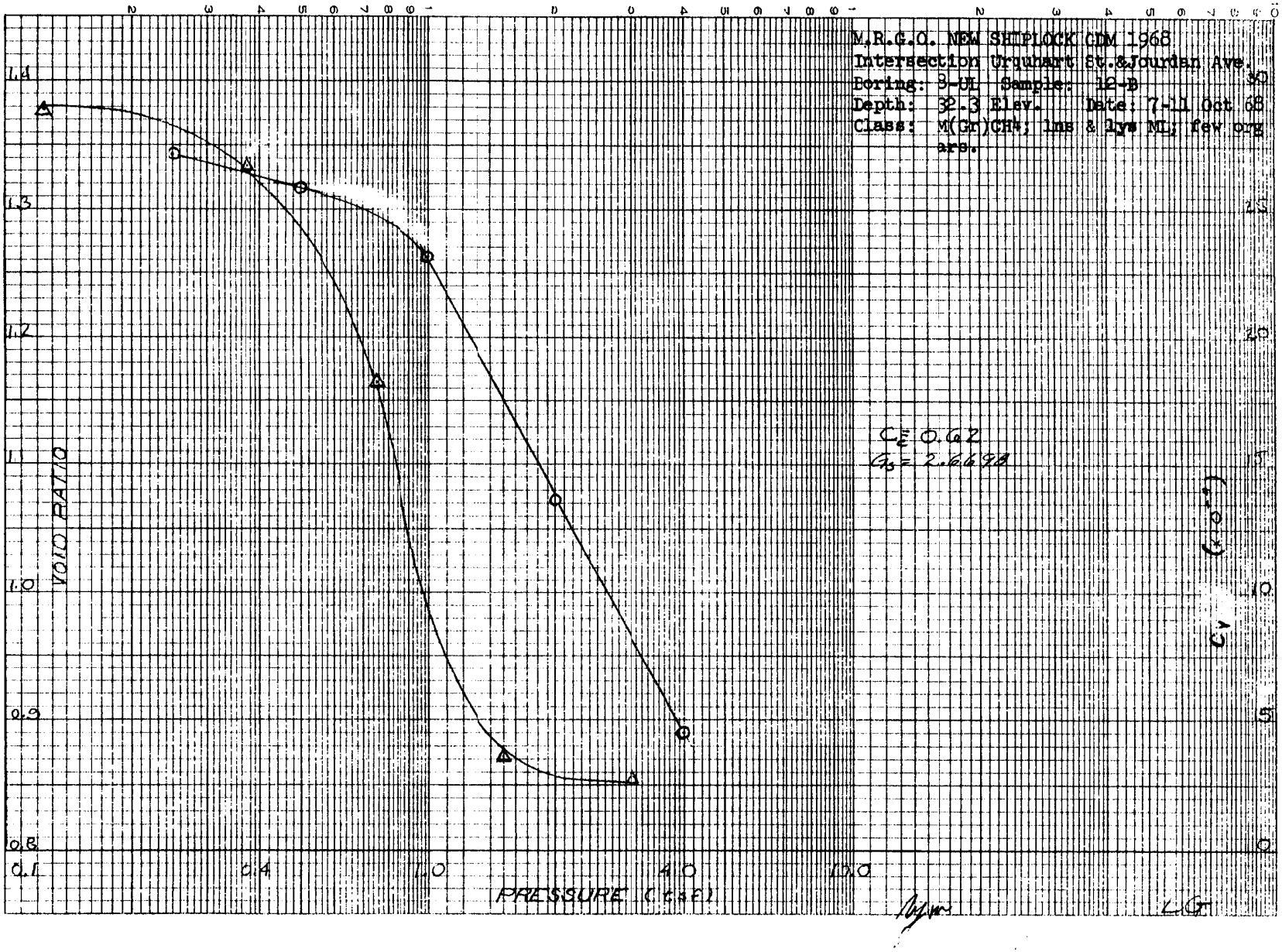
NO. 340-L310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.



NO. 340-L310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

EUGENE DIETZGEN CO.
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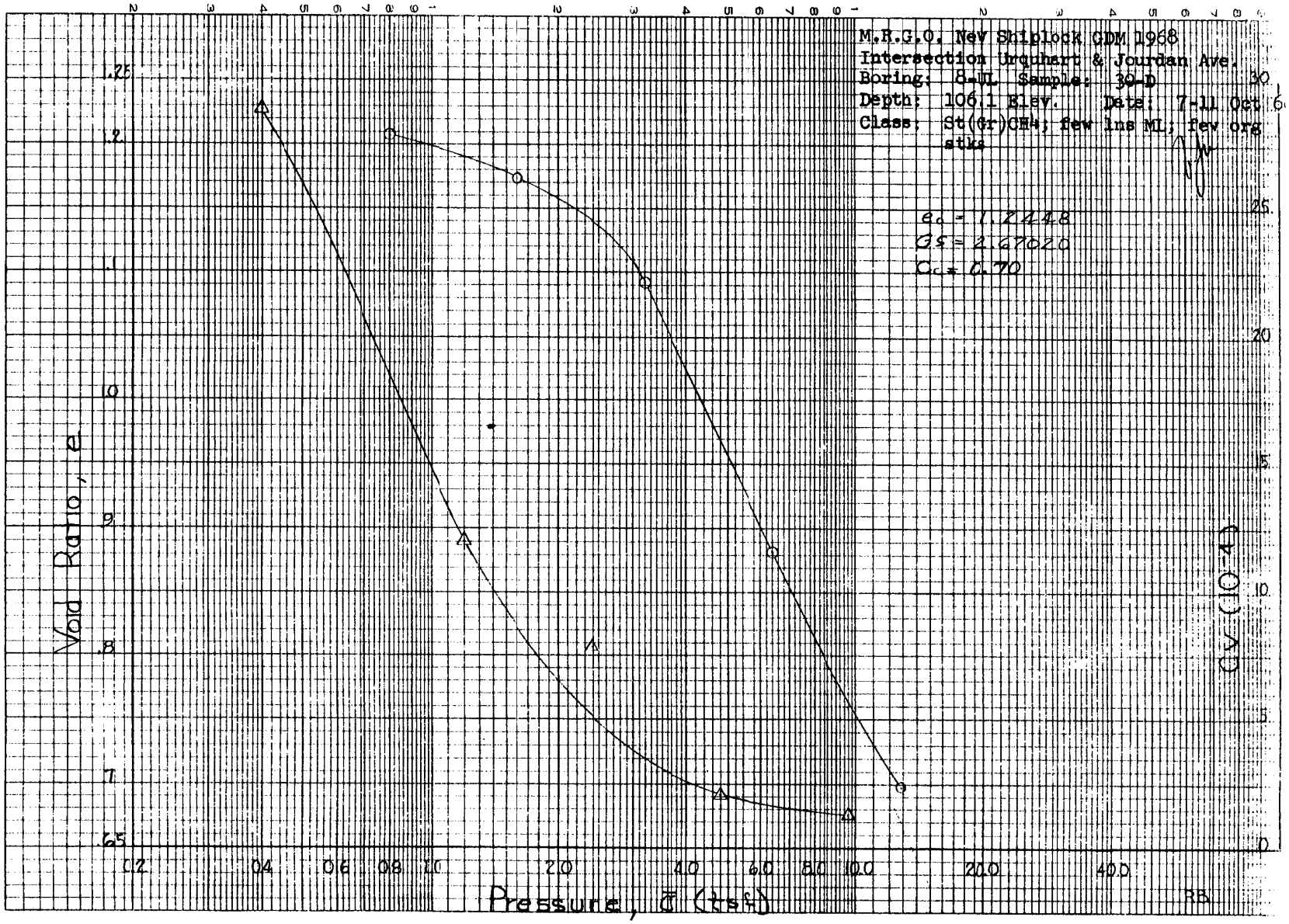

NO. 340-L310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

EUGENE DIETZGEN CO.
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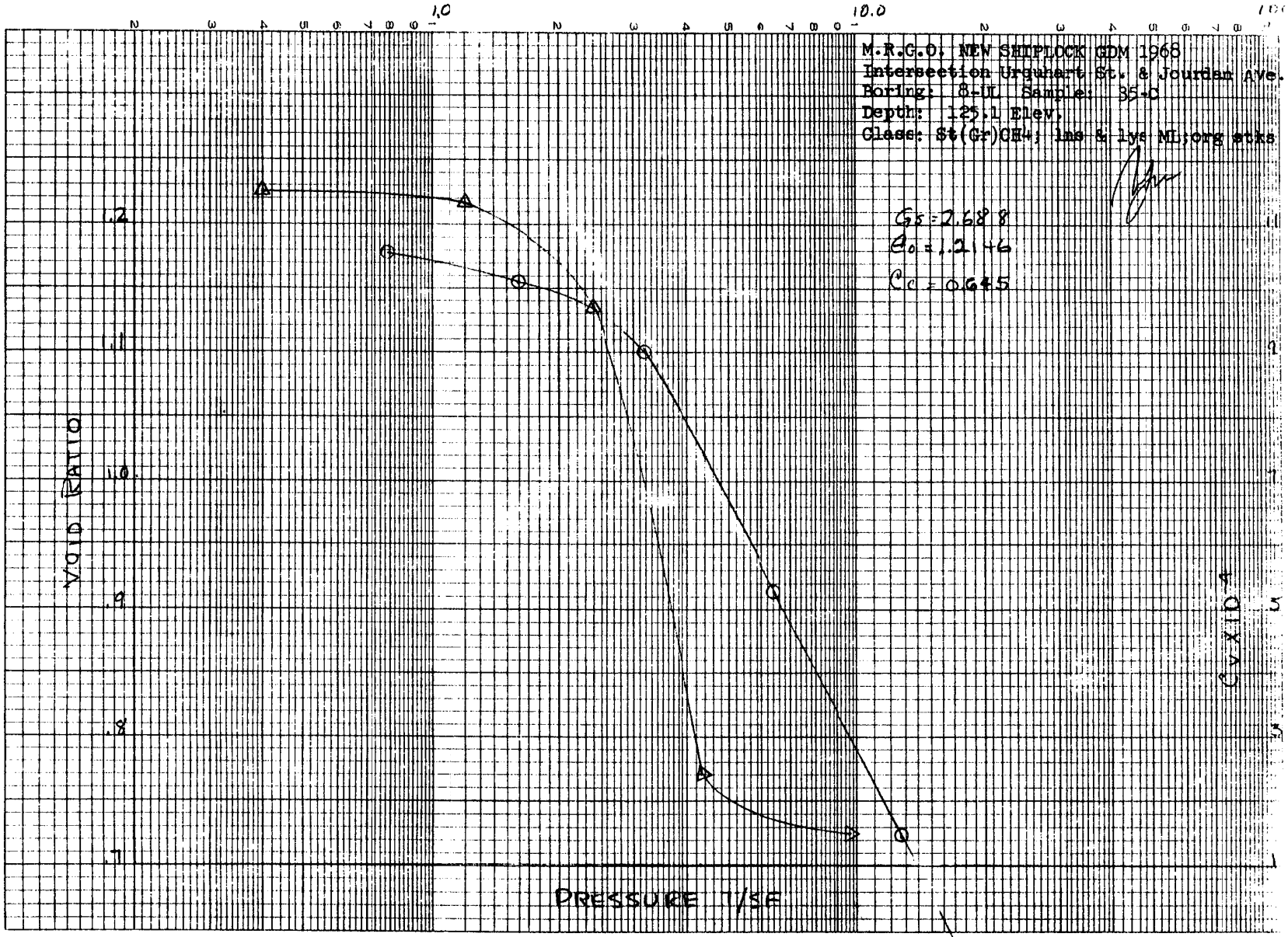
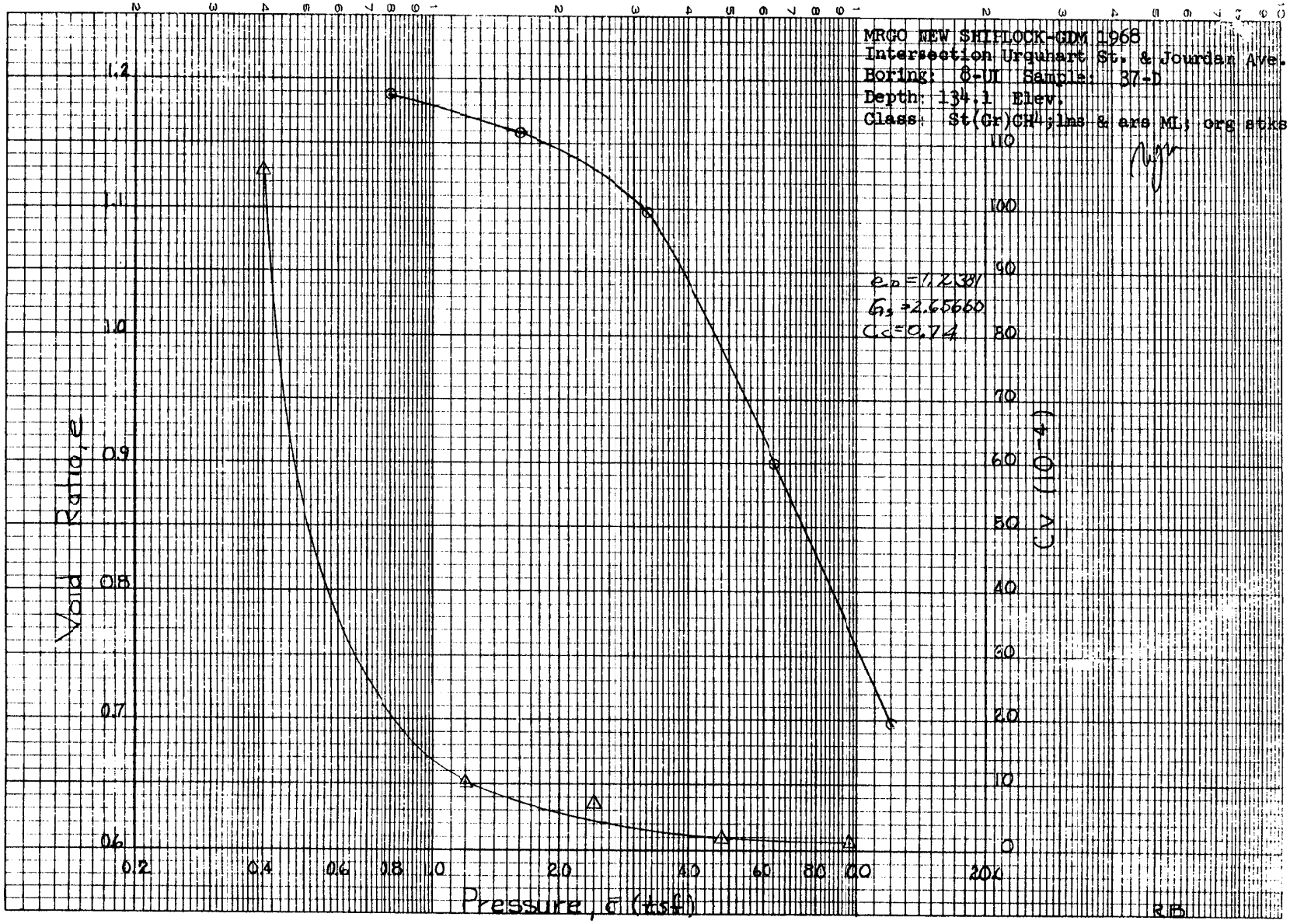
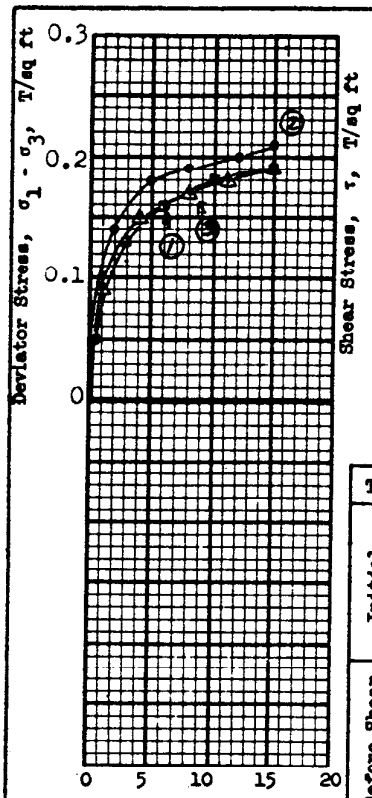


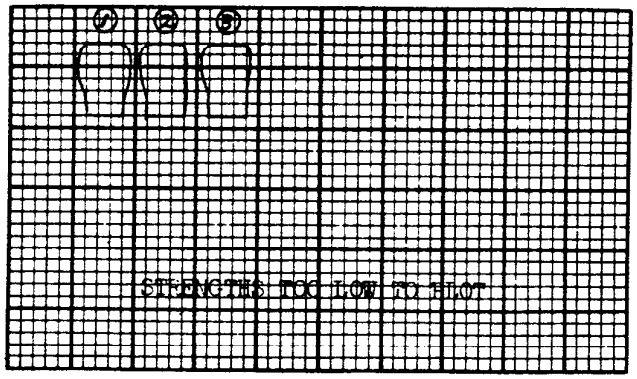
EK

NO. 340-1310 DIETZGEN GRAPH PAPER
SEMI-LOGARITHMIC
3 CYCLES X 10 DIVISIONS PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.







Test No.			1	2	3	
Initial	Water content	w_o	61.2 %	60.2 %	65.2 %	%
	Void ratio	e_o	1.60	1.57	1.74	
	Saturation	S_o	100+ %	100+ %	100+ %	%
	Dry density, lb/cu ft	γ_d	64.3	65.1	61.1	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.19	0.21	0.19	
Time to failure, min		t_f	58	50	40	
Rate of strain, percent/min			0.26	0.30	0.38	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.41	1.40	1.41	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.10 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, homogeneous

LL 70 | PL 23 | PI 47 | G_s 2.68

Remarks _____

Project MISS. RIVER - GULF OUTLET

NEW SHIP DOCK - GDM

Area

Boring No. 4-UL | Sample No. 2-B

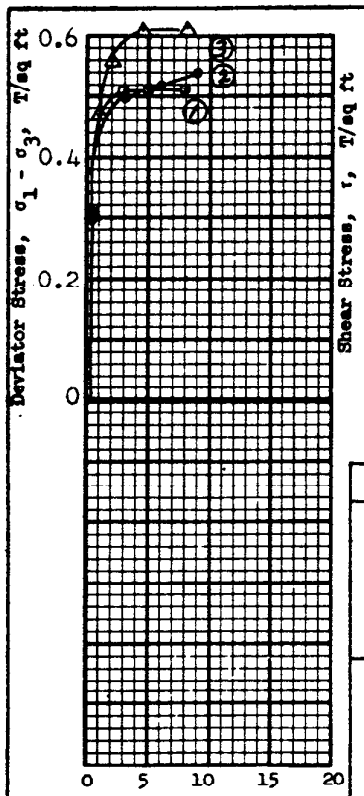
Depth 5.0 | Date 26 JULY 1968

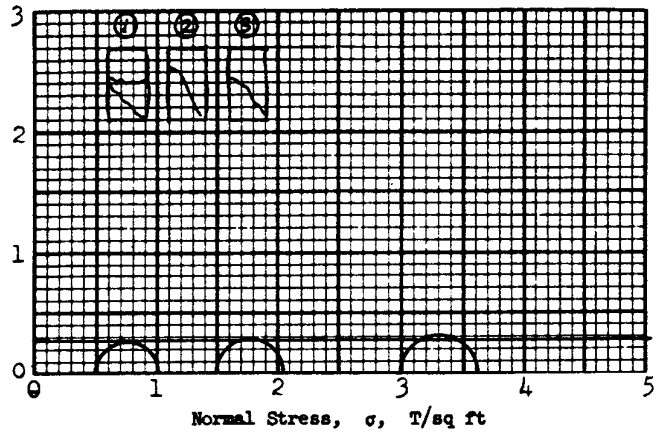
JMS TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION

Incl 2'





Test No.			1	2	3	
Initial	Water content	w_o	48.0 %	39.8 %	43.1 %	%
	Void ratio	e_o	1.20	1.15	1.15	
	Saturation	S_o	100+ %	93.1 %	100+ %	%
	Dry density, lb/cu ft	γ_d	76.4	78.1	78.1	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.51	0.54	0.62	
Time to failure, min		t_f	27	69	90	
Rate of strain, percent/min			0.11	0.13	0.05	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.39	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.28 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray and brown, homogeneous				
LL 72	PL 24	PI 48		G_s 2.69

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

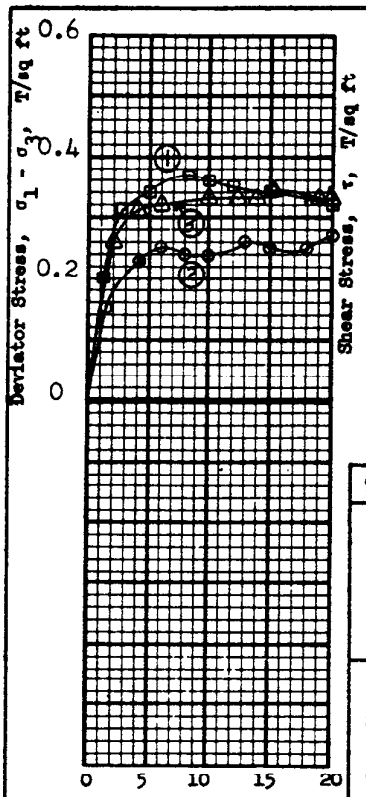
Boring No. 4-UL | Sample No. 4-C

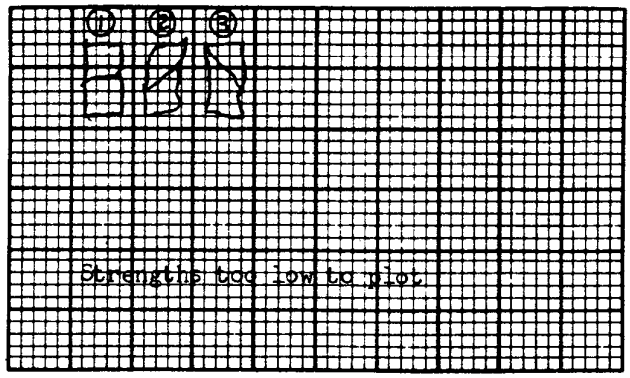
Depth 13.8 | Date 26 JULY 1968

EAK TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	97.3 %	102.3 %	99.7 %	%
	Void ratio	e_o	2.61	2.75	2.67	
	Saturation	S_o	97.3 %	97.1 %	97.4 %	%
	Dry density, lb/cu ft	γ_d	45.1	43.4	44.4	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.37	0.25	0.33	
Time to failure, min		t_f	92	27	56	
Rate of strain, percent/min			0.09	0.22	0.22	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.39	1.39	1.39	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.16 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), dark gray, contains small roots

LL 145 | PL 42 | PI 103 | G_s 2.61

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 6-D

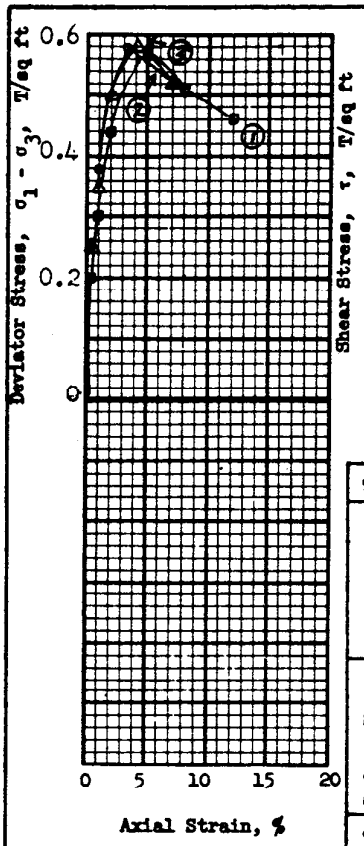
Depth 23.1 | Date 29 JULY 1968

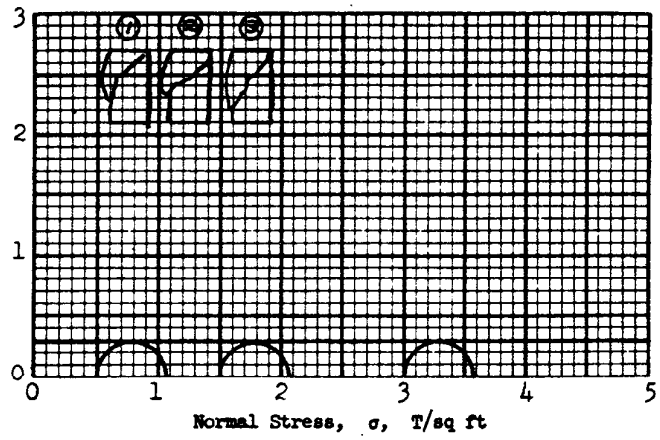
GDA TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	65.0 %	59.7 %	61.9 %	%
	Void ratio	e_o	1.77	1.64	1.70	
	Saturation	S_o	99.9 %	99.0 %	99.0 %	%
	Dry density, lb/cu ft	γ_d	61.2	64.4	62.9	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.57	0.58	0.58	
Time to failure, min		t_f	16	27	44	
Rate of strain, percent/min			0.32	0.13	0.09	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.29 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray, contains a few 1/8" to 1/4" dia. *				
LL 85	PL 29	PI 56		G_s 2.72

Remarks * roots

specimen 1 patched where root removed

Project MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 7-C

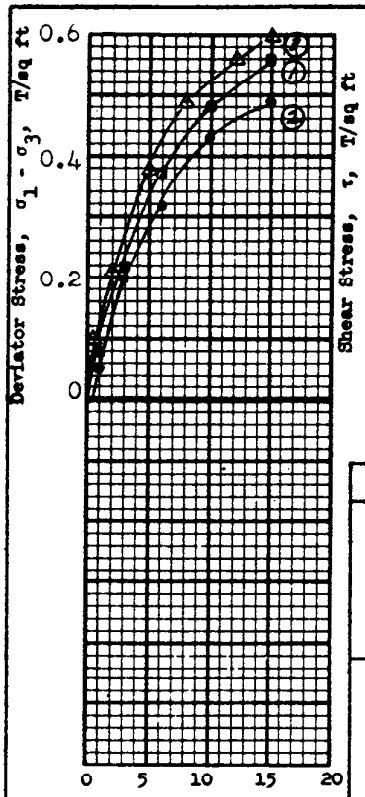
Depth 26.0 | Date 26 JULY 1968

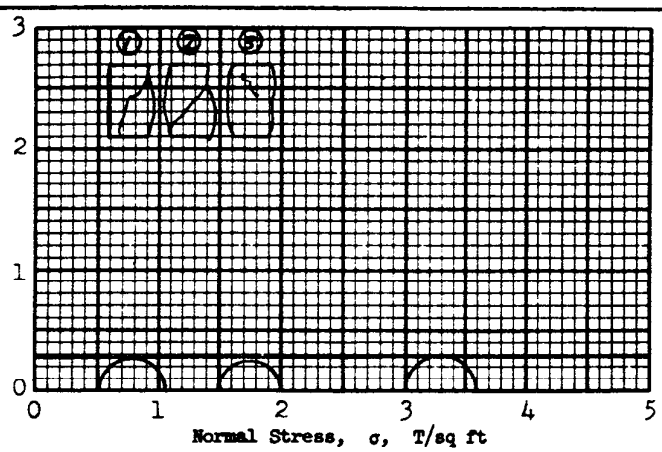
JMS TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	39.5 %	39.0 %	39.7 %	%
	Void ratio	e_o	1.05	1.05	1.04	
	Saturation	S_o	100+ %	100+ %	100+ %	%
	Dry density, lb/cu ft	γ_d	81.4	81.5	81.6	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.56	0.49	0.60	
Time to failure, min		t_f	60	52	45	
Rate of strain, percent/min			0.25	0.29	0.33	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.28 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED			
Classification SILTY CLAY (CL), gray				
LL 40	PL 25	PI 15		G_s 2.67

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 10-A

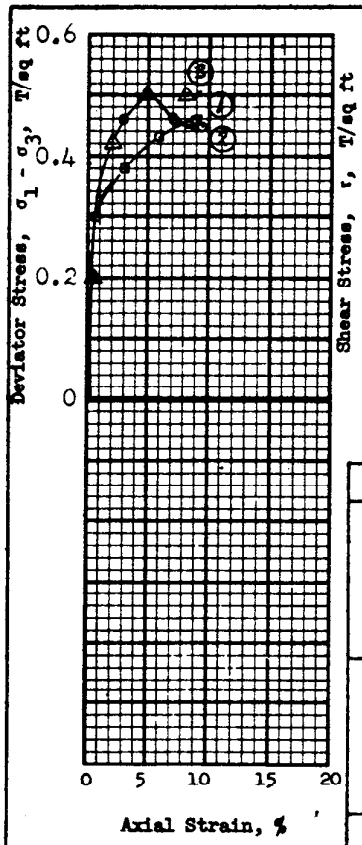
Depth 36.5 | Date 29 JULY 1968

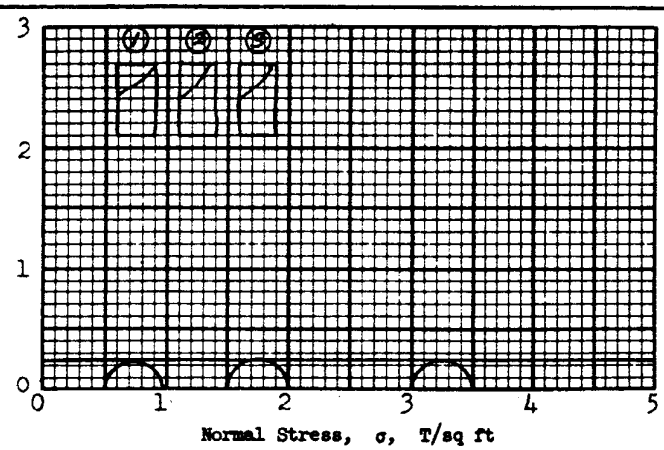
EAK TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	51.0 %	52.2 %	49.8 %	%
	Void ratio	e_o	1.38	1.40	1.38	
	Saturation	S_o	100+ %	100+ %	98.5 %	%
	Dry density, lb/cu ft	γ_d	71.6	71.0	71.7	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.46	0.50	0.50	
Time to failure, min		t_f	50	56	50	
Rate of strain, percent/min			0.18	0.09	0.10	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.39	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.24 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray, contains fine sand seams				
LL 69	PL 23	PI 46		G_s 2.73

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 11-C_2

Depth 41.9 | Date 29 JULY 1968

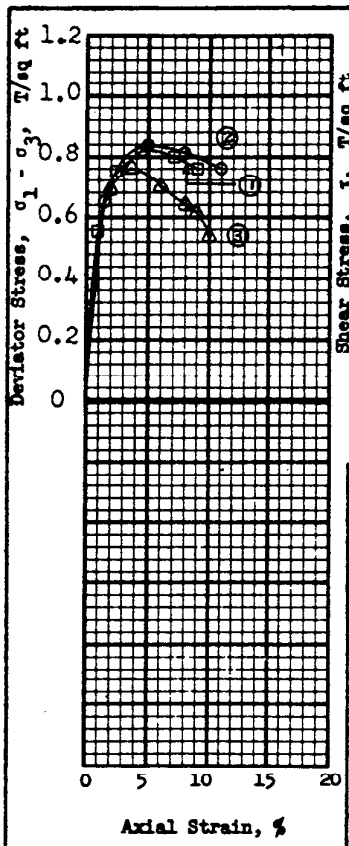
EAK

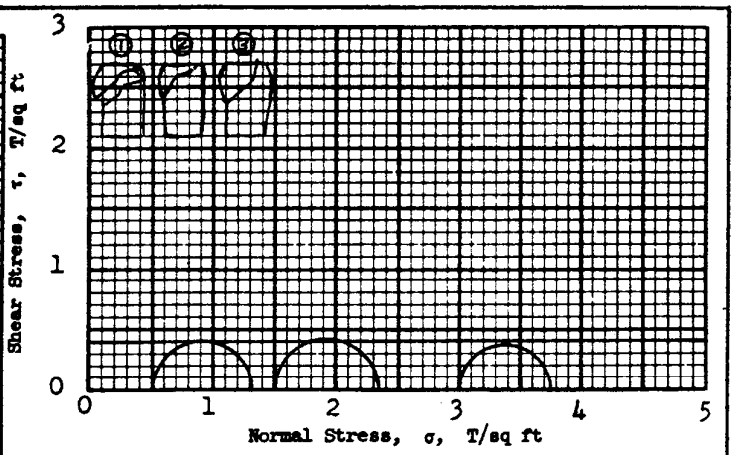
TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	57.3 %	57.6%	59.4%	%
	Void ratio	e_o	1.55	1.56	1.61	
	Saturation	S_o	100+ %	100+%	100+%	%
	Dry density, lb/cu ft	γ_d	66.8	66.5	65.4	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.82	0.84	0.76	
Time to failure, min		t_f	23	28	18	
Rate of strain, percent/min			0.19	0.18	0.20	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.40 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED		
Classification PLASTIC CLAY (CH), grey, homogeneous			
LL 84	PL 27	PI 57	G_s 2.73

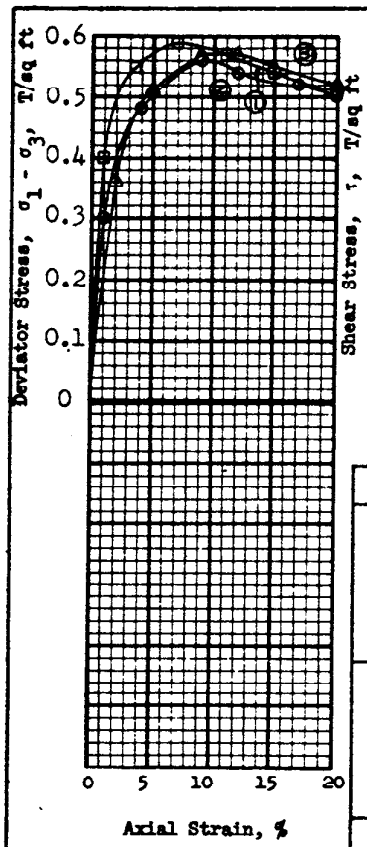
Remarks _____

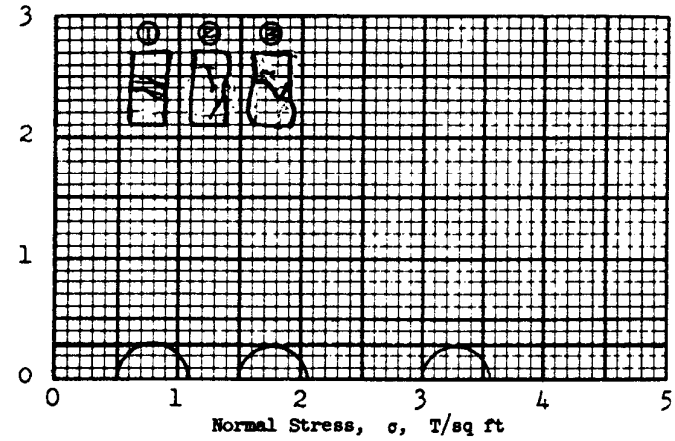
Project	MISS. RIVER - GULF OUTLET
	NEW SHIP LOCK - GDM
Area	
Boring No. 4-UL	Sample No. 12-C
Depth ~~El~~ 46.0	Date 31 JULY 1968
JMS	TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	45.7 %	49.6 %	47.5 %	%
	Void ratio	e_o	1.25	1.32	1.27	
	Saturation	S_o	98.3 %	100+ %	100+ %	%
	Dry density, lb/cu ft	γ_d	74.7	72.2	74.0	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.59	0.56	0.57	
Time to failure, min		t_f	88	47	45	
Rate of strain, percent/min			0.08	0.19	0.20	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.29 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

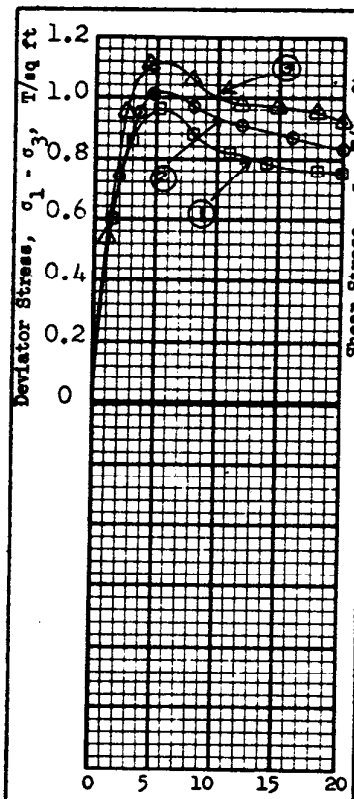
Type of test Q	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray, contains silt seams				
LL 72	PL 25	PI 47		G_s 2.69

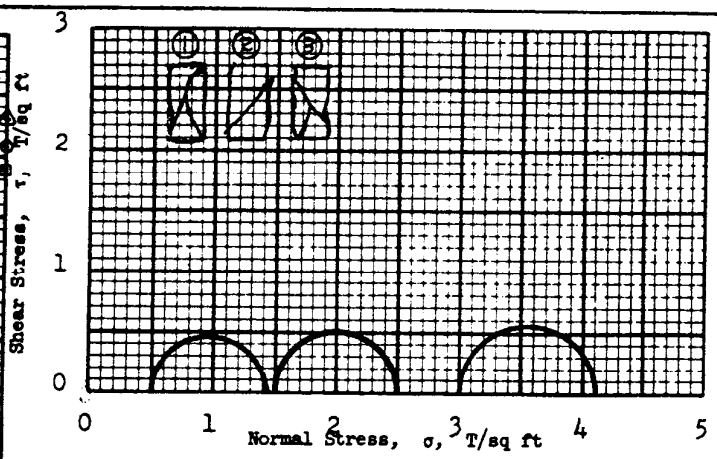
Remarks _____

Project	MISS. RIVER - GULF OUTLET NEW SHIP LOCK - GDM
Area	
Boring No. 4-UL	Sample No. 13-D
Depth ~~El~~ 51.1	Date 31 JULY 1968
EAK	TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	46.7 %	44.5%	45.1%	%
	Void ratio	e_o	1.27	1.20	1.22	
	Saturation	S_o	98.2 %	99.0%	98.7%	%
	Dry density lb/cu ft	γ_d	73.4	75.7	75.0	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.96	1.01	1.11	
Time to failure, min		t_f	26	31	26	
Rate of strain, percent/min			0.20	0.16	0.17	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.39	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.50 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, contains pockets of sand

LL 62 | PL 20 | PI 42 | G_s 2.67

Remarks _____

Project MISS. RIVER - GULF OUTLET

NEW SHIPLOCK - GDM

Area

Boring No. 4-UL | Sample No. 16-A

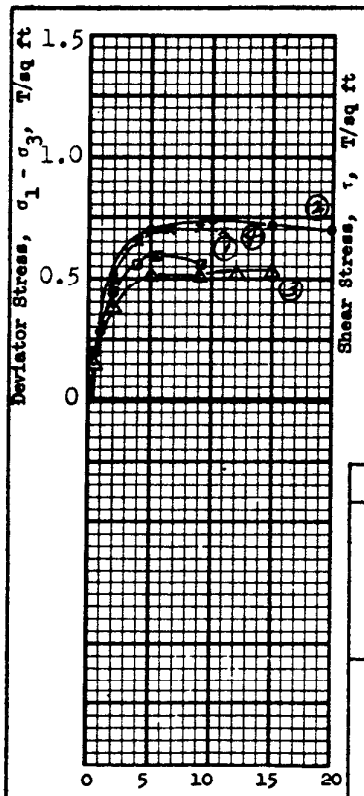
Depth El 60.6 | Date 1 AUG. 1968

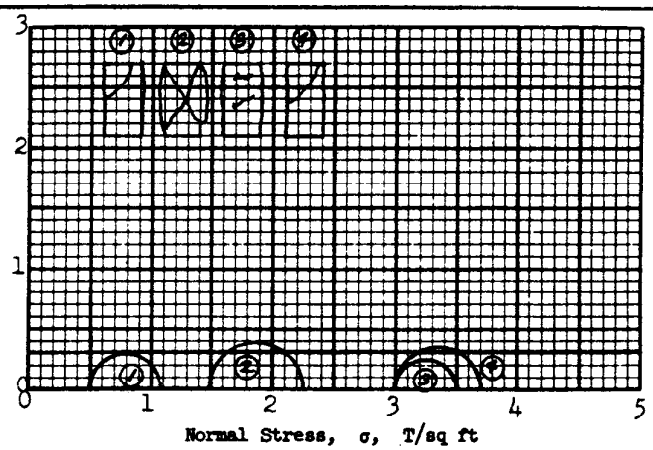
GDA TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	4
Initial	Water content	w_o	34.7 %	32.2 %	36.3%	32.0%
	Void ratio	e_o	0.916	0.869	0.961	0.864
	Saturation	S_o	100+ %	98.9 %	100+%	98.9%
	Dry density, lb/cu ft	γ_d	87.0	89.2	85.0	89.4
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	3.0
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.58	0.74	0.51	0.70
Time to failure, min		t_f	34	77	24	36
Rate of strain, percent/min			0.16	0.13	0.21	0.18
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.39	1.40
Initial height, in.		H_o	3.00	3.00	3.00	3.00

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.31 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification LEAN CLAY (CL), gray, contains a few silty sand pockets & *

LL 40 | PL 16 | PI 24 | G_s 2.67

Remarks * shells 1/8" in diameter

Specimens trimmed from second level

Project MISS. RIVER - GULF OUTLET NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 18-A

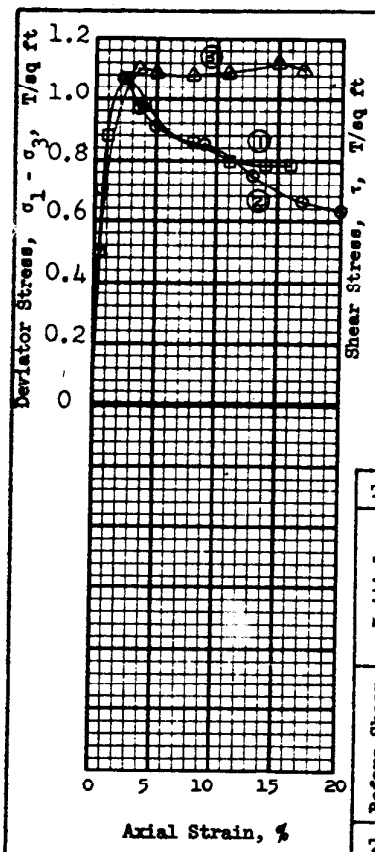
Depth 68.4 | Date 1 AUGUST 1968

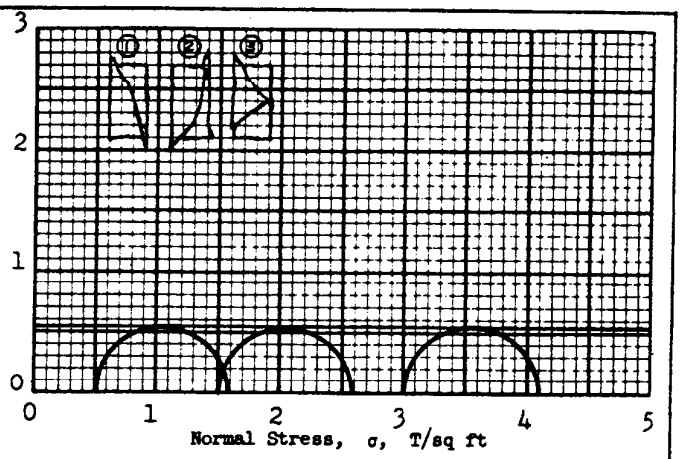
JMS TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	38.8 %	39.2%	39.5%	%
	Void ratio	e_o	1.07	1.09	1.09	
	Saturation	S_o	99.4 %	98.5%	99.3%	%
	Dry density, lb/cu ft	γ_d	82.6	81.7	81.8	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	1.07	1.07	1.10	
Time to failure, min		t_f	13	12	11	
Rate of strain, percent/min			0.19	0.20	0.31	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.41	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.54 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), light bluish gray

LL 77 | PL 26 | PI 51 | G_s 2.74

Remarks All specimens sheared in slickenside

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 20-C

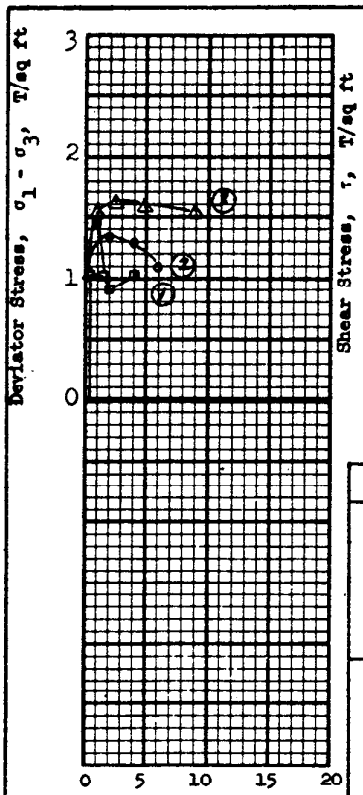
Depth ~~El~~ 78.1 | Date 1 AUG. 1968

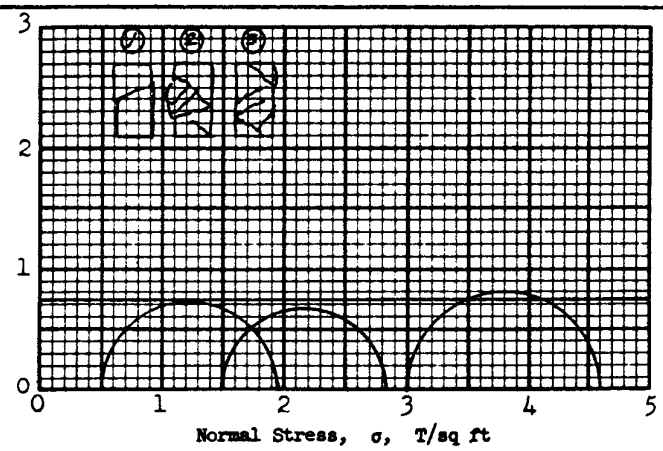
FAM TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	49.3 %	49.4 %	49.3 %	%
	Void ratio	e_o	1.34	1.35	1.35	
	Saturation	S_o	100+ %	99.9 %	99.7 %	%
	Dry density, lb/cu ft	γ_d	72.9	72.5	72.4	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	1.47	1.34	1.61	
Time to failure, min		t_f	15	33	42	
Rate of strain, percent/min			0.06	0.06	0.06	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.38	1.38	1.38	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.74 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

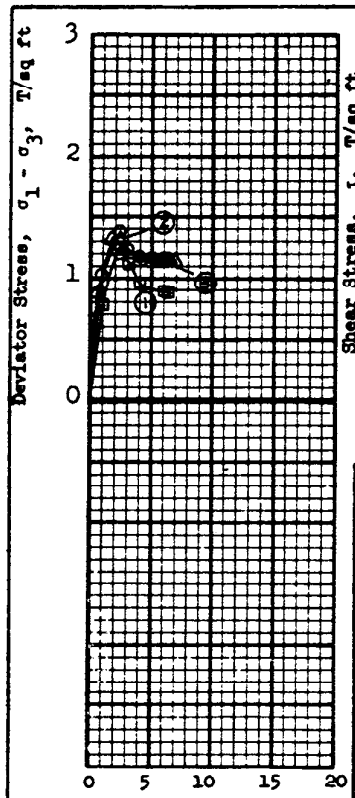
Type of test Q	Type of specimen UNDISTURBED		
Classification PLASTIC CLAY (CH), light gray and brown			
LL 100	PL 24	PI 76	G_s 2.73

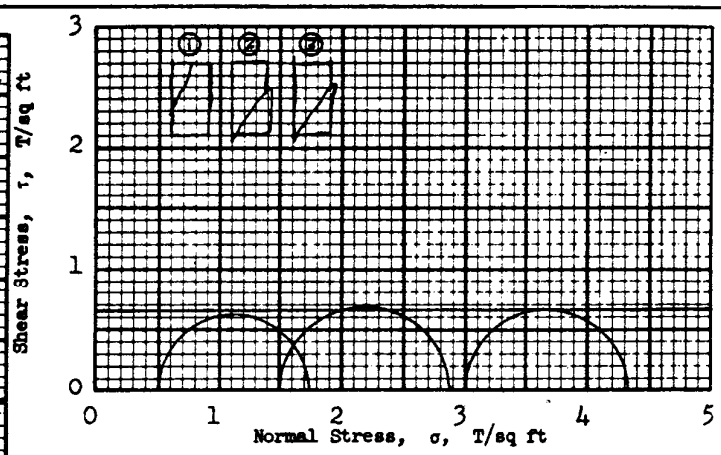
Remarks _____

Project MISS. RIVER - GULF OUTLET	
NEW SHIP LOCK - GBM	
Area	
Boring No. 4-UL	Sample No. 21-C
Depth El 81.8	Date 1 AUGUST 1968
JMS	TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	39.5 %	39.6 %	39.7 %	%
	Void ratio	e_o	1.09	1.11	1.10	
	Saturation	S_o	99.3 %	97.8 %	98.9 %	%
	Dry density, lb/cu ft	γ_d	82.0	81.1	81.4	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	1.23	1.38	1.32	
Time to failure, min		t_f	14	38	20	
Rate of strain, percent/min			0.16	0.06	0.09	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.39	1.39	1.38	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.66 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, contains seams of silty sand

LL 57 | PL 21 | PI 36 | G_s 2.74

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

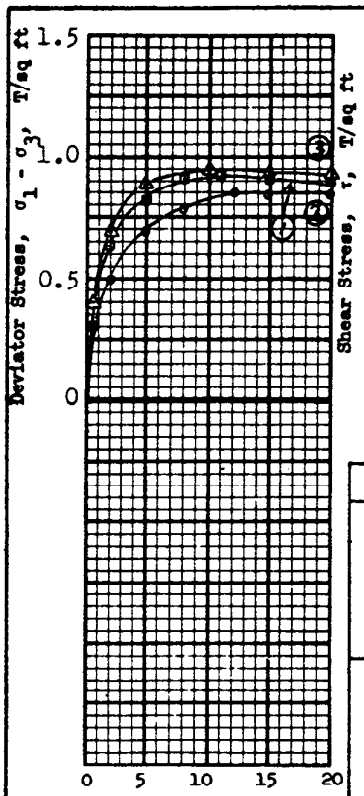
Boring No. 4-UL | Sample No. 23-B_2

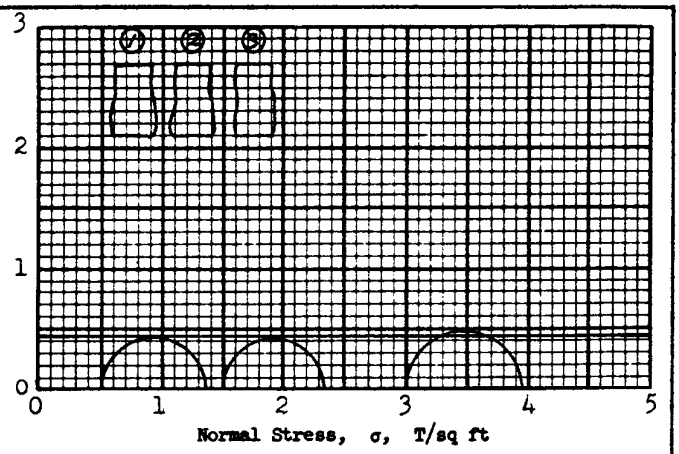
Depth ~~Bl~~ 89.4 | Date 2 AUG. 1968

GDA TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	36.0 %	36.9 %	34.8 %	%
	Void ratio	e_o	0.973	0.977	0.959	
	Saturation	S_o	100+ %	100+ %	99.1 %	%
	Dry density, lb/cu ft	γ_d	86.4	86.2	87.0	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.87	0.85	0.94	
Time to failure, min		t_f	122	50	43	
Rate of strain, percent/min			0.09	0.24	0.23	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.48 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray, homogeneous				
LL 54	PL 18	PI 36		G_s 2.73

Remarks _____

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

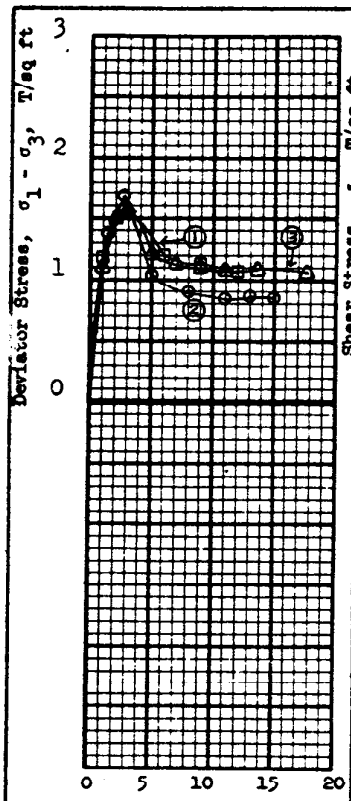
Boring No. 4-UL | Sample No. 26-D

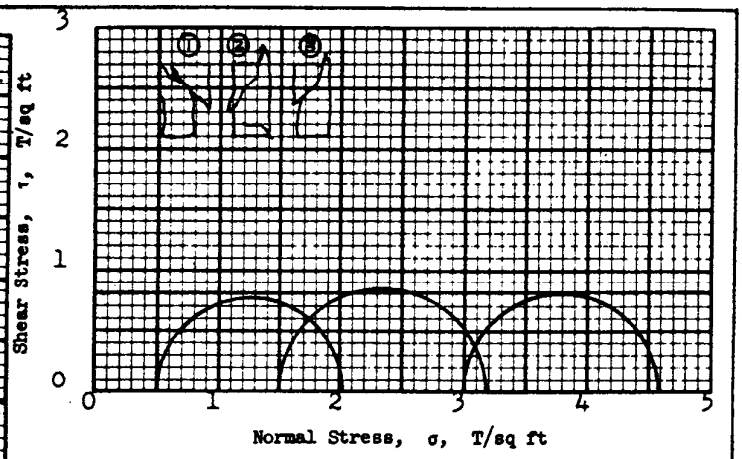
Depth ~~Bl~~ 102.8 | Date 2 AUGUST 1968

EAK TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	43.2 %	43.8 %	45.6 %	%
	Void ratio	e_o	1.20	1.21	1.25	
	Saturation	S_o	98.3 %	98.8 %	99.6 %	%
	Dry density, lb/cu ft	γ_d	77.4	77.0	75.8	
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	1.54	1.68	1.58	
Time to failure, min		t_f	39	10	14	
Rate of strain, percent/min			0.07	0.26	0.20	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$			•	
Initial diameter, in.		D_o	1.40	1.37	1.37	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.80 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, contains silt lenses approx. 1/8" *

LL 67 | PL 22 | PI 45 | G_s 2.73

Remarks * thick

All specimens failed in slickenside

Project MISS. RIVER - GULF OUTLET

NEW SHIPLOCK - GDM

Area

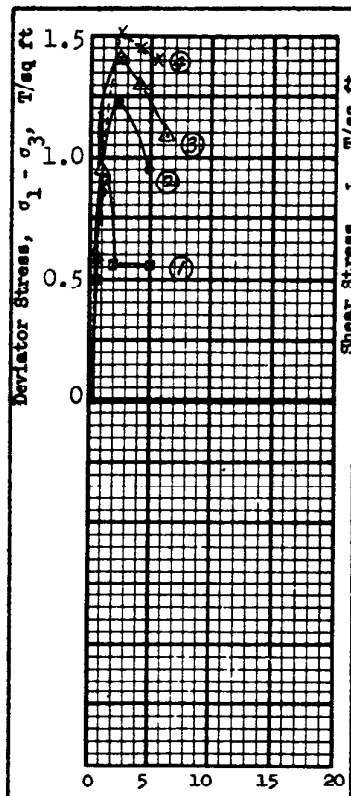
Boring No. 4-UL | Sample No. 29-B

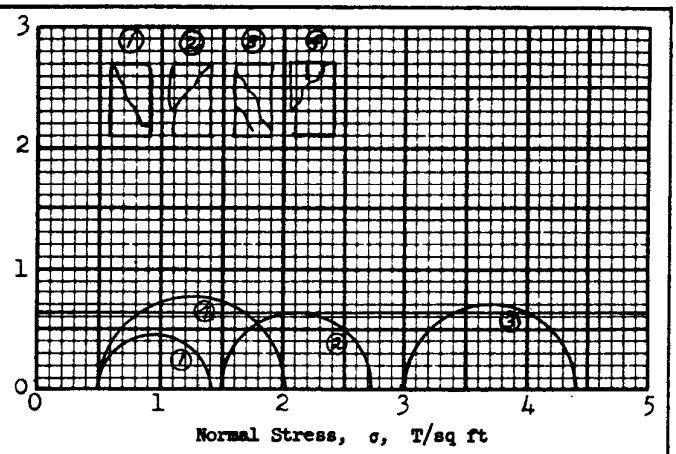
Depth ~~El~~ 113.1 | Date 2 AUG. 1968

FAM TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	4
Initial	Water content	w_o	44.8 %	44.0 %	43.5 %	44.3 %
	Void ratio	e_o	1.21	1.19	1.19	1.22
	Saturation	S_o	100+ %	100+ %	99.8 %	99.1 %
	Dry density, lb/cu ft	γ_d	77.2	77.9	77.9	76.8
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	0.5
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.91	1.23	1.41	1.52
Time to failure, min		t_f	13	44	50	29
Rate of strain, percent/min			0.10	0.05	0.05	0.08
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	1.41
Initial height, in.		H_o	3.00	3.00	3.00	3.00

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.63 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

Type of test Q | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, contains silt seams, fissured

LL 65 | PL 22 | PI 43 | G_s 2.73

Remarks Specimen 1 failed in fissured area

Project MISS.RIVER - GULF OUTLET
NEW SHIP LOCK - GBM

Area

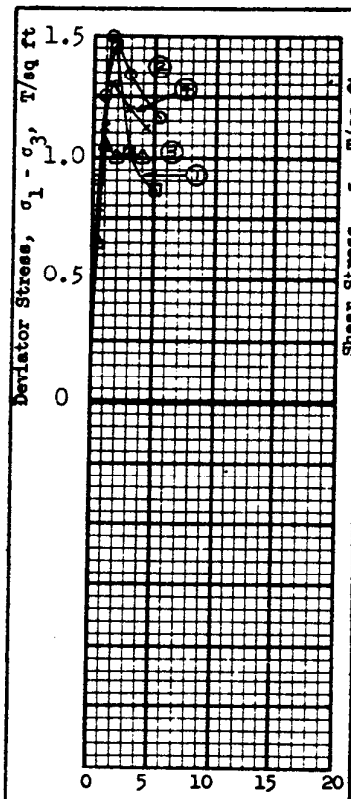
Boring No. 4-UL | Sample No. 33-C

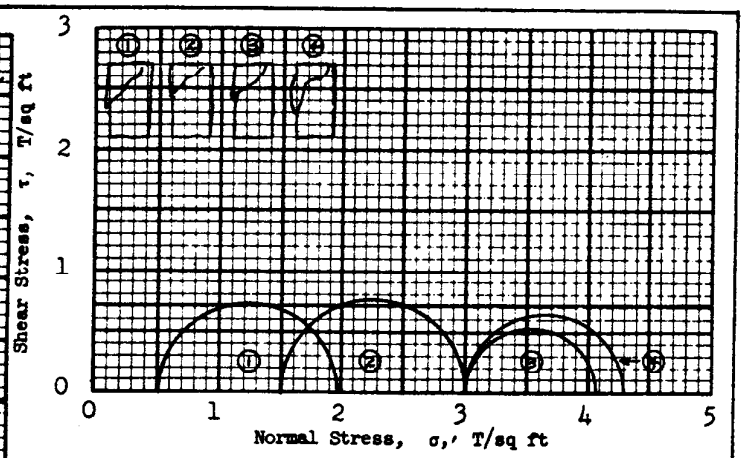
Depth 129.8 | Date 5 AUGUST 1968

EAK TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	4
Initial	Water content	w_o	46.2 %	45.0 %	45.2 %	45.1 %
	Void ratio	e_o	1.26	1.24	1.24	1.24
	Saturation	S_o	100+ %	99.1 %	99.5 %	99.3 %
	Dry density, lb/cu ft	γ_d	75.5	76.2	76.0	76.2
Before Shear	Water content	w_c	%	%	%	%
	Void ratio	e_c				
	Saturation	S_c	%	%	%	%
	Final back pressure, T/sq ft	u_o				
Final	Water content	w_f	%	%	%	%
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	0.5	1.5	3.0	3.0
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	1.46	1.50	1.05	1.30
Time to failure, min		t_f	17	12	33	80
Rate of strain, percent/min			0.11	0.14	0.03	0.02
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.40	1.40	1.41
Initial height, in.		H_o	3.00	3.00	3.00	3.00

Shear Strength Parameters

ϕ = 0 °

tan ϕ = 0

c = 0.71 T/sq ft

Method of saturation _____

☐ Controlled stress

☒ Controlled strain

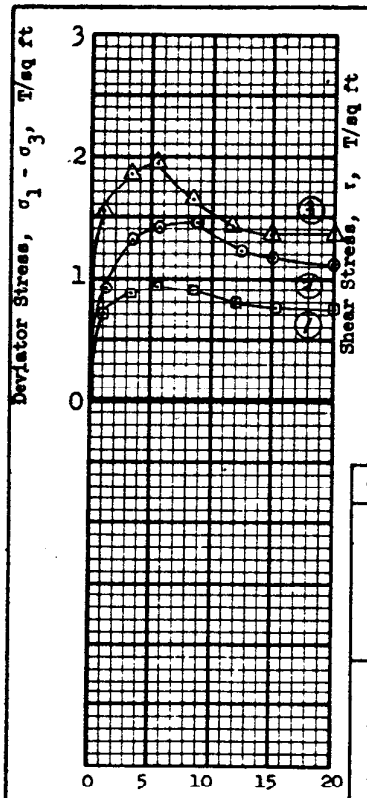
Type of test Q	Type of specimen UNDISTURBED		
Classification PLASTIC CLAY (CH), gray, contains a 1/8" silty sand layer			
LL 71	PL 24	PI 47	G_s 2.73

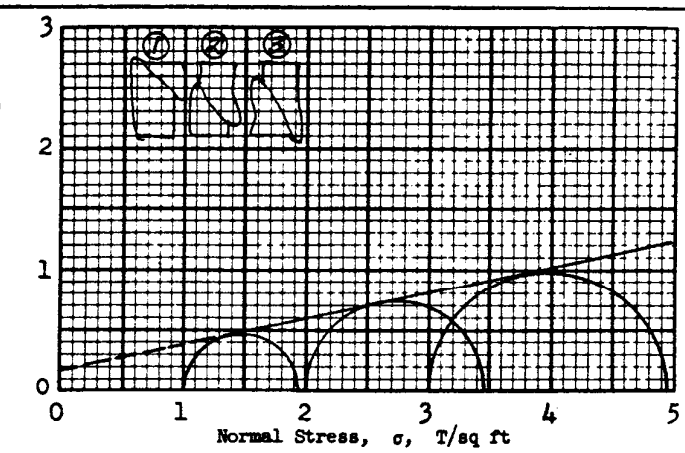
Remarks _____

Project	MISS. RIVER - GULF OUTLET NEW SHIP LOCK
Area	
Boring No. 4-UL	Sample No. 36-C
Depth ~~Bl~~ 142.1	Date 2 AUG. 1968
JMS	TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 *(EM 1110-2-1902)* PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	97.7 %	92.0 %	87.8 %	%
	Void ratio	e_o	2.57	2.42	2.30	
	Saturation	S_o	99.2 %	99.2 %	99.6 %	%
	Dry density, lb/cu ft	γ_d	45.6	47.7	49.3	
Before Shear	Water content	w_c	84.7 %	69.3 %	62.9 %	%
	Void ratio	e_c	1.59	1.19	1.47	
	Saturation	S_c	100+ %	100+ %	100+ %	%
	Final back pressure, PSI	u_o	50	50	50	
	Dry density lb/cu ft	γ_d	62.9	74.4	66.0	
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	1.0	2.0	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.94	1.46	1.95	
Time to failure, min		t_f	110	178	110	
Rate of strain, percent/min			0.05	0.05	0.05	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.40	1.39	1.40	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 12 °

tan ϕ = 0.213

c = 0.18 T/sq ft

Method of saturation Back Pressure

☐ Controlled stress

☒ Controlled strain

Type of test R | Type of specimen UNDISTURBED

Classification PLASTIC CLAY (CH), gray, contains organic matter

LL - | PL - | PI - | G_s 2.61 from Q

Remarks

Project MISS. RIVER - GULF OUTLET
NEW SHIP LOCK - GDM

Area

Boring No. 4-UL | Sample No. 6-D

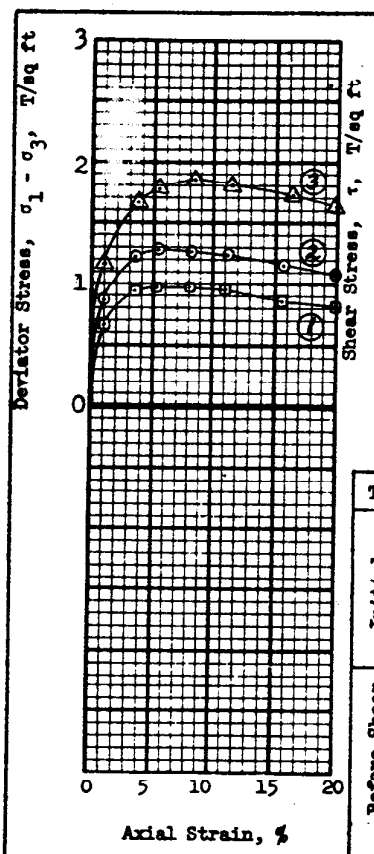
Depth 23.1 | Date 7 July 1968

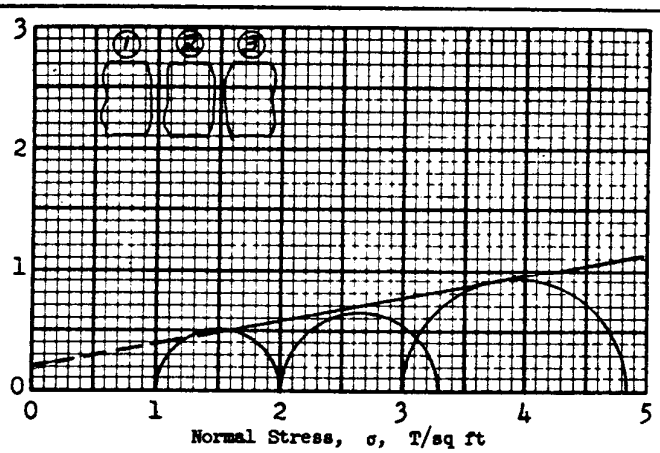
JL TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT

USAEWES SOILS TEST SECTION





Test No.			1	2	3	
Initial	Water content	w_o	62.0 %	62.3 %	62.4 %	%
	Void ratio	e_o	1.68	1.68	1.67	
	Saturation	S_o	100 %	100+ %	100+ %	%
	Dry density, lb/cu ft	γ_d	63.0	63.2	63.3	
Before Shear	Water content	w_c	60.1 %	55.3 %	51.2 %	%
	Void ratio	e_c	1.57	1.41	1.19	
	Saturation	S_c	100+ %	100+ %	100+ %	%
	Final back pressure, PSI	u_o	50	50	50	
	Dry density lb/cu ft	γ_d	65.9	70.3	77.2	
	Void ratio	e_f				
Minor principal stress, T/sq ft		σ_3	1.0	2.0	3.0	
Max deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{max}$	0.99	1.29	1.84	
Time to failure, min		t_f	73	65	106	
Rate of strain, percent/min			0.07	0.08	0.08	
Ult deviator stress, T/sq ft		$(\sigma_1-\sigma_3)_{ult}$				
Initial diameter, in.		D_o	1.39	1.39	1.39	
Initial height, in.		H_o	3.00	3.00	3.00	

Shear Strength Parameters

ϕ = 10 °

tan ϕ = 0.176

c = 0.22 T/sq ft

Method of saturation Back Pressure

☐ Controlled stress

☒ Controlled strain

Type of test R	Type of specimen UNDISTURBED			
Classification PLASTIC CLAY (CH), gray, homogeneous				
LL 86	PL 29	PI 57		G_s 2.71

Remarks

Project MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

Area

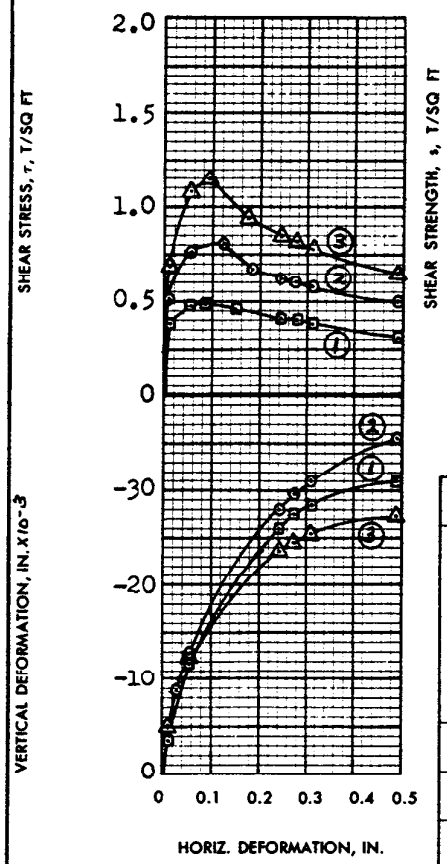
Boring No. 4-UL | Sample No. 12-A

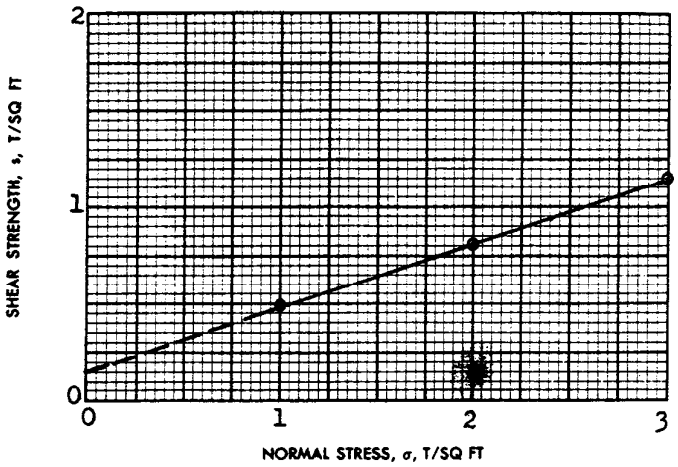
Depth 44.3 | Date 12 August 1968

JL TRIAXIAL COMPRESSION TEST REPORT

ENG FORM 1 JUN 65 2089 (EM 1110-2-1902) PREVIOUS EDITIONS ARE OBSOLETE

TRANSLUCENT USAEWES SOILS TEST SECTION





SHEAR STRENGTH PARAMETERS

$\phi' =$ 18°

TAN $\phi' =$ 0.325

$c' =$ 0.16 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	52.0 %	53.8 %	48.9 %	%
	VOID RATIO	e_o	1.46	1.49	1.41	
	SATURATION	S_o	96.5 %	97.8 %	94.0 %	%
	DRY DENSITY, LB/CU FT	γ_d	68.9	68.0	70.3	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}	1	2	3	
FINAL	WATER CONTENT	w_f	49.7 %	46.3 %	43.5 %	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.49	0.81	1.15	
ACTUAL TIME TO FAILURE, MIN		t_f	480	690	540	
RATE OF STRAIN, IN./MIN			.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

TYPE OF SPECIMEN UNDISTURBED 3.00 IN. SQUARE 0.551 IN. THICK

CLASSIFICATION PLASTIC CLAY (CH), gray, contains a trace of organic matter, *

LL 103 PL 27 PI 76 G. 2.71

REMARKS * fissured, slickensided

PROJECT MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

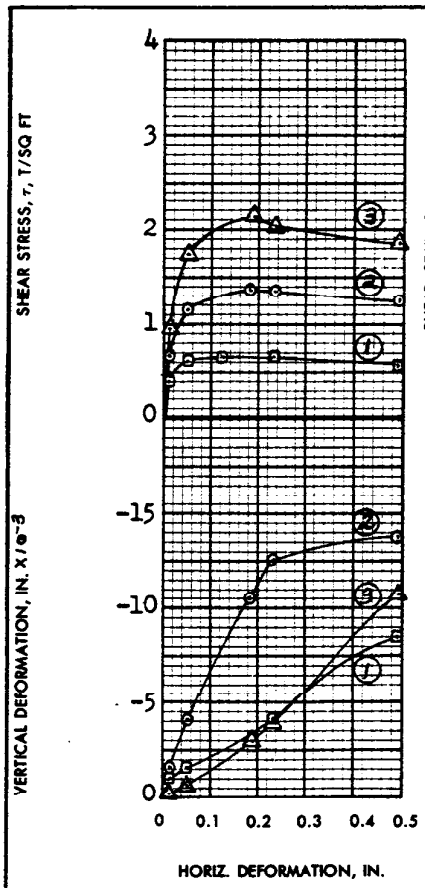
AREA

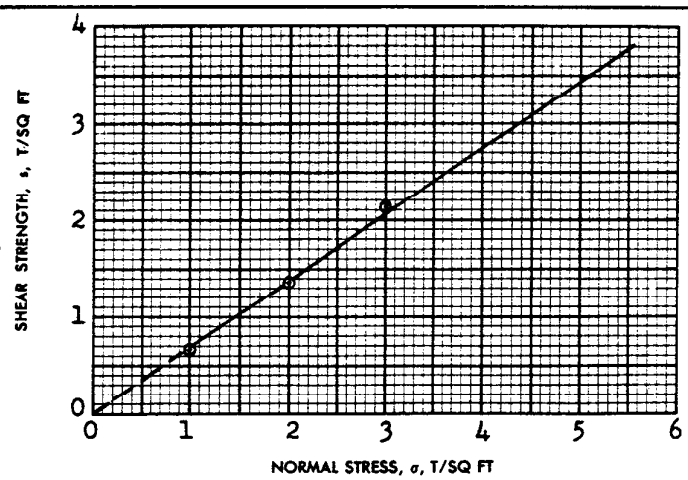
BORING NO. 4-UL SAMPLE NO. 5-C

DEPTH 18.2 DATE 18 July 1968

JHMc **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 **2092** (EM 1110-2-1906) PREVIOUS EDITIONS ARE OBSOLETE (TRANSLUCENT) GPO : 1966 OF—214-845 USAEWES SOILS TEST SECTION





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	33.4%	33.2%	30.6%	%
	VOID RATIO	e_o	0.855	0.853	0.817	
	SATURATION	S_o	100+%	100+%	99.6%	%
	DRY DENSITY, LB/CU FT	γ_d	89.5	89.6	91.4	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}	<1	<1	<1	
FINAL	WATER CONTENT	w_f	30.6%	28.7%	27.8%	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.66	1.37	2.13	
ACTUAL TIME TO FAILURE, MIN		t_f	750	1050	1080	
RATE OF STRAIN, IN./MIN			.00019	.00019	.00019	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

ϕ' = 35°

TAN ϕ' = 0.700

c' = 0 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN UNDISTURBED — 3.00 IN. SQUARE — 0.551 IN. THICK

CLASSIFICATION SANDY SILT (ML), gray, contains a trace of organic matter

LL — PL — PI — G_s 2.66

REMARKS

PROJECT MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

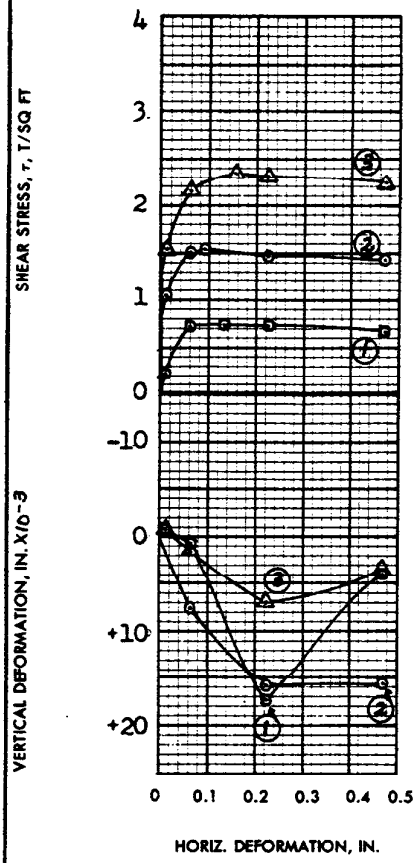
AREA

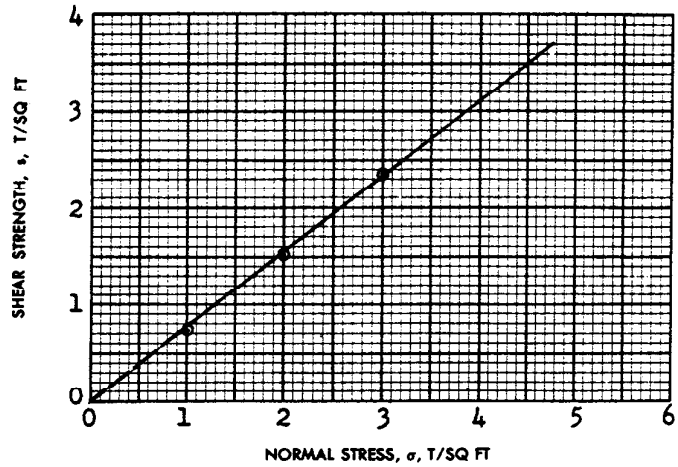
BORING NO. 4-UL — SAMPLE NO. 8-B

DEPTH 29.2 — DATE 18 July 1968

WJH **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 2092 (EM 1110-2-1906) PREVIOUS EDITIONS ARE OBSOLETE (TRANSLUCENT) USAEWES SOILS TEST SECTION





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	22.1 %	22.7 %	21.9 %	%
	VOID RATIO	e_o	0.676	0.674	0.679	
	SATURATION	S_o	87.0 %	89.6 %	85.8 %	%
	DRY DENSITY, LB/CU FT	γ_d	99.1	99.2	98.9	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}				
FINAL	WATER CONTENT	w_f	22.4 %	21.4 %	21.1 %	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.73	1.53	2.35	
ACTUAL TIME TO FAILURE, MIN		t_f	840	600	960	
RATE OF STRAIN, IN./MIN			.00017	.00017	.00017	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

φ' = 38°

TAN φ' = 0.781

c' = 0 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN UNDISTURBED — 3.00 IN. SQUARE — 0.562 IN. THICK

CLASSIFICATION SAND (SP), gray, contains a few small pieces of shell

LL — PL — PI — G_s 2.66

REMARKS

PROJECT MISS. RIVER-GULF OUTLET

NEW SHIP LOCK - GDM

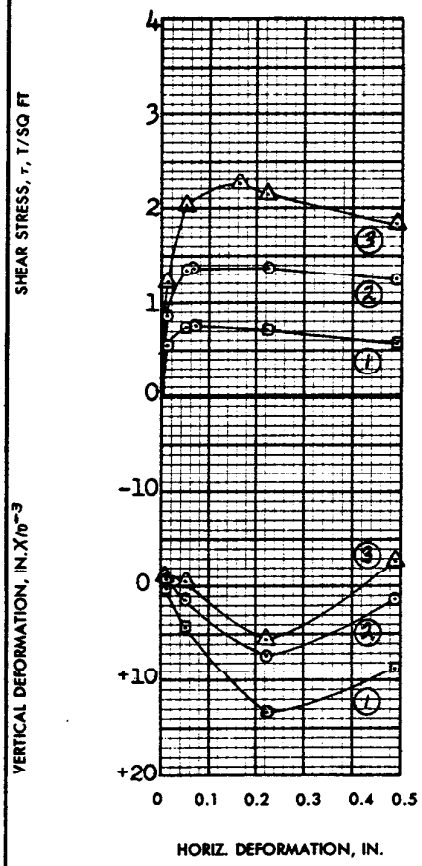
AREA

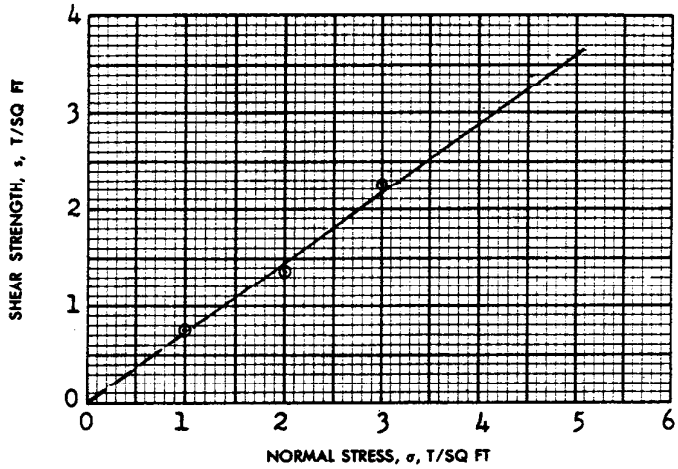
BORING NO. 4-UL — SAMPLE NO. 17-B

DEPTH 64.8 — DATE 19 July 1968

GDA **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 **2092** *(EM 1110-2-1906)* PREVIOUS EDITIONS ARE OBSOLETE *(TRANSLUCENT)* USAEWES SOILS TEST SECTION





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	20.9%	21.1%	21.4%	%
	VOID RATIO	e_o	0.594	0.589	0.600	
	SATURATION	S_o	93.6%	95.3%	94.9%	%
	DRY DENSITY, LB/CU FT	γ_d	104.2	104.5	103.8	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}				
FINAL	WATER CONTENT	w_f	22.7%	22.5%	23.0%	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.75	1.38	2.26	
ACTUAL TIME TO FAILURE, MIN		t_f	480	450	1020	
RATE OF STRAIN, IN./MIN			.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

ϕ' = 36°

TAN ϕ' = 0.726

c' = 0 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN	UNDISTURBED	3.00 IN. SQUARE	0.551 IN. THICK
CLASSIFICATION	SILTY SAND (SM), gray		
LL —	PL —	PI —	G_s 2.66

REMARKS

PROJECT MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

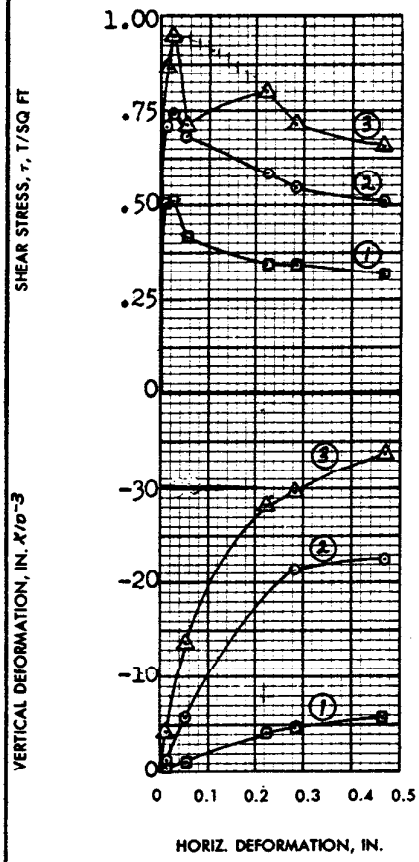
AREA

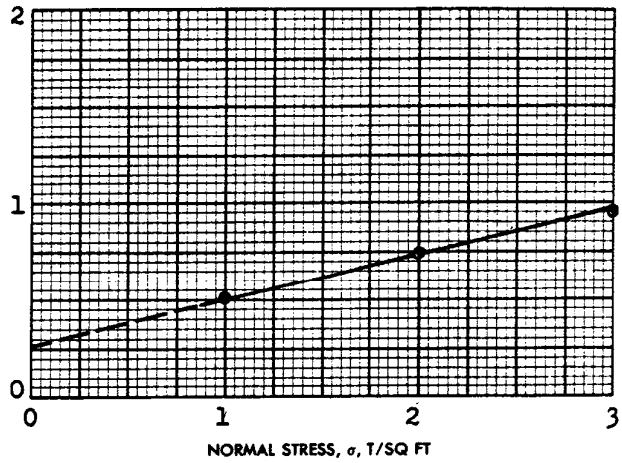
BORING NO. 4-UL | SAMPLE NO. 19-A

DEPTH 72.3 | DATE 19 July 1968

WJH **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 2092 (EM 1110-2-1906) PREVIOUS EDITIONS ARE OBSOLETE (TRANSLUCENT) GPO : 1966 OF—214-945 USAEWES SOILS TEST SECTION PLATE IV-3





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	45.4%	45.4%	46.7%	%
	VOID RATIO	e_o	1.31	1.27	1.29	
	SATURATION	S_o	94.6%	97.6%	98.8%	%
	DRY DENSITY, LB/CU FT	γ_d	73.8	75.1	74.4	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}	<1	<1	<1	
FINAL	WATER CONTENT	w_f	53.3%	46.9%	47.1%	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.51	0.74	0.95	
ACTUAL TIME TO FAILURE, MIN		t_f	180	210	180	
RATE OF STRAIN, IN./MIN			.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

ϕ' = 14°

TAN ϕ' = 0.249

c' = 0.27 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN UNDISTURBED — 3.00 IN. SQUARE — 0.562 IN. THICK

CLASSIFICATION PLASTIC CLAY (CH), gray, fissured

LL - | PL - | PI - | G. 2.73 from Q

REMARKS

PROJECT MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

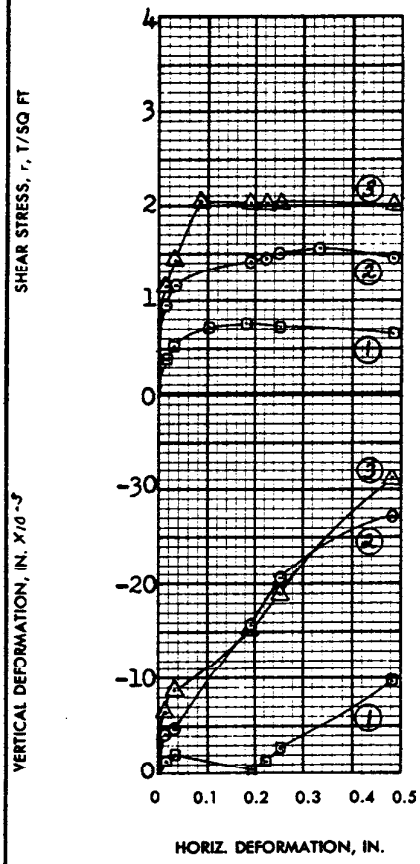
AREA

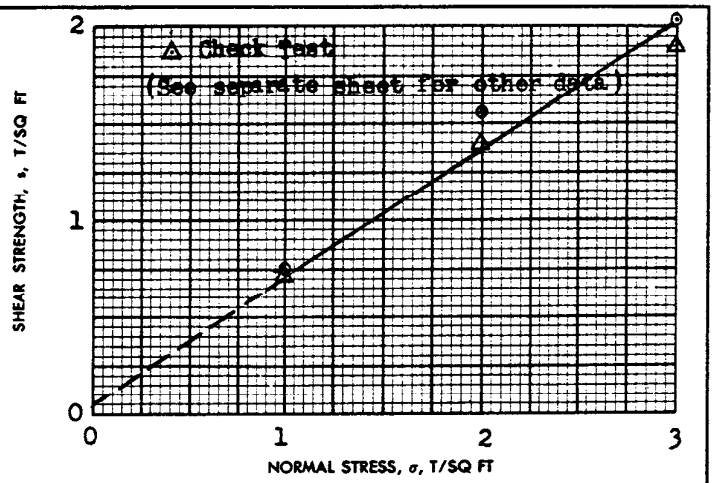
BORING NO. 4-UL | SAMPLE NO. 21-C

DEPTH 81.8 | DATE 18 July 1968

BWG **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 2092 (EM 1110-2-1906) PREVIOUS EDITIONS ARE OBSOLETE (TRANSLUCENT) USAEWES SOILS TEST SECTION





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	24.2 %	24.2 %	24.0 %	%
	VOID RATIO	e_o	0.696	0.712	0.679	
	SATURATION	S_o	92.5 %	90.4 %	94.0 %	%
	DRY DENSITY, LB/CU FT	γ_d	97.9	97.0	98.9	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}				
FINAL	WATER CONTENT	w_f	24.2 %	24.9 %	24.3 %	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.76	1.56	2.04	
ACTUAL TIME TO FAILURE, MIN		t_f	1170	1920	1140	
RATE OF STRAIN, IN./MIN			.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

ϕ' = 34°

TAN ϕ' = 0.674

c' = 0.05 T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN UNDISTURBED 3.00 IN. SQUARE 0.551 IN. THICK

CLASSIFICATION SILTY SAND (SM), gray

LL — PL — PI — G. 2.66

REMARKS Sheet 1 of 2

PROJECT MISS. RIVER - GULF OUTLET

NEW SHIP LOCK - GDM

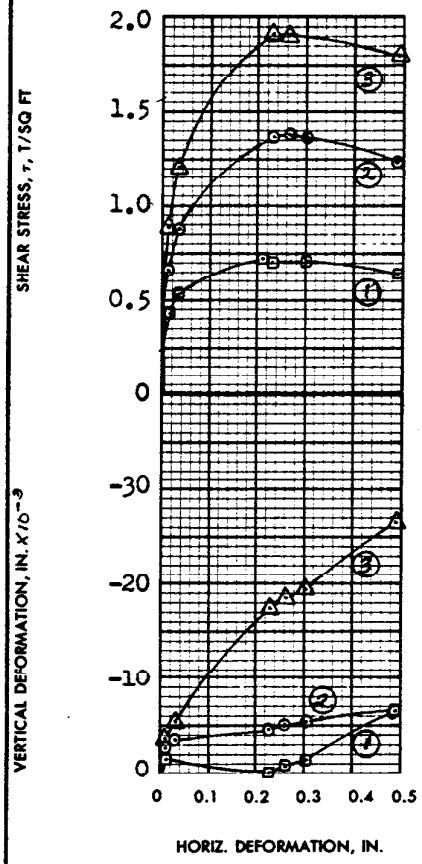
AREA

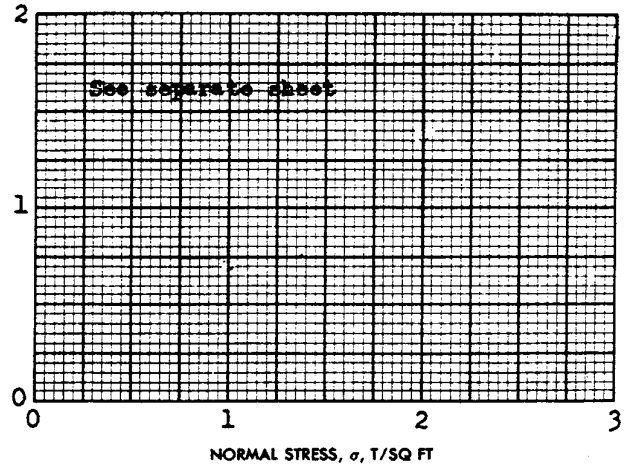
BORING NO. 4-UL SAMPLE NO. 24-D

DEPTH 94.6 DATE 19 July 1968

JHMc DIRECT SHEAR TEST REPORT

ENG FORM 1 JUN 65 2092 (EM 1110-2-1906) PREVIOUS EDITIONS ARE OBSOLETE (TRANSLUCENT) USAEWES SOILS TEST SECTI





TEST NO.			1	2	3	
INITIAL	WATER CONTENT	w_o	25.5 %	25.1 %	25.3 %	%
	VOID RATIO	e_o	0.703	0.696	0.716	
	SATURATION	S_o	96.5 %	95.9 %	94.0 %	%
	DRY DENSITY, LB/CU FT	γ_d	97.5	97.9	96.8	
VOID RATIO AFTER CONSOLIDATION		e_c				
TIME FOR 50 PERCENT CONSOLIDATION, MIN		t_{50}				
FINAL	WATER CONTENT	w_f	24.4 %	24.2 %	24.9 %	%
	VOID RATIO	e_f				
	SATURATION	S_f	%	%	%	%
NORMAL STRESS, T/SQ FT		σ	1.0	2.0	3.0	
MAXIMUM SHEAR STRESS, T/SQ FT		τ_{max}	0.72	1.38	1.91	
ACTUAL TIME TO FAILURE, MIN		t_f	1230	1500	1320	
RATE OF STRAIN, IN./MIN			.00018	.00018	.00018	
ULTIMATE SHEAR STRESS, T/SQ FT		τ_{ult}				

SHEAR STRENGTH PARAMETERS

ϕ' = _____

TAN ϕ' = _____

c' = _____ T/SQ FT

☐ CONTROLLED STRESS

☒ CONTROLLED STRAIN

TYPE OF SPECIMEN UNDISTURBED 3.00 IN. SQUARE 0.551 IN. THICK

CLASSIFICATION SILTY SAND (SM), gray

LL — PL — PI — G_s 2.66

REMARKS Check Test

Sheet 2 of 2

PROJECT MISS. RIVER-GULF OUTLET

NEW SHIP LOCK - GDM

AREA

BORING NO. 4-UL SAMPLE NO. 24-D

DEPTH 94.6 DATE 31 July 1968

JHMc **DIRECT SHEAR TEST REPORT**

ENG FORM 1 JUN 65 **2092** *(EM 1110-2-1906)* PREVIOUS EDITIONS ARE OBSOLETE *(TRANSLUCENT)* GPO : 1966 OF—214-945 PLATE IX-3

USAEWES SOILS TEST SECTI