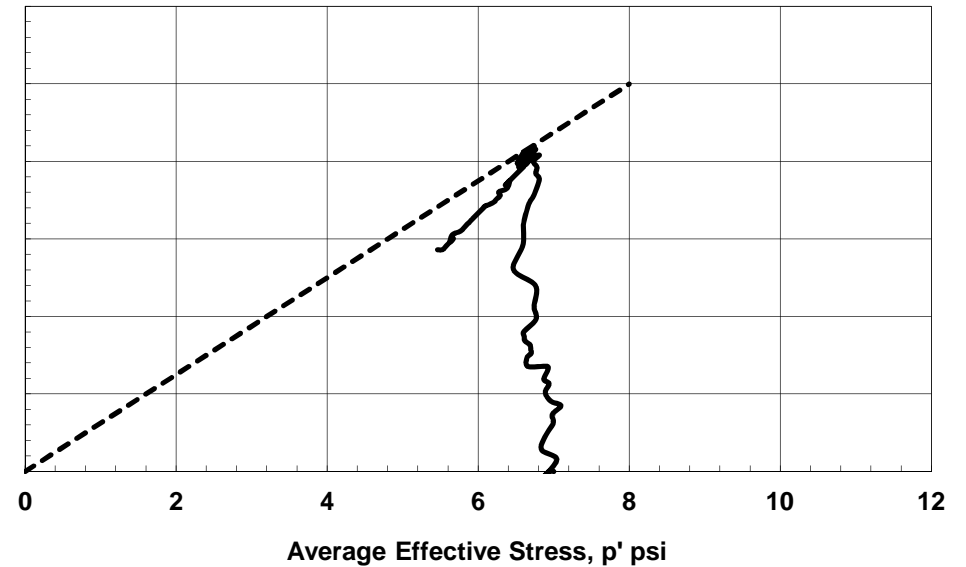
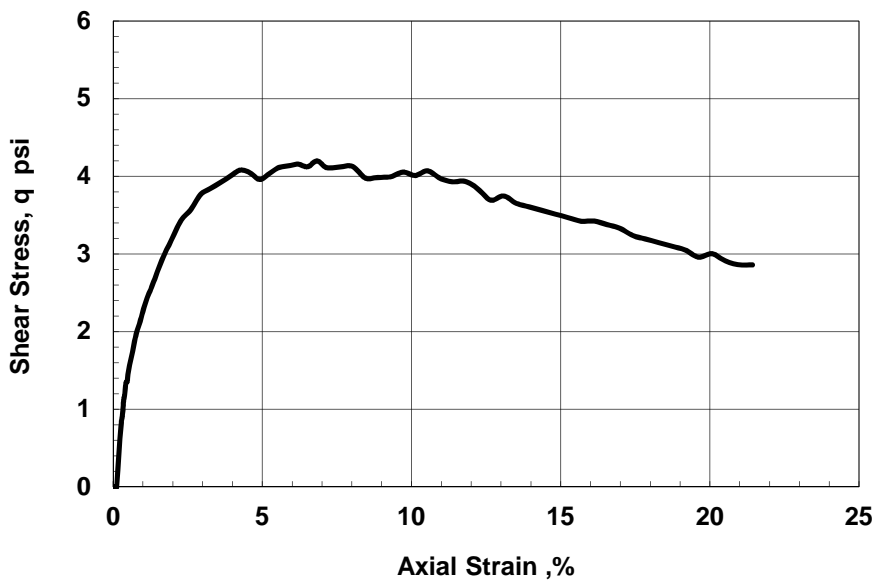
TEST SUMMARY

Consolidation Stresses: 7.00 psi vertical, 7.00 psi lateral
 Water Content: 70.4 % Total Unit Weight: 98.8 pcf
 B Coefficient: 99.2 Strain Rate: 0.018 %/min
 Peak Shear Strength: 4.20 psi @ 6.8 % Strain
 Peak Effective Friction Angle: 38.7°



Failure Sketch

REMARKS:



Test by: DT

Project No.
7960-12006

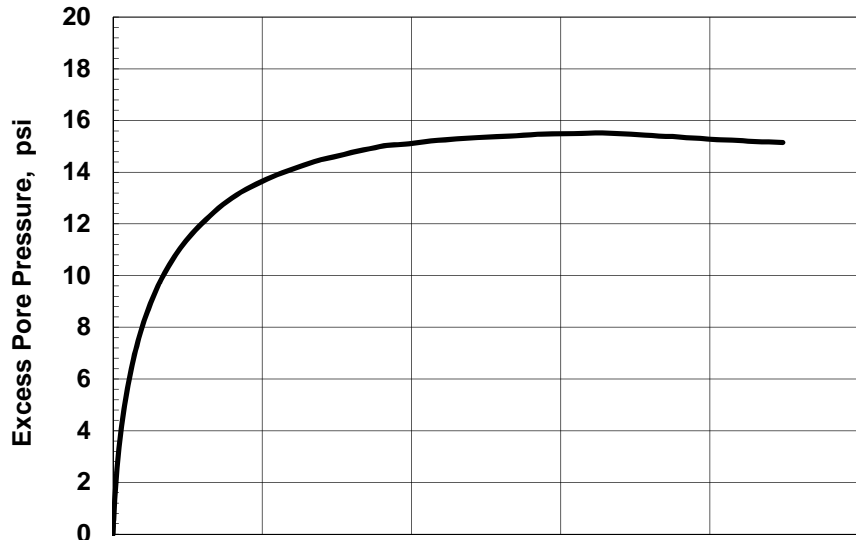
GEI Consultants #093020
Fulton Former MGP PDI

CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION
 with Pore Pressure Measurements
 Boring: FW-SB-110A Sample: T-1A

November-12

Checked by: GET

TerraSense, LLC



SAMPLE INFORMATION

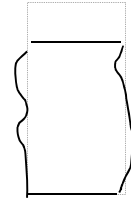
Boring: FW-SB-110A Sample: T-1C Depth: 14.5ft
 Type: Intact tube sample
 Description: OH, gray organic silt

SPECIMEN INFORMATION (Initial)

Height: 5.73 inch Diameter: 2.86 inch Area: 6.44 in²
 Water Content: 73.1 % Total Unit Weight: 96.1 pcf

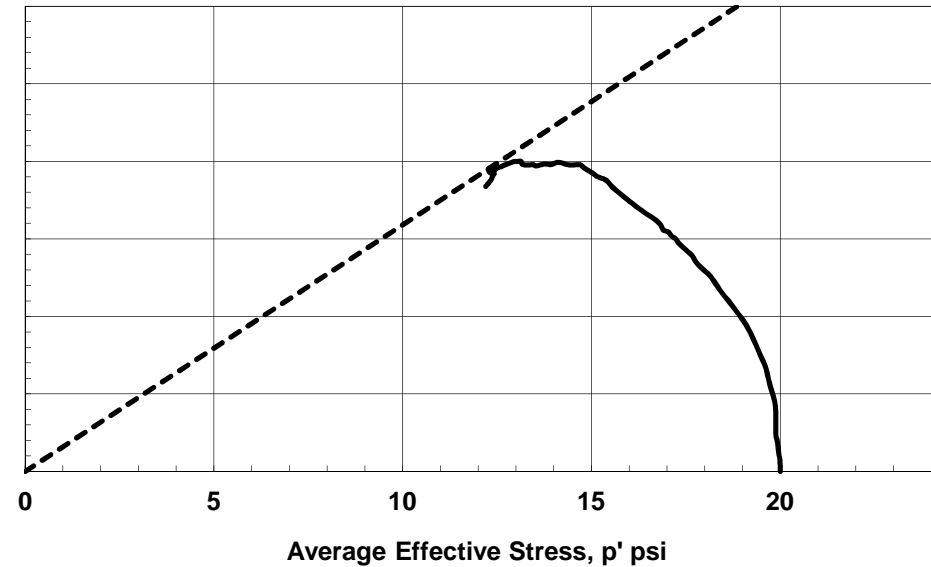
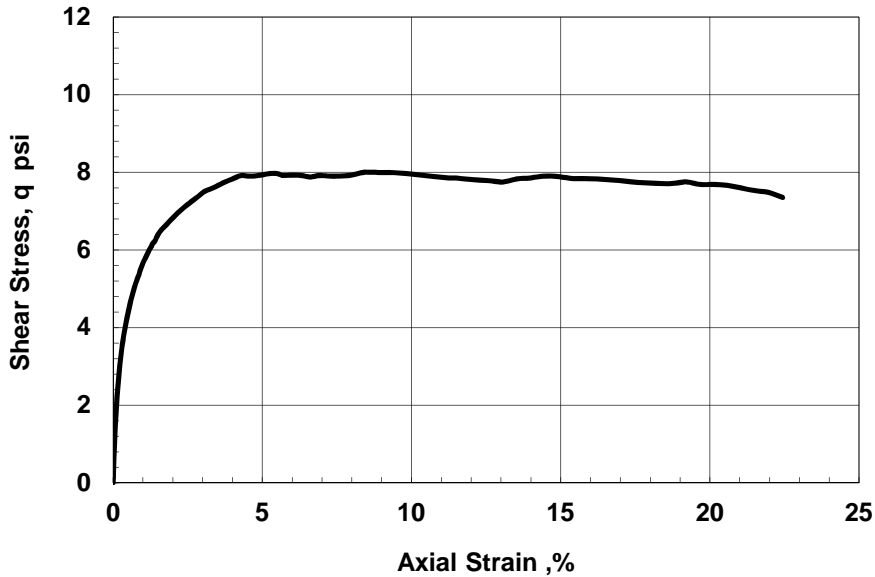
TEST SUMMARY

Consolidation Stresses: 20.00 psi vertical, 20.00 psi lateral
 Water Content: 56.6 % Total Unit Weight: 104.1 pcf
 B Coefficient: 99.7 Strain Rate: 0.022 %/min
 Peak Shear Strength: 8.00 psi @ 8.4 % Strain
 Peak Effective Friction Angle: 39.5°



Failure Sketch

REMARKS:



Test by: DT

Project No.
7960-12006

GEI Consultants #093020
Fulton Former MGP PDI

**CONSOLIDATED UNDRAINED
 TRIAXIAL COMPRESSION**
 with Pore Pressure Measurements
 Boring: FW-SB-110A Sample: T-1C

November-12

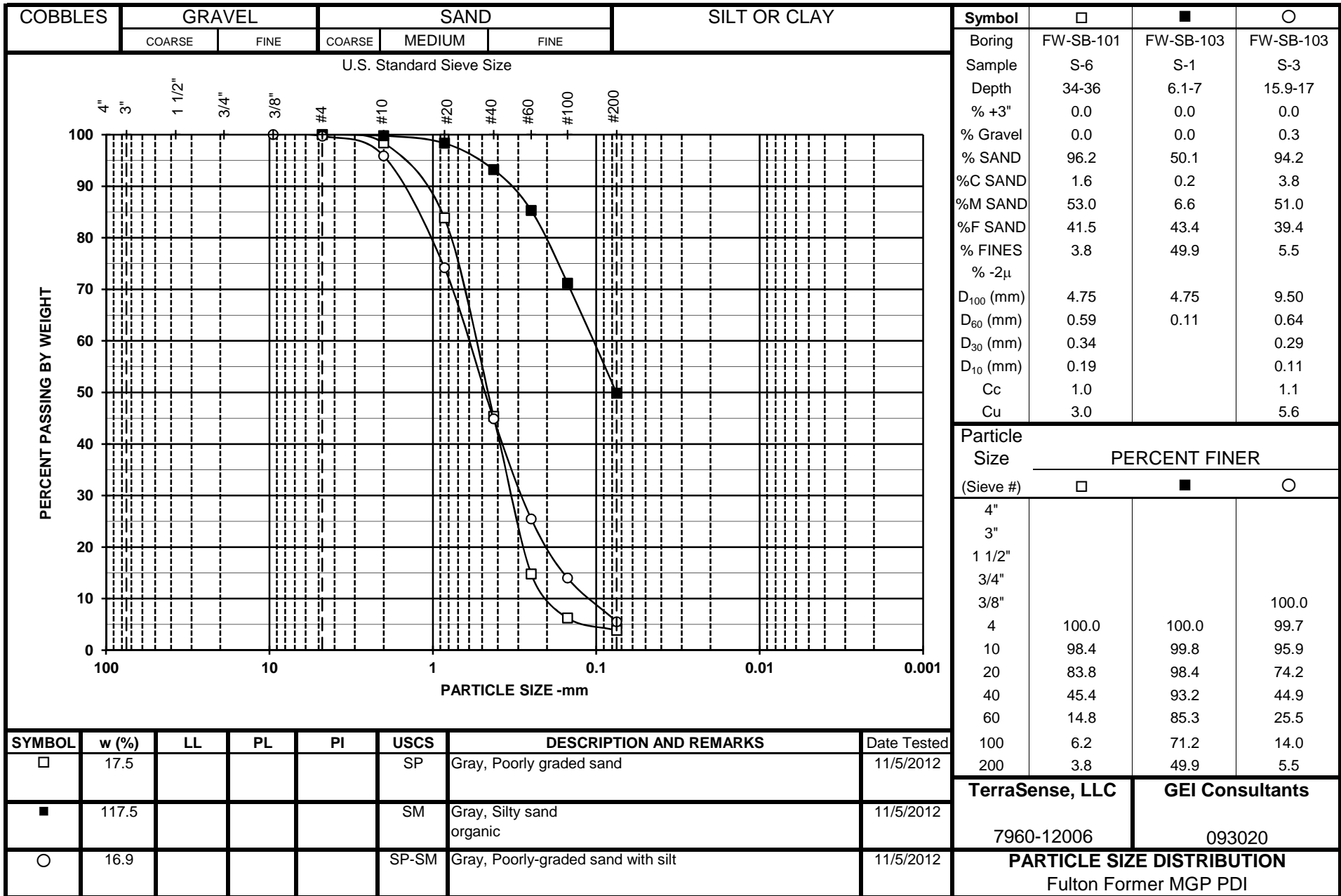
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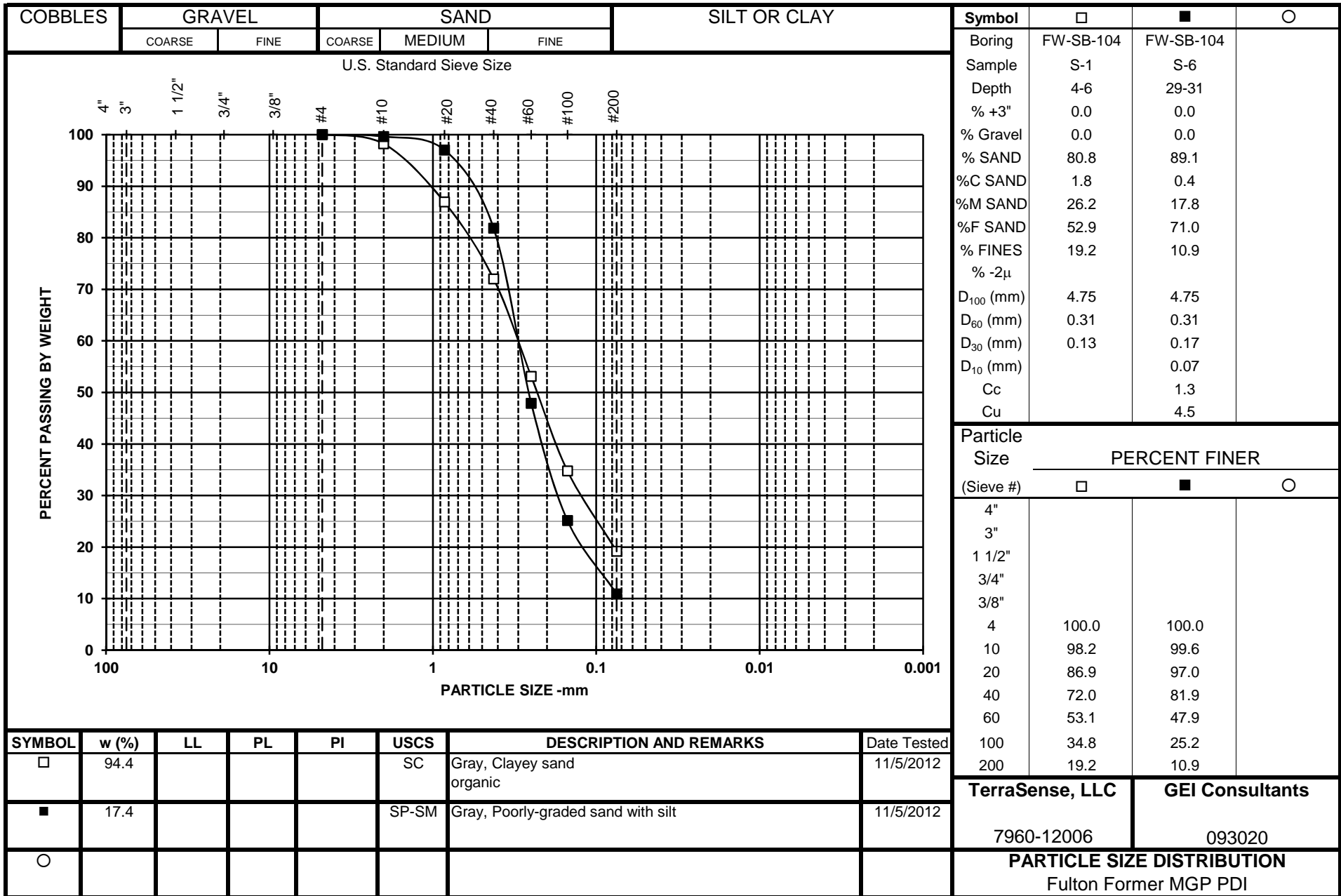
TerraSense, LLC

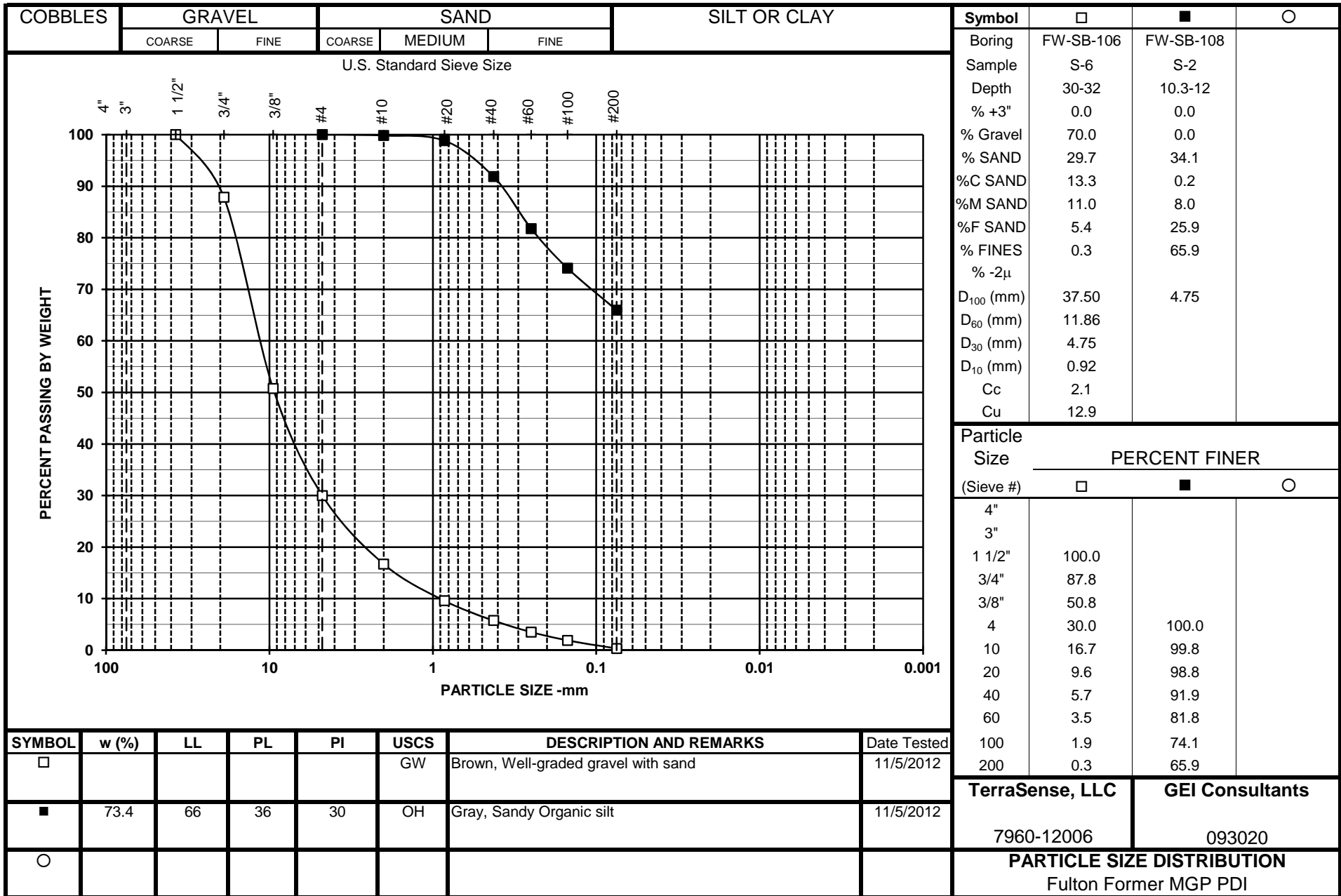
GEI Consultants #093020
Fulton Former MGP PDI
LABORATORY TESTING DATA SUMMARY

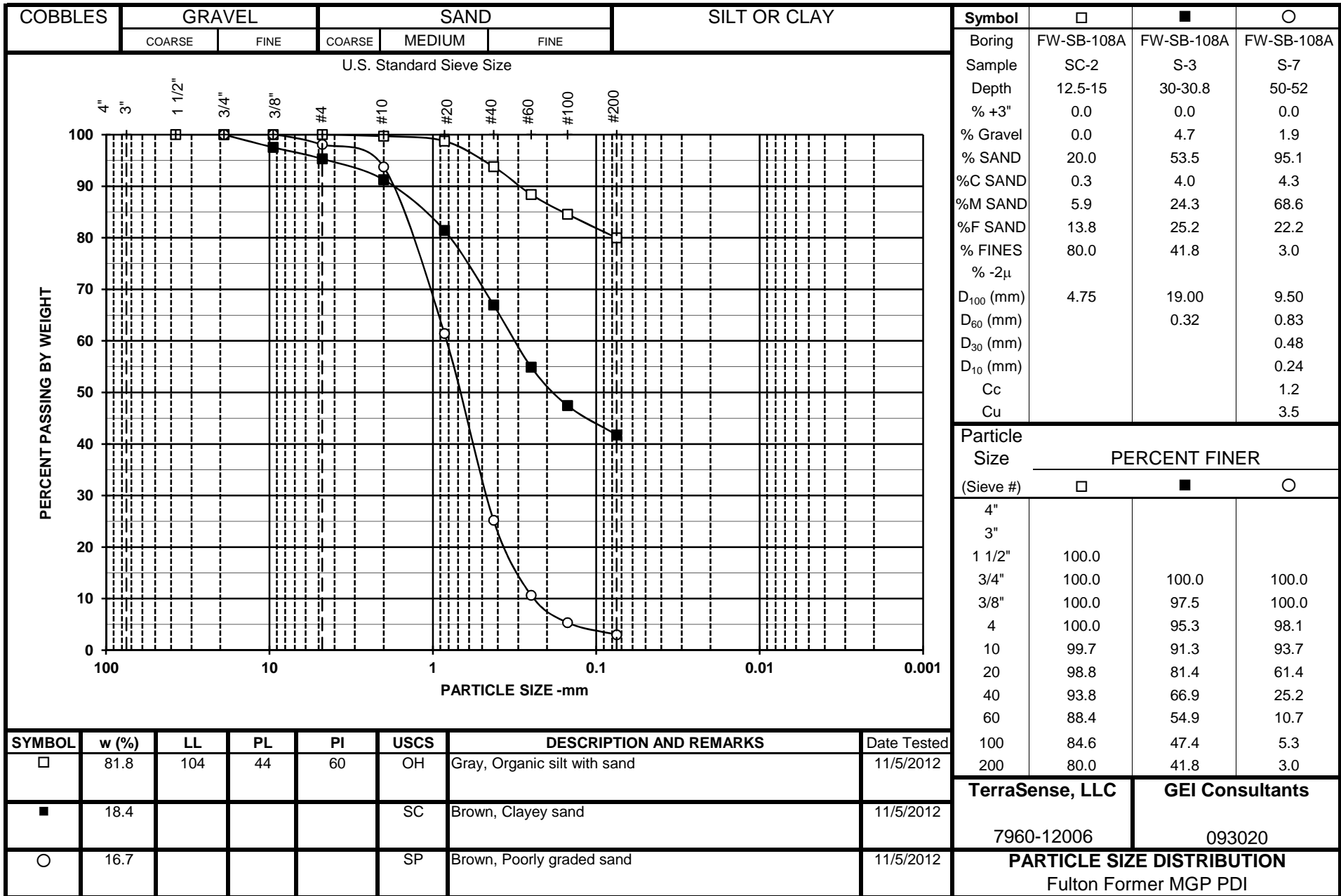
BORING NO.	SAMPLE NO.	DEPTH (ft)	IDENTIFICATION TESTS										REMARKS on density determination
			WATER CONTENT (%)	LIQUID LIMIT (-)	PLASTIC LIMIT (-)	PLAS. INDEX (-)	ORGANIC CONTENT (burnoff) (%)	SPECIFIC GRAVITY (-)	USCS SYMB. (1)	SIEVE MINUS NO. 200 (%)	TOTAL UNIT WEIGHT (pcf)	DRY UNIT WEIGHT (pcf)	
FW-SB-101	S-6	34-36	17.5					2.719	SP	3.8	135.2*	115.0*	*Calculated for S=100%
FW-SB-103	S-1	6.1-7	117.5					22.2	SM	49.9	83.3*	38.3*	*Calculated for S=100%
FW-SB-103	S-3	15.9-17	16.9					1.3	SP-SM	5.5	136.5*	116.8*	*Calculated for S=100%
FW-SB-104	S-1	4-6	94.4					21.2	SC	19.2	87.8*	45.2*	*Calculated for S=100%
FW-SB-104	S-6	29-31	17.4					2.674	SP-SM	10.9	133.7*	113.8*	*Calculated for S=100%
FW-SB-106	S-6	30-32	6.1						GW	0.3	106.1	100.0	@medium dense compaction
FW-SB-108	S-2	10.3-12	73.4	66	36	30	8.1	2.641	OH	65.9	97.3*	56.1*	*Calculated for S=100%
FW-SB-108A	SC-2	12.5-15	81.8	104	44	60	7.1	2.632	OH	80.0	94.7*	52.1*	*Calculated for S=100%
FW-SB-108A	S-3	30-30.8	18.4					2.728	SC	41.8	134.2*	113.3*	*Calculated for S=100%
FW-SB-108A	S-7	50-52	16.7					2.687	SP	3.0	135.1*	115.7*	*Calculated for S=100%
FW-SB-110	SC-7	35-37	15.1					2.668	SP	4.7	136.7*	118.8*	*Calculated for S=100%
FW-SB-110	S-12	60-62	15.2				0.8	2.745	SP	4.9	139.2*	120.8*	*Calculated for S=100%
FW-SB-110A	S-1	5-5.9	17.6					2.329	SM	20.1	121.3*	103.2*	*Calculated for S=100%
FW-SB-110A	S-9	45.3-46.7	26.3	24	19	5	2.5	2.745	CL-ML	85.0	125.7*	99.5*	*Calculated for S=100%

Note: (1) USCS symbol based on visual observation, Sieve results, and Atterberg Limits reported.





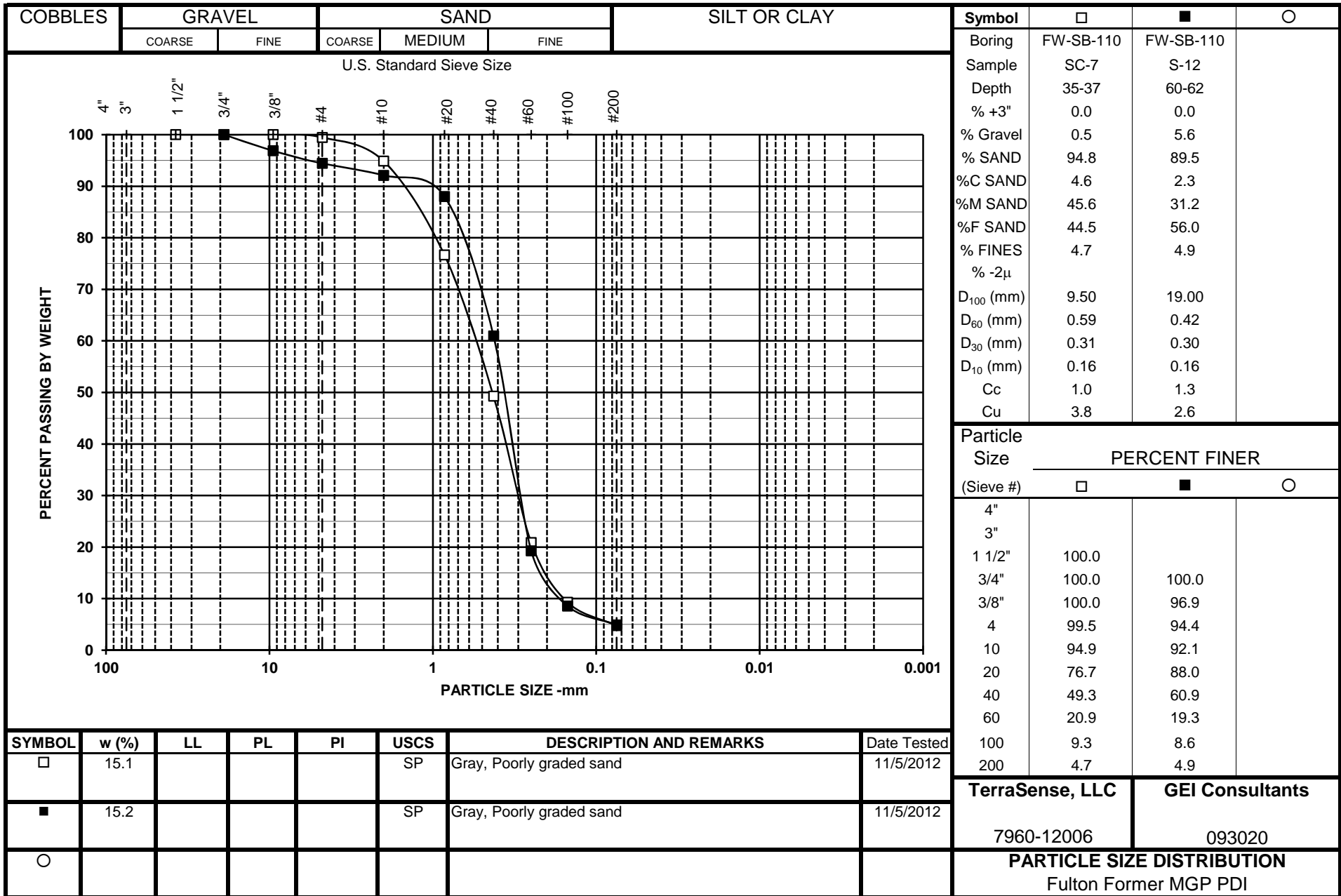


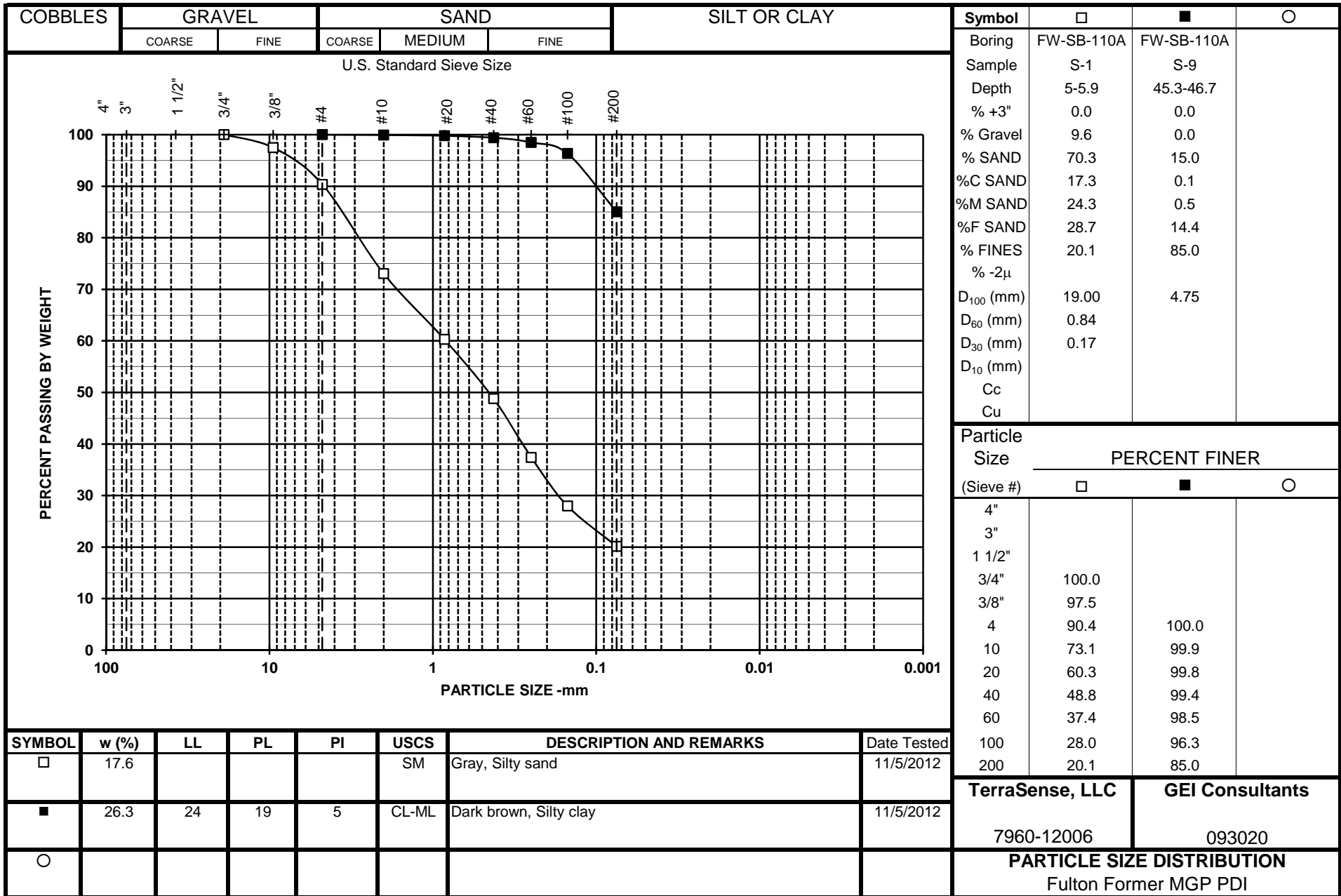


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