TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2926		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	09/15/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	50	51	52				
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT				
Station	124+97	119+33	175+01				
Offset	F.S. +18.8	C/L -3.7	F.S. +25.4				
Lift No	1	5	2				
X-Coor	E3660452.0	E3659890.9	E3665443.3				
Y-Coor	N501002.2	N501066.7	N500648.2				
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT				
Elevation	5.5	7.8	5.9				
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY				
Est amt. ret. on #40 (%)	0	0	0				
Sample Air Dried?	NO	NO	NO				
Liquid Limit (ASTM D 4318)							
Test Sequence 1	26	27	24				
a. Container Number	T24	T17	T6				
b. Wet Soil + Tare Mass (g)	33.90	33.31	36.57				
c. Dry Soil + Tare Mass (g)	26.08	25.75	29.85				
d. Water Mass (g)	7.82	7.56	6.72				
e. Tare Mass (g)	13.78	14.70	19.19				
f. Dry Soil Mass (g)	12.30	11.05	10.66				
g. Moisture Content (%)	63.6	68.4	63.0				
Test Sequence 2	27	25	24				
a. Container Number	T35	T34	T36				
b. Wet Soil + Tare Mass (g)	35.32	35.34	33.13				
c. Dry Soil + Tare Mass (g)	27.69	28.11	27.48				
d. Water Mass (g)	7.63	7.23	5.65				
e. Tare Mass (g)	15.60	17.58	18.48				
f. Dry Soil Mass (g)	12.09	10.53	9.00				
g. Moisture Content (%)	63.1	68.7	62.8				
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T50	T47	T7				
j. Wet Soil + Tare Mass (g)	34.19	28.61	31.24				
k. Dry Soil + Tare mass (g)	31.48	26.38	29				
l. Water Mass (g)	2.71	2.23	2.24				
m. Tare Mass (g)	19.13	16.84	19.72				
n. Dry Soil Mass (g)	12.35	9.54	9.28				
o. Moisture Content (%)	21.9	23.4	24.1				
Test Sequence 2							
i. Container Number	T46	T14	T37				
j. Wet Soil + Tare Mass (g)	31.57	26.92	27.56				
k. Dry Soil + Tare mass (g)	29.49	24.69	25.66				
l. Water Mass (g)	2.08	2.23	1.90				
m. Tare Mass (g)	19.90	15.26	17.61				
n. Dry Soil Mass (g)	9.59	9.43	8.05				
o. Moisture Content (%)	21.7	23.6	23.6				
Liquid Limit (%)	64	69	63				
Plastic Limit (%)	22	24	24				
Plasticity Index (%)	42	45	39				
Gravel (#4) retained (%)	0.0	0.0	0.0				
Sand (#200) retained (%)	3.2	3.2	2.9				
Fines (minus #200) (%)	96.8	96.8	97.1				
Group Symbol	CH	CH	CH				
Group Name	FAT CLAY	FAT CLAY	FAT CLAY				
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2935		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	09/16/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	53	54	55	56	57		
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT		
Station	110+91	119+13	163+28	175+01	175+01		
Offset	F.S. +23.5'	C/L +2.5'	F.S. +21'	F.S. +25.4'			
Lift No	4	6	1	2	UNCOMPACTED FILL		
X-Coor	E3659560.4	E3659870.9	E3664273.9	E3665443.3			
Y-Coor	N501712.4	N501061.8	N500731.4	N500648.2			
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT			
Elevation	6.8	8.3	5.6	5.9			
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY		
Est amt. ret. on #40 (%)	0	0	0	0	0		
Sample Air Dried?	NO	NO	NO	NO	NO		
Liquid Limit (ASTM D 4318)							
Test Sequence 1	26	23	25	26	22		
a. Container Number	T47	T34	T50	T33	T25		
b. Wet Soil + Tare Mass (g)	33.49	37.39	42.71	32.26	33.12		
c. Dry Soil + Tare Mass (g)	27.23	28.94	33.51	25.57	26.7		
d. Water Mass (g)	6.26	8.45	9.20	6.69	6.42		
e. Tare Mass (g)	16.84	17.54	19.12	14.93	16.58		
f. Dry Soil Mass (g)	10.39	11.40	14.39	10.64	10.12		
g. Moisture Content (%)	60.3	74.1	63.9	62.9	63.4		
Test Sequence 2	27	23	25	27	24		
a. Container Number	T6	T24	T17	T5	T18		
b. Wet Soil + Tare Mass (g)	35.89	31	38.22	36.51	33.92		
c. Dry Soil + Tare Mass (g)	29.56	23.68	28.98	29.92	27.49		
d. Water Mass (g)	6.33	7.32	9.24	6.59	6.43		
e. Tare Mass (g)	19.18	13.79	14.70	19.28	17.33		
f. Dry Soil Mass (g)	10.38	9.89	14.28	10.64	10.16		
g. Moisture Content (%)	61.0	74.0	64.7	61.9	63.3		
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T36	T14	T35	T51	T12		
j. Wet Soil + Tare Mass (g)	27.56	23.26	26.28	29.61	26.82		
k. Dry Soil + Tare mass (g)	25.99	21.58	24.18	27.18	25.23		
l. Water Mass (g)	1.57	1.68	2.10	2.43	1.59		
m. Tare Mass (g)	18.48	15.26	15.60	17.53	19.66		
n. Dry Soil Mass (g)	7.51	6.32	8.58	9.65	5.57		
o. Moisture Content (%)	20.9	26.6	24.5	25.2	28.5		
Test Sequence 2							
i. Container Number	T7	T46	T37	T29	T28		
j. Wet Soil + Tare Mass (g)	27.7	27.64	28.8	29.35	26.49		
k. Dry Soil + Tare mass (g)	26.32	26.03	26.61	27.1	24.57		
l. Water Mass (g)	1.38	1.61	2.19	2.25	1.92		
m. Tare Mass (g)	19.72	19.90	17.61	18.19	17.88		
n. Dry Soil Mass (g)	6.60	6.13	9.00	8.91	6.69		
o. Moisture Content (%)	20.9	26.3	24.3	25.3	28.7		
Liquid Limit (%)	61	73	64	63	63		
Plastic Limit (%)	21	27	24	25	29		
Plasticity Index (%)	40	46	40	38	34		
Gravel (#4) retained (%)	0.0	0.0	0.0	0.0	0.0		
Sand (#200) retained (%)	3.5	2.5	4.5	2.9	1.6		
Fines (minus #200) (%)	96.5	97.5	95.5	97.1	98.4		
Group Symbol	CH	CH	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY		
Remarks:	TEST ID 57 WAS TAKEN FROM UNCOMPACTED FILL AREA						

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2609
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	07/16/2010
Testing Technician(s):	B. LANDERS	Checked by:	W. PROCHASKA
Submitted by:	G. LECOQ		

Test ID	1						
Source of material	**NE STOCKPILE**						
Station							
Offset							
Lift No							
X-Coor							
Y-Coor							
Feature							
Elevation							
Visual Description	**BR. CL.**						
Est amt. ret. on #40 (%)	**0**						
Sample Air Dried?	**NO**						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	**25**						
a. Container Number	**T23**						
b. Wet Soil + Tare Mass (g)	**37.63**						
c. Dry Soil + Tare Mass (g)	**28.53**						
d. Water Mass (g)	**9.10**						
e. Tare Mass (g)	**14.23**						
f. Dry Soil Mass (g)	**14.30**						
g. Moisture Content (%)	**63.6**						
Test Sequence 2	**25**						
a. Container Number	**T9**						
b. Wet Soil + Tare Mass (g)	**45.06**						
c. Dry Soil + Tare Mass (g)	**35.20**						
d. Water Mass (g)	**9.86**						
e. Tare Mass (g)	**19.71**						
f. Dry Soil Mass (g)	**15.49**						
g. Moisture Content (%)	**63.7**						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	**T20**						
j. Wet Soil + Tare Mass (g)	**32.78**						
k. Dry Soil + Tare mass (g)	**29.97**						
l. Water Mass (g)	**2.81**						
m. Tare Mass (g)	**17.83**						
n. Dry Soil Mass (g)	**12.14**						
o. Moisture Content (%)	**23.1**						
Test Sequence 2							
i. Container Number	**T5**						
j. Wet Soil + Tare Mass (g)	**34.83**						
k. Dry Soil + Tare mass (g)	**31.91**						
l. Water Mass (g)	**2.92**						
m. Tare Mass (g)	**19.26**						
n. Dry Soil Mass (g)	**12.65**						
o. Moisture Content (%)	**23.1**						
Liquid Limit (%)	**64**						
Plastic Limit (%)	**23**						
Plasticity Index (%)	**41**						
Gravel (#4) retained (%)	**0.0**						
Sand (#200) retained (%)	**1.8**						
Fines (minus #200) (%)	**98.2**						
Group Symbol	**CH**						
Group Name	**FAT CLAY**						

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2610
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	07/16/2010
Testing Technician(s):	B. LANDERS	Checked by:	W. PROCHASKA
Submitted by:	G. LECOQ		

Test ID	2						
Source of material	**NE NEW PIT**						
Station							
Offset							
Lift No							
X-Coor							
Y-Coor							
Feature							
Elevation							
Visual Description	**BR. CL.**						
Est amt. ret. on #40 (%)	**0**						
Sample Air Dried?	**NO**						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	**23**						
a. Container Number	**T24**						
b. Wet Soil + Tare Mass (g)	**39.03**						
c. Dry Soil + Tare Mass (g)	**30.29**						
d. Water Mass (g)	**8.74**						
e. Tare Mass (g)	**13.80**						
f. Dry Soil Mass (g)	**16.49**						
g. Moisture Content (%)	**53.0**						
Test Sequence 2	**23**						
a. Container Number	**T6**						
b. Wet Soil + Tare Mass (g)	**43.81**						
c. Dry Soil + Tare Mass (g)	**35.28**						
d. Water Mass (g)	**8.53**						
e. Tare Mass (g)	**19.19**						
f. Dry Soil Mass (g)	**16.09**						
g. Moisture Content (%)	**53.0**						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	**T39**						
j. Wet Soil + Tare Mass (g)	**36.29**						
k. Dry Soil + Tare mass (g)	**33.17**						
l. Water Mass (g)	**3.12**						
m. Tare Mass (g)	**20.78**						
n. Dry Soil Mass (g)	**12.39**						
o. Moisture Content (%)	**25.2**						
Test Sequence 2							
i. Container Number	**T32**						
j. Wet Soil + Tare Mass (g)	**35.16**						
k. Dry Soil + Tare mass (g)	**31.66**						
l. Water Mass (g)	**3.50**						
m. Tare Mass (g)	**17.64**						
n. Dry Soil Mass (g)	**14.02**						
o. Moisture Content (%)	**25.0**						
Liquid Limit (%)	**53**						
Plastic Limit (%)	**25**						
Plasticity Index (%)	**28**						
Gravel (#4) retained (%)	**0.0**						
Sand (#200) retained (%)	**2.8**						
Fines (minus #200) (%)	**97.2**						
Group Symbol	**CH**						
Group Name	**FAT CLAY**						

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2611
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	07/16/2010
Testing Technician(s):	B. LANDERS	Checked by:	W. PROCHASKA
Submitted by:	G. LECOQ		

Test ID	3
Source of material	**mple B S.E. Corner of Stock Pile**
Station	
Offset	
Lift No	
X-Coor	
Y-Coor	
Feature	
Elevation	
Visual Description	**BR. CL.**
Est amt. ret. on #40 (%)	**0**
Sample Air Dried?	**NO**
Liquid Limit (ASTM D 4318)	
Test Sequence 1	**26**
a. Container Number	**T42**
b. Wet Soil + Tare Mass (g)	**39.00**
c. Dry Soil + Tare Mass (g)	**30.59**
d. Water Mass (g)	**8.41**
e. Tare Mass (g)	**19.73**
f. Dry Soil Mass (g)	**10.86**
g. Moisture Content (%)	**77.4**
Test Sequence 2	**26**
a. Container Number	**T41**
b. Wet Soil + Tare Mass (g)	**43.98**
c. Dry Soil + Tare Mass (g)	**33.21**
d. Water Mass (g)	**10.77**
e. Tare Mass (g)	**19.35**
f. Dry Soil Mass (g)	**13.86**
g. Moisture Content (%)	**77.7**
Plastic Limit (ASTM D 4318)	
Test Sequence 1	
i. Container Number	**T31**
j. Wet Soil + Tare Mass (g)	**36.88**
k. Dry Soil + Tare mass (g)	**33.03**
l. Water Mass (g)	**3.85**
m. Tare Mass (g)	**19.48**
n. Dry Soil Mass (g)	**13.55**
o. Moisture Content (%)	**28.4**
Test Sequence 2	
i. Container Number	**T33**
j. Wet Soil + Tare Mass (g)	**27.9**
k. Dry Soil + Tare mass (g)	**25.07**
l. Water Mass (g)	**2.83**
m. Tare Mass (g)	**14.89**
n. Dry Soil Mass (g)	**10.18**
o. Moisture Content (%)	**27.8**
Liquid Limit (%)	**78**
Plastic Limit (%)	**28**
Plasticity Index (%)	**50**
Gravel (#4) retained (%)	**0.0**
Sand (#200) retained (%)	**2.5**
Fines (minus #200) (%)	**97.5**
Group Symbol	**CH**
Group Name	**FAT CLAY**

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2641
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	07/27/2010
Testing Technician(s):	B. LANDERS	Checked by:	W. PROCHASKA
Submitted by:	G. LECOQ		

Test ID	4						
Source of material	**SOUTH END NEW PIT**						
Station							
Offset							
Lift No							
X-Coor							
Y-Coor							
Feature							
Elevation							
Visual Description	**BR. SA. CL.**						
Est amt. ret. on #40 (%)	**0**						
Sample Air Dried?	**NO**						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	**25**						
a. Container Number	**T38**						
b. Wet Soil + Tare Mass (g)	**47.11**						
c. Dry Soil + Tare Mass (g)	**39.19**						
d. Water Mass (g)	**7.92**						
e. Tare Mass (g)	**16.85**						
f. Dry Soil Mass (g)	**22.34**						
g. Moisture Content (%)	**35.5**						
Test Sequence 2	**25**						
a. Container Number	**T28**						
b. Wet Soil + Tare Mass (g)	**46.06**						
c. Dry Soil + Tare Mass (g)	**38.69**						
d. Water Mass (g)	**7.37**						
e. Tare Mass (g)	**17.88**						
f. Dry Soil Mass (g)	**20.81**						
g. Moisture Content (%)	**35.4**						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	**T52**						
j. Wet Soil + Tare Mass (g)	**34.12**						
k. Dry Soil + Tare mass (g)	**31.62**						
l. Water Mass (g)	**2.50**						
m. Tare Mass (g)	**20.25**						
n. Dry Soil Mass (g)	**11.37**						
o. Moisture Content (%)	**22.0**						
Test Sequence 2							
i. Container Number	**T51**						
j. Wet Soil + Tare Mass (g)	**32.79**						
k. Dry Soil + Tare mass (g)	**30**						
l. Water Mass (g)	**2.79**						
m. Tare Mass (g)	**17.44**						
n. Dry Soil Mass (g)	**12.56**						
o. Moisture Content (%)	**22.2**						
Liquid Limit (%)	**35**						
Plastic Limit (%)	**22**						
Plasticity Index (%)	**13**						
Gravel (#4) retained (%)	**0.0**						
Sand (#200) retained (%)	**6.3**						
Fines (minus #200) (%)	**93.7**						
Group Symbol	**CL**						
Group Name	**LEAN CLAY**						

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2653
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	08/02/2010
Testing Technician(s):	B. LANDERS	Checked by:	G. LECOQ
Submitted by:	G. LECOQ		

Test ID	6	7	8				
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	FLOOD SIDE				
Station	181+43	175+00	177+00				
Offset	6' F.S.	15' F.S.					
Lift No	1	1	1				
X-Coor	E3666066.2	E3665443.2					
Y-Coor	N500562.3	N500655.8					
Feature	EMBANKMENT	EMBANKMENT					
Elevation	6.3	5.7					
Visual Description	BR. CLAY	BR. CLAY	BR. CLAY				
Est amt. ret. on #40 (%)	0	0	0				
Sample Air Dried?	NO	NO	NO				
Liquid Limit (ASTM D 4318)							
Test Sequence 1	29	25	25				
a. Container Number	T46	T45	T34				
b. Wet Soil + Tare Mass (g)	37.40	47.7	48.60				
c. Dry Soil + Tare Mass (g)	29.09	37.12	37.11				
d. Water Mass (g)	8.31	10.58	11.49				
e. Tare Mass (g)	14.79	19.19	17.58				
f. Dry Soil Mass (g)	14.30	17.93	19.53				
g. Moisture Content (%)	58.1	59.0	58.8				
Test Sequence 2	28	26	25				
a. Container Number	T17	T40	T26				
b. Wet Soil + Tare Mass (g)	46.3	46.7	45.43				
c. Dry Soil + Tare Mass (g)	36.59	36.54	35.59				
d. Water Mass (g)	9.71	10.16	9.84				
e. Tare Mass (g)	19.85	19.32	18.98				
f. Dry Soil Mass (g)	16.74	17.22	16.61				
g. Moisture Content (%)	58.0	59.0	59.2				
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T29	T43	T23				
j. Wet Soil + Tare Mass (g)	31.05	31.39	31.31				
k. Dry Soil + Tare mass (g)	28.56	28.88	28.03				
l. Water Mass (g)	2.49	2.51	3.28				
m. Tare Mass (g)	18.14	18.52	14.23				
n. Dry Soil Mass (g)	10.42	10.36	13.80				
o. Moisture Content (%)	23.9	24.2	23.8				
Test Sequence 2							
i. Container Number	T35	T44	T6				
j. Wet Soil + Tare Mass (g)	26.12	28.49	30.79				
k. Dry Soil + Tare mass (g)	24.07	25.81	28.56				
l. Water Mass (g)	2.05	2.68	2.23				
m. Tare Mass (g)	15.52	14.93	19.18				
n. Dry Soil Mass (g)	8.55	10.88	9.38				
o. Moisture Content (%)	24.0	24.6	23.8				
Liquid Limit (%)	59	59	59				
Plastic Limit (%)	24	24	24				
Plasticity Index (%)	35	35	35				
Gravel (#4) retained (%)	0.0	0.0	0.0				
Sand (#200) retained (%)	2.7	3.1	3.7				
Fines (minus #200) (%)	97.3	96.9	96.3				
Group Symbol	CH	CH	CH				
Group Name	FAT CLAY	FAT CLAY	FAT CLAY				

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2690
USACE Contract no.	W912p8-09-D-0046-0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	08/06/2010
Testing Technician(s):	B. LANDERS	Checked by:	G. LECOQ
Submitted by:	G. LECOQ		

Test ID	9	10	11	12	13	14	15
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT
Station	168+84.1	161+04.7	180+73.1	175+05	169+76.5	164+82.8	159+93.8
Offset	13.8	27.9	-86.9	-80.5	-78.2	-83.3	-77.3
Lift No	1	1	1	1	1	1	1
X-Coor	E3664828.2	E3664049.5	E3666027.6	E3665454.74	E3664926.3	E3664434.4	E3663945.9
Y-Coor	N500701.0	N500738.9	N500668.1	N500753.87	N500786.6	N500824.7	N500851.3
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT
Elevation	5.9	4.9	5.1	4.8	4.9	5	4.9
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY
Est amt. ret. on #40 (%)	0	0	0	0	0	0	0
Sample Air Dried?	NO	NO	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318)							
Test Sequence 1	29	21	26	30	24	26	30
a. Container Number	T24	T18	T27	T8	T47	T19	T43
b. Wet Soil + Tare Mass (g)	39.12	41.03	41.87	47.00	48.74	39.65	41.34
c. Dry Soil + Tare Mass (g)	29.62	34.48	33.91	36.47	36.62	31.48	32.99
d. Water Mass (g)	9.50	6.55	7.96	10.53	12.12	8.17	8.35
e. Tare Mass (g)	13.81	17.36	20.02	20.27	16.86	17.83	18.50
f. Dry Soil Mass (g)	15.81	17.12	13.89	16.20	19.76	13.65	14.49
g. Moisture Content (%)	60.1	38.3	57.3	65.0	61.3	59.9	57.6
Test Sequence 2	30	21	24	30	23	26	29
a. Container Number	T14	T21	T42	T12	T42	T41	T17
b. Wet Soil + Tare Mass (g)	42.18	42.95	45.39	45.38	43.18	48.73	36.31
c. Dry Soil + Tare Mass (g)	32.07	35.35	36.05	35.22	33.01	37.64	28.46
d. Water Mass (g)	10.11	7.60	9.34	10.16	10.17	11.09	7.85
e. Tare Mass (g)	15.28	15.55	19.73	19.76	16.58	19.44	14.81
f. Dry Soil Mass (g)	16.79	19.80	16.32	15.46	16.43	18.20	13.65
g. Moisture Content (%)	60.2	38.4	57.2	65.7	61.9	60.9	57.5
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T9	T16	T25	T51	T26	T23	T35
j. Wet Soil + Tare Mass (g)	30.61	32.89	27.73	26.82	30.18	25.21	26.27
k. Dry Soil + Tare mass (g)	28.39	30.41	25.52	24.82	27.99	22.98	23.88
l. Water Mass (g)	2.22	2.48	2.21	2.00	2.19	2.23	2.39
m. Tare Mass (g)	19.71	20.02	16.70	17.54	19.00	14.27	15.58
n. Dry Soil Mass (g)	8.68	10.39	8.82	7.28	8.99	8.71	8.30
o. Moisture Content (%)	25.6	23.9	25.1	27.5	24.4	25.6	28.8
Test Sequence 2							
i. Container Number	T44	T34	T7	T15	T38	T11	T29
j. Wet Soil + Tare Mass (g)	26.04	29.55	32.81	26.24	27.84	25.01	26.98
k. Dry Soil + Tare mass (g)	23.82	27.24	30.19	23.99	25.7	23.03	25.03
l. Water Mass (g)	2.22	2.31	2.62	2.25	2.14	1.98	1.95
m. Tare Mass (g)	14.94	17.54	19.82	15.76	16.88	15.48	18.14
n. Dry Soil Mass (g)	8.88	9.70	10.37	8.23	8.82	7.55	6.89
o. Moisture Content (%)	25.0	23.8	25.3	27.3	24.3	26.2	28.3
Liquid Limit (%)	61	38	57	67	61	61	59
Plastic Limit (%)	25	24	25	27	24	26	29
Plasticity Index (%)	36	14	32	40	37	35	30
Gravel (#4) retained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sand (#200) retained (%)	2.6	11.8	2.3	3.7	8.1	7.7	3.4
Fines (minus #200) (%)	97.4	88.2	97.7	96.3	91.9	92.3	96.6
Group Symbol	CH	CH	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2690		
USACE Contract no.	W912p8-09-D-0046-0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	08/06/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	16	17	18	19	20	21	22
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT
Station	154+92.5	149+86	145+01	139+99.4	134+96.2	129+97.3	124+98.7
Offset	-77.5	-76.4	-78.7	-78.9	-80.7	-82.5	-80
Lift No	1	1	1	1	1	1	1
X-Coor	E3663445.7	E3662940.3	E3662457.1	E3661956.8	E3661455.2	E3660957.9	E3660460.3
Y-Coor	N500884.8	N500917.4	N500952.1	N500987.2	N501026.7	N501065.7	N501100.6
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT
Elevation	4.8	4.9	4.9	4.8	4.6	4.9	5
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY
Est amt. ret. on #40 (%)	0	0	0	0	0	0	0
Sample Air Dried?	NO	NO	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318)							
Test Sequence 1	23	22	27	28	30	30	22
a. Container Number	T37	T24	T6	T30	T33	T13	T44
b. Wet Soil + Tare Mass (g)	42.74	32.44	40.69	43.90	42.75	42.10	37.24
c. Dry Soil + Tare Mass (g)	32.99	25.51	33.03	35.11	31.99	33.93	27.71
d. Water Mass (g)	9.75	6.93	7.66	8.79	10.76	8.17	9.53
e. Tare Mass (g)	17.58	13.82	19.86	20.21	14.89	18.04	14.94
f. Dry Soil Mass (g)	15.41	11.69	13.17	14.90	17.10	15.89	12.77
g. Moisture Content (%)	63.3	59.3	58.2	59.0	62.9	51.4	74.6
Test Sequence 2	24	22	26	29	30	29	23
a. Container Number	T28	T45	T21	T20	T32	T42	T9
b. Wet Soil + Tare Mass (g)	35.14	39.5	40.02	40.38	40.82	42.66	39.27
c. Dry Soil + Tare Mass (g)	28.44	32.01	31.15	31.97	31.87	33.77	30.86
d. Water Mass (g)	6.70	7.49	8.87	8.41	8.95	8.89	8.41
e. Tare Mass (g)	17.87	19.25	15.65	17.85	17.63	16.60	19.70
f. Dry Soil Mass (g)	10.57	12.76	15.50	14.12	14.24	17.17	11.16
g. Moisture Content (%)	63.4	58.7	57.2	59.6	62.9	51.8	75.4
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T39	T46	T18	T50	T5	T36	T34
j. Wet Soil + Tare Mass (g)	29.97	29.27	24.85	28.22	29.06	29.80	31.44
k. Dry Soil + Tare mass (g)	27.88	27.24	23.46	26.16	26.68	27.53	27.78
l. Water Mass (g)	2.09	2.03	1.39	2.06	2.38	2.27	3.66
m. Tare Mass (g)	20.79	19.88	17.37	19.09	19.30	18.46	17.55
n. Dry Soil Mass (g)	7.09	7.36	6.09	7.07	7.38	9.07	10.23
o. Moisture Content (%)	29.5	27.6	22.8	29.1	32.2	25.0	35.8
Test Sequence 2							
i. Container Number	T52	T40	T14	T53	T31	T10	T16
j. Wet Soil + Tare Mass (g)	27.08	27.19	23.68	24.78	32.62	25.71	31.5
k. Dry Soil + Tare mass (g)	25.57	25.48	22.15	22.78	29.47	23.7	28.42
l. Water Mass (g)	1.51	1.71	1.53	2.00	3.15	2.01	3.08
m. Tare Mass (g)	20.27	19.35	15.27	15.78	19.52	15.50	20.04
n. Dry Soil Mass (g)	5.30	6.13	6.88	7.00	9.95	8.20	8.38
o. Moisture Content (%)	28.5	27.9	22.2	28.6	31.7	24.5	36.8
Liquid Limit (%)	63	58	58	60	64	53	74
Plastic Limit (%)	29	28	23	29	32	25	36
Plasticity Index (%)	34	30	35	31	32	28	38
Gravel (#4) retained (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sand (#200) retained (%)	4.0	2.4	4.4	2.0	3.9	2.4	3.4
Fines (minus #200) (%)	96.0	97.6	95.6	98.0	96.1	97.6	96.6
Group Symbol	CH	CH	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2690		
USACE Contract no.	W912p8-09-D-0046-0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	08/06/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	**23**						
Source of material	**WILLOW BEND PIT**						
Station	**120+99.2**						
Offset	**-79.6**						
Lift No	**1**						
X-Coor	**E3660062.1**						
Y-Coor	**N501129.9**						
Feature	**EMBANKMENT**						
Elevation	**5.4**						
Visual Description	**G-BR. CLAY**						
Est amt. ret. on #40 (%)	**0**						
Sample Air Dried?	**NO**						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	**22**						
a. Container Number	**T7**						
b. Wet Soil + Tare Mass (g)	**45.77**						
c. Dry Soil + Tare Mass (g)	**37.23**						
d. Water Mass (g)	**8.54**						
e. Tare Mass (g)	**19.81**						
f. Dry Soil Mass (g)	**17.42**						
g. Moisture Content (%)	**49.0**						
Test Sequence 2	**21**						
a. Container Number	**T25**						
b. Wet Soil + Tare Mass (g)	**44.49**						
c. Dry Soil + Tare Mass (g)	**35.40**						
d. Water Mass (g)	**9.09**						
e. Tare Mass (g)	**16.65**						
f. Dry Soil Mass (g)	**18.75**						
g. Moisture Content (%)	**48.5**						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	**T51**						
j. Wet Soil + Tare Mass (g)	**28.35**						
k. Dry Soil + Tare mass (g)	**26.04**						
l. Water Mass (g)	**2.31**						
m. Tare Mass (g)	**17.55**						
n. Dry Soil Mass (g)	**8.49**						
o. Moisture Content (%)	**27.2**						
Test Sequence 2							
i. Container Number	**T15**						
j. Wet Soil + Tare Mass (g)	**29.13**						
k. Dry Soil + Tare mass (g)	**26.25**						
l. Water Mass (g)	**2.88**						
m. Tare Mass (g)	**15.75**						
n. Dry Soil Mass (g)	**10.50**						
o. Moisture Content (%)	**27.4**						
Liquid Limit (%)	**48**						
Plastic Limit (%)	**27**						
Plasticity Index (%)	**21**						
Gravel (#4) retained (%)	**0.0**						
Sand (#200) retained (%)	**3.0**						
Fines (minus #200) (%)	**97.0**						
Group Symbol	**CH**						
Group Name	**FAT CLAY**						
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2690		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	08/06/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	23						
Source of material	WILLOW BEND PIT						
Station	120+99.2						
Offset	-79.6						
Lift No	1						
X-Coor	E3660062.1						
Y-Coor	N501129.9						
Feature	EMBANKMENT						
Elevation	5.4						
Visual Description	G-BR. CLAY						
Est amt. ret. on #40 (%)	0						
Sample Air Dried?	NO						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	22						
a. Container Number	T7						
b. Wet Soil + Tare Mass (g)	45.77						
c. Dry Soil + Tare Mass (g)	37.23						
d. Water Mass (g)	8.54						
e. Tare Mass (g)	19.81						
f. Dry Soil Mass (g)	17.42						
g. Moisture Content (%)	49.0						
Test Sequence 2	21						
a. Container Number	T25						
b. Wet Soil + Tare Mass (g)	44.49						
c. Dry Soil + Tare Mass (g)	35.40						
d. Water Mass (g)	9.09						
e. Tare Mass (g)	16.65						
f. Dry Soil Mass (g)	18.75						
g. Moisture Content (%)	48.5						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T51						
j. Wet Soil + Tare Mass (g)	28.35						
k. Dry Soil + Tare mass (g)	26.04						
l. Water Mass (g)	2.31						
m. Tare Mass (g)	17.55						
n. Dry Soil Mass (g)	8.49						
o. Moisture Content (%)	27.2						
Test Sequence 2							
i. Container Number	T15						
j. Wet Soil + Tare Mass (g)	29.13						
k. Dry Soil + Tare mass (g)	26.25						
l. Water Mass (g)	2.88						
m. Tare Mass (g)	15.75						
n. Dry Soil Mass (g)	10.50						
o. Moisture Content (%)	27.4						
Liquid Limit (%)	48						
Plastic Limit (%)	27						
Plasticity Index (%)	21						
Gravel (#4) retained (%)	0.0						
Sand (#200) retained (%)	3.0						
Fines (minus #200) (%)	97.0						
Group Symbol	CH						
Group Name	FAT CLAY						
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737	Report ID	2762
USACE Contract no.	W912p8-09-D-0046 0008	Contractor	PHYLWAY CONSTRUCTION
Project	WBV 14C.2 Phase 2, Lift 1	Sample Date	08/20/2010
Testing Technician(s):	B. LANDERS	Checked by:	G. LECOQ
Submitted by:	G. LECOQ		

Test ID	24						
Source of material	**Material of Existing Levee**						
Station	**120+50**						
Offset							
Lift No							
X-Coor							
Y-Coor							
Feature							
Elevation							
Visual Description	**BR. CLAY**						
Est amt. ret. on #40 (%)	**0**						
Sample Air Dried?	**NO**						
Liquid Limit (ASTM D 4318)							
Test Sequence 1	**21**						
a. Container Number	**T20**						
b. Wet Soil + Tare Mass (g)	**43.98**						
c. Dry Soil + Tare Mass (g)	**32.90**						
d. Water Mass (g)	**11.08**						
e. Tare Mass (g)	**17.87**						
f. Dry Soil Mass (g)	**15.03**						
g. Moisture Content (%)	**73.7**						
Test Sequence 2	**21**						
a. Container Number	**T28**						
b. Wet Soil + Tare Mass (g)	**42.93**						
c. Dry Soil + Tare Mass (g)	**32.33**						
d. Water Mass (g)	**10.60**						
e. Tare Mass (g)	**17.88**						
f. Dry Soil Mass (g)	**14.45**						
g. Moisture Content (%)	**73.4**						
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	**T29**						
j. Wet Soil + Tare Mass (g)	**28.01**						
k. Dry Soil + Tare mass (g)	**25.80**						
l. Water Mass (g)	**2.21**						
m. Tare Mass (g)	**18.14**						
n. Dry Soil Mass (g)	**7.66**						
o. Moisture Content (%)	**28.9**						
Test Sequence 2							
i. Container Number	**T35**						
j. Wet Soil + Tare Mass (g)	**24.78**						
k. Dry Soil + Tare mass (g)	**22.71**						
l. Water Mass (g)	**2.07**						
m. Tare Mass (g)	**15.57**						
n. Dry Soil Mass (g)	**7.14**						
o. Moisture Content (%)	**29.0**						
Liquid Limit (%)	**72**						
Plastic Limit (%)	**29**						
Plasticity Index (%)	**43**						
Gravel (#4) retained (%)	**0.0**						
Sand (#200) retained (%)	**2.9**						
Fines (minus #200) (%)	**97.1**						
Group Symbol	**CH**						
Group Name	**FAT CLAY**						

Remarks:

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2928		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	09/14/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	47	48	49				
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT				
Station	139+03	119+36	110+68				
Offset	F.S. +22'	F.S. +12'	F.S. +1'				
Lift No	1	4	3				
X-Coor	E3661854.2	E3659892.3	E3659587.8				
Y-Coor	N500893.4	N501050.6	N501730.1				
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT				
Elevation	4.8	6.8	6.9				
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY				
Est amt. ret. on #40 (%)	0	0	0				
Sample Air Dried?	NO	NO	NO				
Liquid Limit (ASTM D 4318)							
Test Sequence 1	26	21	22				
a. Container Number	T51	T33	T18				
b. Wet Soil + Tare Mass (g)	38.60	32.18	35.67				
c. Dry Soil + Tare Mass (g)	30.62	25.18	28.45				
d. Water Mass (g)	7.98	7.00	7.22				
e. Tare Mass (g)	17.52	15.02	17.35				
f. Dry Soil Mass (g)	13.10	10.16	11.10				
g. Moisture Content (%)	60.9	68.9	65.0				
Test Sequence 2	26	21	24				
a. Container Number	T29	T5	T25				
b. Wet Soil + Tare Mass (g)	36.82	32.51	33.72				
c. Dry Soil + Tare Mass (g)	29.74	27.08	26.98				
d. Water Mass (g)	7.08	5.43	6.74				
e. Tare Mass (g)	18.20	19.29	16.60				
f. Dry Soil Mass (g)	11.54	7.79	10.38				
g. Moisture Content (%)	61.4	69.7	64.9				
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T19	T7	T17				
j. Wet Soil + Tare Mass (g)	29.11	28.87	27.37				
k. Dry Soil + Tare mass (g)	26.89	27.18	25.1				
l. Water Mass (g)	2.22	1.69	2.27				
m. Tare Mass (g)	17.80	19.72	14.70				
n. Dry Soil Mass (g)	9.09	7.46	10.40				
o. Moisture Content (%)	24.4	22.7	21.8				
Test Sequence 2							
i. Container Number	T6	T37	T34				
j. Wet Soil + Tare Mass (g)	30.34	26.89	28.9				
k. Dry Soil + Tare mass (g)	28.15	25.17	26.84				
l. Water Mass (g)	2.19	1.72	2.06				
m. Tare Mass (g)	19.18	17.67	17.63				
n. Dry Soil Mass (g)	8.97	7.50	9.21				
o. Moisture Content (%)	24.4	22.9	22.4				
Liquid Limit (%)	61	68	64				
Plastic Limit (%)	24	23	22				
Plasticity Index (%)	37	45	42				
Gravel (#4) retained (%)	0.0	0.0	0.0				
Sand (#200) retained (%)	3.2	7.6	4.1				
Fines (minus #200) (%)	96.8	92.4	95.9				
Group Symbol	CH	CH	CH				
Group Name	FAT CLAY	FAT CLAY	FAT CLAY				
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2942		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	09/17/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	58	59	60	61	62		
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT		
Station	110+81	175+01	170+03	119+13	119+59		
Offset	C/L -3.2	F.S. +25.4'	F.S. +28.6'	C/L +2.5'	P.S. -8.2'		
Lift No	5	2	2	6	7		
X-Coor	E3659588.6	E3665443.3	E3664945.9	E3659870.9	E3659917.5		
Y-Coor	N501716.1	N500648.2	N500678.4	N501061.8	N501069.3		
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT	EMBANKMENT		
Elevation	8.2	5.7	5.8	8.3	10.9		
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY		
Est amt. ret. on #40 (%)	0	0	0	0	0		
Sample Air Dried?	NO	NO	NO	NO	NO		
Liquid Limit (ASTM D 4318)							
Test Sequence 1	27	21	27	22	22		
a. Container Number	ML17	ML13	ML06	T11	T7		
b. Wet Soil + Tare Mass (g)	293.49	290	274.4	36.25	42.95		
c. Dry Soil + Tare Mass (g)	286.79	283.08	268.08	28.41	33.64		
d. Water Mass (g)	6.70	6.92	6.32	7.84	9.31		
e. Tare Mass (g)	276.43	272.66	257.94	15.12	19.73		
f. Dry Soil Mass (g)	10.36	10.42	10.14	13.29	13.91		
g. Moisture Content (%)	64.7	66.4	62.3	59.0	66.9		
Test Sequence 2	28	21	27	21	21		
a. Container Number	ML05	ML22	ML04	T25	T6		
b. Wet Soil + Tare Mass (g)	268.54	293.62	251.94	39	42.32		
c. Dry Soil + Tare Mass (g)	262.95	285.41	244.75	30.66	33.10		
d. Water Mass (g)	5.59	8.21	7.19	8.34	9.22		
e. Tare Mass (g)	254.17	272.97	233.09	16.54	19.18		
f. Dry Soil Mass (g)	8.78	12.44	11.66	14.12	13.92		
g. Moisture Content (%)	63.7	66.0	61.7	59.1	66.2		
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	ML27	ML03	ML102	T32	T47		
j. Wet Soil + Tare Mass (g)	292.65	265.25	276.03	25.04	23.9		
k. Dry Soil + Tare mass (g)	290.90	262.86	272.45	23.8	22.55		
l. Water Mass (g)	1.75	2.39	3.58	1.24	1.35		
m. Tare Mass (g)	281.28	251.76	255.06	17.64	16.85		
n. Dry Soil Mass (g)	9.62	11.10	17.39	6.16	5.70		
o. Moisture Content (%)	18.2	21.5	20.6	20.1	23.7		
Test Sequence 2							
i. Container Number	ML26	ML103	ML10	T36	T45		
j. Wet Soil + Tare Mass (g)	291.83	294.17	272.17	26.46	27.06		
k. Dry Soil + Tare mass (g)	289.91	290.98	268.62	25.09	25.59		
l. Water Mass (g)	1.92	3.19	3.55	1.37	1.47		
m. Tare Mass (g)	279.26	275.85	251.44	18.48	19.21		
n. Dry Soil Mass (g)	10.65	15.13	17.18	6.61	6.38		
o. Moisture Content (%)	18.0	21.1	20.7	20.7	23.0		
Liquid Limit (%)	65	65	63	58	50		
Plastic Limit (%)	18	21	21	20	23		
Plasticity Index (%)	47	44	42	38	27		
Gravel (#4) retained (%)	0.0	0.0	0.0	0.0	0.0		
Sand (#200) retained (%)	3.4	3.2	2.6	4.4	3.7		
Fines (minus #200) (%)	96.6	96.8	97.4	95.6	96.3		
Group Symbol	CH	CH	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY		
Remarks:							

TOLUNAY-WONG ENGINEERS, INC.

Unified Soil Classification System - ASTM D 2487

Laboratory	Tolunay-Wong Engineers, Inc. - 37534 Hwy. 30, Gonzales, LA 70737			Report ID	2968		
USACE Contract no.	W912p8-09-D-0046 0008			Contractor	PHYLWAY CONSTRUCTION		
Project	WBV 14C.2 Phase 2, Lift 1			Sample Date	09/18/2010		
Testing Technician(s):	B. LANDERS		Checked by:	G. LECOQ		Submitted by:	G. LECOQ
Test ID	63	64	65				
Source of material	WILLOW BEND PIT	WILLOW BEND PIT	WILLOW BEND PIT				
Station	110+75	119+26	119+84				
Offset	F.S. + 8.4	C/L +2.9	P.S. -126				
Lift No	6	8	1				
X-Coor	E3659578.8	E3659883.4	E3659951.9				
Y-Coor	N501724.5	N501060.6	N501184.8				
Feature	EMBANKMENT	EMBANKMENT	EMBANKMENT				
Elevation	9.2	12.2	2.6				
Visual Description	G-BR. CLAY	G-BR. CLAY	G-BR. CLAY				
Est amt. ret. on #40 (%)	0	0	0				
Sample Air Dried?	NO	NO	NO				
Liquid Limit (ASTM D 4318)							
Test Sequence 1	24	26	23				
a. Container Number	T25	T28	T47				
b. Wet Soil + Tare Mass (g)	28.86	31.79	31.9				
c. Dry Soil + Tare Mass (g)	23.70	26.16	25.45				
d. Water Mass (g)	5.16	5.63	6.45				
e. Tare Mass (g)	15.60	17.88	16.84				
f. Dry Soil Mass (g)	8.10	8.28	8.61				
g. Moisture Content (%)	63.7	68.0	74.9				
Test Sequence 2	25	27	24				
a. Container Number	T37	T12	T6				
b. Wet Soil + Tare Mass (g)	29.93	31.19	33.94				
c. Dry Soil + Tare Mass (g)	25.09	26.53	27.62				
d. Water Mass (g)	4.84	4.66	6.32				
e. Tare Mass (g)	17.60	19.65	19.17				
f. Dry Soil Mass (g)	7.49	6.88	8.45				
g. Moisture Content (%)	64.6	67.7	74.8				
Plastic Limit (ASTM D 4318)							
Test Sequence 1							
i. Container Number	T51	T50	T7				
j. Wet Soil + Tare Mass (g)	33.37	35.06	37.7				
k. Dry Soil + Tare mass (g)	30.97	32.39	34.64				
l. Water Mass (g)	2.40	2.67	3.06				
m. Tare Mass (g)	17.51	19.14	19.72				
n. Dry Soil Mass (g)	13.46	13.25	14.92				
o. Moisture Content (%)	17.8	20.2	20.5				
Test Sequence 2							
i. Container Number	T29	T17	T36				
j. Wet Soil + Tare Mass (g)	32.95	29.13	35.03				
k. Dry Soil + Tare mass (g)	30.8	26.73	32.14				
l. Water Mass (g)	2.15	2.40	2.89				
m. Tare Mass (g)	18.19	14.71	18.48				
n. Dry Soil Mass (g)	12.61	12.02	13.66				
o. Moisture Content (%)	17.0	20.0	21.2				
Liquid Limit (%)	64	68	74				
Plastic Limit (%)	17	20	21				
Plasticity Index (%)	47	48	53				
Gravel (#4) retained (%)	0.0	0.0	0.0				
Sand (#200) retained (%)	5.8	3.2	7.9				
Fines (minus #200) (%)	94.2	96.8	92.1				
Group Symbol	CH	CH	CH				
Group Name	FAT CLAY	FAT CLAY	FAT CLAY				
Remarks:							

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3829
USACE Contract No	W912P8-09-D-0046-0007	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-15a.2 Phase 2, First Lift			**Sample Date**	1/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	729	730			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G.-Br. Clay	G.-Br. Clay			
Station	427+15	431+48			
Offset	P.S. -24.9	P.S. -16.3			
Lift No	8	8			
Latitude (°N)	29.870093	29.870083			
Longitude (°W)	90.191332	90.189963			
Elevation (ft)	8.5	9.0			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25			
Tare No	T43	T29			
Wet Soil + Tare Mass (g)	34.84	44.98			
Dry Soil + Tare Mass (g)	28.93	35.16			
Tare Mass (g)	18.52	18.16			
Moisture Content (%)	57.6	57.8			
Trial No 2 / Blow Count	29	26			
Tare No	T14	T51			
Wet Soil + Tare Mass (g)	40.76	41.09			
Dry Soil + Tare Mass (g)	31.52	32.42			
Tare Mass (g)	15.26	17.48			
Moisture Content (%)	57.9	58.3			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T37	T22			
Wet Soil + Tare Mass (g)	25.23	27.31			
Dry Soil + Tare Mass (g)	23.86	25.82			
Tare Mass (g)	17.62	19.00			
Moisture Content (%)	22.0	21.8			
Trial No 2 / Tare No	T105	T30			
Wet Soil + Tare Mass (g)	23.57	26.78			
Dry Soil + Tare Mass (g)	22.17	25.65			
Tare Mass (g)	15.78	20.28			
Moisture Content (%)	21.9	21.0			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.34	96.02			
Dry Soil Mass after Washing (g)	4.30	8.93			
Test Status					
Liquid Limit	**58**	**58**			
Plastic Limit	**22**	**21**			
Plasticity Index	**36**	**37**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.1	9.3			
Fines (%)	95.9	90.7			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4506
USACE Contract No	W912P8-09-D-0046-0007	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-15a.2 Phase 2, First Lift			**Sample Date**	4/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1013	1014	1015		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	47+24	480+32	317+80		
Offset	P.S. -119.7	P.S. -98.9	P.S. -0.8		
Lift No	5	6	8		
Latitude (°N)	29.870302	29.870244	29.870457		
Longitude (°W)	90.176477	90.176477	90.255799		
Elevation (ft)	-1.4	-1.7	10.7		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25		
Tare No	T80	T32	T47		
Wet Soil + Tare Mass (g)	28.61	30.52	29.16		
Dry Soil + Tare Mass (g)	23.13	24.75	24.01		
Tare Mass (g)	16.59	17.65	16.88		
Moisture Content (%)	83.8	81.3	72.2		
Trial No 2 / Blow Count	25	25	25		
Tare No	T83	T92	T37		
Wet Soil + Tare Mass (g)	30.27	41.10	35.44		
Dry Soil + Tare Mass (g)	24.03	34.10	28.01		
Tare Mass (g)	16.60	25.47	17.59		
Moisture Content (%)	84.0	81.1	71.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T34	T51	G113		
Wet Soil + Tare Mass (g)	26.18	26.15	24.40		
Dry Soil + Tare Mass (g)	24.28	24.41	23.13		
Tare Mass (g)	17.52	17.47	17.64		
Moisture Content (%)	28.1	25.1	23.1		
Trial No 2 / Tare No	T68	G126	T103		
Wet Soil + Tare Mass (g)	28.99	25.25	23.67		
Dry Soil + Tare Mass (g)	27.20	23.57	22.51		
Tare Mass (g)	20.74	16.68	17.44		
Moisture Content (%)	27.7	24.4	22.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.17	114.56	110.33		
Dry Soil Mass after Washing (g)	4.87	4.34	3.58		
Test Status					
Liquid Limit	**84**	**81**	**72**		
Plastic Limit	**28**	**25**	**23**		
Plasticity Index	**56**	**56**	**49**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.4	3.8	3.2		
Fines (%)	95.6	96.2	96.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks	TEST ID 1013 PROCTOR				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4517
USACE Contract No	W912P8-09-D-0046-0007	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-15a.2 Phase 2, First Lift			**Sample Date**	4/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1016	1017	1018	1019	1020
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	317+60	483+46	481+40	473+62	317+54
Offset	F.S. +3.8	P.S. -101.9	P.S. -137.0	P.S. -35.7	F.S. +3.2
Lift No	9	6	6	6	10
Latitude (°N)	29.870455	29.870393	29.870386	29.870045	29.870460
Longitude (°W)	90.225865	90.173661	90.174286	90.176676	90.225883
Elevation (ft)	12.0	0.8	-1.6	2.5	12.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	26	27	25	25
Tare No	T12	T27	T20	G118	T66
Wet Soil + Tare Mass (g)	33.59	30.89	34.88	32.57	31.70
Dry Soil + Tare Mass (g)	27.92	26.05	27.23	24.52	25.28
Tare Mass (g)	19.64	19.97	17.83	15.55	15.26
Moisture Content (%)	67.0	80.0	82.1	89.7	64.1
Trial No 2 / Blow Count	22	27	28	25	26
Tare No	T36	G101	G103	T67	T10
Wet Soil + Tare Mass (g)	33.28	36.38	30.88	34.09	29.35
Dry Soil + Tare Mass (g)	27.27	28.78	25.84	26.91	23.94
Tare Mass (g)	18.48	19.28	19.63	18.93	15.49
Moisture Content (%)	67.3	80.7	82.3	90.0	64.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T1021	T16	T45	T24	T9
Wet Soil + Tare Mass (g)	22.55	28.25	28.79	21.72	27.27
Dry Soil + Tare Mass (g)	21.31	26.68	26.84	19.99	26.08
Tare Mass (g)	15.18	19.98	19.21	13.80	19.70
Moisture Content (%)	20.2	23.4	25.6	27.9	18.7
Trial No 2 / Tare No	G106	T42	T75	T19	T33
Wet Soil + Tare Mass (g)	24.03	24.26	25.84	24.50	22.00
Dry Soil + Tare Mass (g)	22.96	22.80	23.87	23.04	20.88
Tare Mass (g)	17.41	16.58	16.16	17.81	14.91
Moisture Content (%)	19.3	23.5	25.6	27.9	18.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.16	94.60	105.97	111.87	109.66
Dry Soil Mass after Washing (g)	4.02	3.28	5.23	6.93	4.46
Test Status					
Liquid Limit	**67**	**80**	**82**	**90**	**64**
Plastic Limit	**20**	**23**	**26**	**28**	**19**
Plasticity Index	**47**	**57**	**56**	**62**	**45**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.6	3.5	4.9	6.2	4.1
Fines (%)	96.4	96.5	95.1	93.8	95.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4523
USACE Contract No	W912P8-09-D-0046-0007	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-15a.2 Phase 2, First Lift			**Sample Date**	4/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1021	1022	1023	1024	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	317+61	512+34	508+61	504+88	
Offset	F.S. +3.5	F.S. +53.5	F.S. +59.9	F.S. +65.6	
Lift No	11	2	2	2	
Latitude (°N)	29.870455	29.875817	29.874895	29.873973	
Longitude (°W)	90.225863	90.167727	90.168242	90.168771	
Elevation (ft)	12.8	5.9	6.0	5.7	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	28	28	28	
Tare No	G103	T67	T10	T84	
Wet Soil + Tare Mass (g)	37.14	34.37	28.46	33.64	
Dry Soil + Tare Mass (g)	30.28	27.28	22.54	28.25	
Tare Mass (g)	19.62	18.92	15.49	22.06	
Moisture Content (%)	64.7	86.0	85.1	88.3	
Trial No 2 / Blow Count	26	28	28	28	
Tare No	T20	G118	T66	T72	
Wet Soil + Tare Mass (g)	34.74	31.04	32.98	41.35	
Dry Soil + Tare Mass (g)	28.10	23.87	24.88	32.85	
Tare Mass (g)	17.82	15.55	15.27	23.11	
Moisture Content (%)	64.9	87.4	85.5	88.5	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T45	T19	T33	T6	
Wet Soil + Tare Mass (g)	30.47	27.34	23.02	30.07	
Dry Soil + Tare Mass (g)	28.44	25.20	21.26	27.69	
Tare Mass (g)	19.21	17.79	14.92	19.17	
Moisture Content (%)	22.0	28.9	27.8	27.9	
Trial No 2 / Tare No	T75	T24	T9	T107	
Wet Soil + Tare Mass (g)	28.48	24.52	29.64	23.72	
Dry Soil + Tare Mass (g)	26.28	22.09	27.46	21.58	
Tare Mass (g)	16.16	13.79	19.69	13.79	
Moisture Content (%)	21.7	29.3	28.1	27.5	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.39	105.84	85.32	108.19	
Dry Soil Mass after Washing (g)	3.12	11.09	10.47	8.83	
Test Status					
Liquid Limit	**65**	**87**	**85**	**88**	
Plastic Limit	**22**	**29**	**28**	**28**	
Plasticity Index	**43**	**58**	**57**	**60**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.1	10.5	12.3	8.2	
Fines (%)	95.9	89.5	87.7	91.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Ardaman & Associates, Inc.	**Lab Type**	QA	**Report No**	10-81-3667-4074
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway Construction	**Revision**	
Project	New Westwego Pump Station to Orleans Village Levee			**Sample Date**	9/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	Calvin Hu, Jami Harpole	**Reviewed By**	Eric Paille	**Submitted By**	Dustin Wyble
Test No	T-7	T-8	T-9		
Retest of Test ID		T-5			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Berm	Berm	Berm		
Visual Description	Brown Clay (CH)	Brown and Gray Clay (CH)	Brown Clay (CH)		
Station	93+17	103+06	154+88		
Offset	16' FS	CL	37' FS		
Lift No	1	1	2		
Latitude (°N)					
Longitude (°W)					
Elevation (ft)	4.5	5.8	5.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	No	No	No		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	29	30	30		
Tare No	512	635	104		
Wet Soil + Tare Mass (g)	53.37	53.21	53.24		
Dry Soil + Tare Mass (g)	47.27	46.06	47.20		
Tare Mass (g)	37.83	37.91	38.31		
Moisture Content (%)	65.8	89.7	69.5		
Trial No 2 / Blow Count	29	30	30		
Tare No	910	554	549		
Wet Soil + Tare Mass (g)	53.48	49.17	50.02		
Dry Soil + Tare Mass (g)	47.69	43.48	44.85		
Tare Mass (g)	38.70	37.00	37.17		
Moisture Content (%)	65.6	89.8	68.8		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	564	715	906		
Wet Soil + Tare Mass (g)	47.81	47.72	50.13		
Dry Soil + Tare Mass (g)	46.17	45.64	48.08		
Tare Mass (g)	37.66	37.63	38.44		
Moisture Content (%)	19.3	26.0	21.3		
Trial No 2 / Tare No	557	106	525		
Wet Soil + Tare Mass (g)	48.11	48.33	47.13		
Dry Soil + Tare Mass (g)	46.43	46.13	45.33		
Tare Mass (g)	37.65	37.62	36.99		
Moisture Content (%)	19.1	25.9	21.6		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.69	103.73	104.45		
Dry Soil Mass after Washing (g)	5.14	8.87	5.18		
Test Status					
Liquid Limit	**66**	**90**	**69**		
Plastic Limit	**19**	**26**	**21**		
Plasticity Index	**47**	**64**	**48**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.0	8.6	5.0		
Fines (%)	95.0	91.4	95.0		
Group Symbol	CH	CH	CH		
Group Name	CH	CH	CH		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks	Coordinates are as follows: (T-7) N.503429.4 E.3660009.5, (T-8) N.502470.2 E.3659766.5, (T-9) N.500770.7 E.3663434.3				
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Ardaman & Associates, Inc.	**Lab Type**	QA	**Report No**	10-81-3667-4075
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway Construction	**Revision**	
Project	New Westwego Pump Station to Orleans Village Levee			**Sample Date**	9/29/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	Calvin Hu, Jami Harpole	**Reviewed By**	Eric Paille	**Submitted By**	Dustin Wyble
Test No	C-3	C-4			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Berm	Berm			
Visual Description	Brown and Gray Clay (CH)	Brown and Gray Clay (CH)			
Station	99+25	99+25			
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	No	No			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	30	29			
Tare No	508	516			
Wet Soil + Tare Mass (g)	49.14	51.60			
Dry Soil + Tare Mass (g)	44.41	45.68			
Tare Mass (g)	37.67	37.66			
Moisture Content (%)	71.7	75.2			
Trial No 2 / Blow Count	30	29			
Tare No	734	111			
Wet Soil + Tare Mass (g)	52.44	50.63			
Dry Soil + Tare Mass (g)	46.48	45.35			
Tare Mass (g)	37.89	38.23			
Moisture Content (%)	70.9	75.5			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	702	509			
Wet Soil + Tare Mass (g)	49.67	48.65			
Dry Soil + Tare Mass (g)	47.58	46.60			
Tare Mass (g)	37.59	37.60			
Moisture Content (%)	20.9	22.8			
Trial No 2 / Tare No	538	524			
Wet Soil + Tare Mass (g)	50.23	48.54			
Dry Soil + Tare Mass (g)	48.08	46.54			
Tare Mass (g)	37.67	37.79			
Moisture Content (%)	20.7	22.9			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.91	75.73			
Dry Soil Mass after Washing (g)	4.66	8.82			
Test Status					
Liquid Limit	**71**	**75**			
Plastic Limit	**21**	**23**			
Plasticity Index	**50**	**52**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.4	11.6			
Fines (%)	95.6	88.4			
Group Symbol	CH	CH			
Group Name	CH	CH			
Test Result	**Pass**	**Pass**			
Remarks	Station number was the only information provided.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2970
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/20/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	Bryan Landers	**Reviewed By**	G. Lecoq	**Submitted By**	G. Lecoq

Test No	66	67	68	69	70
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	119+47	119+42	120+97	128+75	110+84
Offset	C/L +3.7'	P.S. -104	F.S. +20.5'	UNCOMPACTED FILL	P.S. -6'
Lift No	9	2	2		7
Latitude (°N)	29.872373	29.872668	29.872291		29.874182
Longitude (°W)	90.137265	90.137251	90.136797		90.138233
Elevation (ft)	13.5	3.7	5.6		9.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	22	27	22	27
Tare No	T51	T34	T18	T41	ML04
Wet Soil + Tare Mass (g)	41.45	36.20	33.25	41.78	254.33
Dry Soil + Tare Mass (g)	31.85	28.51	26.93	34.53	245.81
Tare Mass (g)	17.51	17.48	17.31	19.36	233.10
Moisture Content (%)	65.2	68.6	66.3	47.1	67.7
Trial No 2 / Blow Count	20	23	25	24	26
Tare No	T24	T10	T33	T16	ML06
Wet Soil + Tare Mass (g)	34.22	33.77	31.09	39.58	280.06
Dry Soil + Tare Mass (g)	26.05	26.26	24.67	33.22	271.11
Tare Mass (g)	13.80	15.48	14.92	20.00	257.97
Moisture Content (%)	64.9	69.0	65.8	47.9	68.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T37	T14	T5	T9	ML103
Wet Soil + Tare Mass (g)	25.71	25.80	26.20	29.09	289.74
Dry Soil + Tare Mass (g)	24.23	23.85	24.91	27.43	286.86
Tare Mass (g)	17.60	15.26	19.25	19.70	275.31
Moisture Content (%)	22.3	22.7	22.8	21.5	24.9
Trial No 2 / Tare No	T35	T46	T19	ML102	ML03
Wet Soil + Tare Mass (g)	24.62	27.86	24.34	265.94	267.34
Dry Soil + Tare Mass (g)	23.15	26.38	23.13	264.00	264.21
Tare Mass (g)	16.59	19.89	17.78	255.07	251.76
Moisture Content (%)	22.4	22.8	22.6	21.7	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	367.45	378.17	364.94	368.86	394.20
Dry Soil Mass after Washing (g)	280.45	273.40	283.84	270.65	284.30
Test Status					
Liquid Limit	**65**	**69**	**66**	**47**	**68**
Plastic Limit	**22**	**23**	**23**	**22**	**25**
Plasticity Index	**43**	**46**	**43**	**25**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	4.3	4.3	5.1	4.7
Fines (%)	96.6	95.7	95.7	94.9	95.3
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2970
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/20/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	Bryan Landers	**Reviewed By**	G. Lecoq	**Submitted By**	G. Lecoq

Test No	66	67	68	69	70
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	119+47	119+42	120+97	128+75	110+84
Offset	C/L +3.7'	P.S. -104	F.S. +20.5'	UNCOMPACTED FILL	P.S. -6'
Lift No	9	2	2		7
Latitude (°N)	29.940320	29.940615	29.940224		29.942158
Longitude (°W)	86.090660	86.090634	86.090195		86.091555
Elevation (ft)	13.5	3.7	5.6		9.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	22	27	22	27
Tare No	T51	T34	T18	T41	ML04
Wet Soil + Tare Mass (g)	41.45	36.20	33.25	41.78	254.33
Dry Soil + Tare Mass (g)	31.85	28.51	26.93	34.53	245.81
Tare Mass (g)	17.51	17.48	17.31	19.36	233.10
Moisture Content (%)	65.2	68.6	66.3	47.1	67.7
Trial No 2 / Blow Count	20	23	25	24	26
Tare No	T24	T10	T33	T16	ML06
Wet Soil + Tare Mass (g)	34.22	33.77	31.09	39.58	280.06
Dry Soil + Tare Mass (g)	26.05	26.26	24.67	33.22	271.11
Tare Mass (g)	13.80	15.48	14.92	20.00	257.97
Moisture Content (%)	64.9	69.0	65.8	47.9	68.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T37	T14	T5	T9	ML103
Wet Soil + Tare Mass (g)	25.71	25.80	26.20	29.09	289.74
Dry Soil + Tare Mass (g)	24.23	23.85	24.91	27.43	286.86
Tare Mass (g)	17.60	15.26	19.25	19.70	275.31
Moisture Content (%)	22.3	22.7	22.8	21.5	24.9
Trial No 2 / Tare No	T35	T46	T19	ML102	ML03
Wet Soil + Tare Mass (g)	24.62	27.86	24.34	265.94	267.34
Dry Soil + Tare Mass (g)	23.15	26.38	23.13	264.00	264.21
Tare Mass (g)	16.59	19.89	17.78	255.07	251.76
Moisture Content (%)	22.4	22.8	22.6	21.7	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	367.45	378.17	364.94	368.86	394.20
Dry Soil Mass after Washing (g)	280.45	273.40	283.84	270.65	284.30
Test Status					
Liquid Limit	**65**	**69**	**66**	**47**	**68**
Plastic Limit	**22**	**23**	**23**	**22**	**25**
Plasticity Index	**43**	**46**	**43**	**25**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	4.3	4.3	5.1	4.7
Fines (%)	96.6	95.7	95.7	94.9	95.3
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	71	72	73	74	75
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	111+17	119+60	119+92	110+91	119+20
Offset	F.S. +14'	C/L +3.2'	F.S. +133.9'	C/L +1.4'	C/L +1.7'
Lift No	8	10	3	9	11
Latitude (°N)	29.942087	29.940317	29.940678	29.942147	29.940333
Longitude (°W)	86.091644	86.090620	86.090468	86.091583	86.090745
Elevation (ft)	10.4	13.2	3.4	12.1	14.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	20	23	25	26
Tare No	T43	T34	T45	T46	T9
Wet Soil + Tare Mass (g)	34.41	32.33	34.43	30.77	31.71
Dry Soil + Tare Mass (g)	28.32	26.42	27.95	26.52	26.98
Tare Mass (g)	18.52	17.49	19.22	19.87	19.68
Moisture Content (%)	61.5	64.4	73.5	63.9	65.1
Trial No 2 / Blow Count	23	20	24	25	27
Tare No	T28	T33	T47	T19	T16
Wet Soil + Tare Mass (g)	33.37	28.45	31.09	31.04	35.12
Dry Soil + Tare Mass (g)	27.41	23.08	25.04	25.82	29.19
Tare Mass (g)	17.88	14.90	16.84	17.78	19.98
Moisture Content (%)	61.9	63.9	73.4	64.9	65.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	32	T18	T31	T14	T5
Wet Soil + Tare Mass (g)	34.95	32.26	36.36	29.20	33.32
Dry Soil + Tare Mass (g)	32.00	29.68	33.06	26.80	30.82
Tare Mass (g)	17.65	17.32	19.53	15.26	19.25
Moisture Content (%)	20.6	20.9	24.4	20.8	21.6
Trial No 2 / Tare No	T29	T10	T421	T35	T41
Wet Soil + Tare Mass (g)	32.78	31.23	35.43	29.95	31.86
Dry Soil + Tare Mass (g)	30.29	28.47	32.29	27.48	29.68
Tare Mass (g)	18.19	15.49	19.74	15.59	19.40
Moisture Content (%)	20.6	21.3	25.0	20.8	21.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	392.80	366.50	387.99	366.85	399.78
Dry Soil Mass after Washing (g)	282.37	283.86	280.30	286.06	284.83
Test Status					
Liquid Limit	**62**	**64**	**73**	**64**	**65**
Plastic Limit	**21**	**21**	**25**	**21**	**21**
Plasticity Index	**41**	**43**	**48**	**43**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.3	11.8	6.4	7.2	4.9
Fines (%)	93.7	88.2	93.6	92.8	95.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	71	72	73	74	75
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	111+17	119+60	119+92	110+91	119+20
Offset	F.S. +14'	C/L +3.2'	F.S. +133.9'	C/L +1.4'	C/L +1.7'
Lift No	8	10	3	9	11
Latitude (°N)	29.874108	29.872371	29.872736	29.874170	29.872384
Longitude (°W)	90.138319	90.137225	90.137087	90.138260	90.137350
Elevation (ft)	10.4	13.2	3.4	12.1	14.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	20	23	25	26
Tare No	T43	T34	T45	T46	T9
Wet Soil + Tare Mass (g)	34.41	32.33	34.43	30.77	31.71
Dry Soil + Tare Mass (g)	28.32	26.42	27.95	26.52	26.98
Tare Mass (g)	18.52	17.49	19.22	19.87	19.68
Moisture Content (%)	61.5	64.4	73.5	63.9	65.1
Trial No 2 / Blow Count	23	20	24	25	27
Tare No	T28	T33	T47	T19	T16
Wet Soil + Tare Mass (g)	33.37	28.45	31.09	31.04	35.12
Dry Soil + Tare Mass (g)	27.41	23.08	25.04	25.82	29.19
Tare Mass (g)	17.88	14.90	16.84	17.78	19.98
Moisture Content (%)	61.9	63.9	73.4	64.9	65.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	32	T18	T31	T14	T5
Wet Soil + Tare Mass (g)	34.95	32.26	36.36	29.20	33.32
Dry Soil + Tare Mass (g)	32.00	29.68	33.06	26.80	30.82
Tare Mass (g)	17.65	17.32	19.53	15.26	19.25
Moisture Content (%)	20.6	20.9	24.4	20.8	21.6
Trial No 2 / Tare No	T29	T10	T421	T35	T41
Wet Soil + Tare Mass (g)	32.78	31.23	35.43	29.95	31.86
Dry Soil + Tare Mass (g)	30.29	28.47	32.29	27.48	29.68
Tare Mass (g)	18.19	15.49	19.74	15.59	19.40
Moisture Content (%)	20.6	21.3	25.0	20.8	21.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	392.80	366.50	387.99	366.85	399.78
Dry Soil Mass after Washing (g)	282.37	283.86	280.30	286.06	284.83
Test Status					
Liquid Limit	**62**	**64**	**73**	**64**	**65**
Plastic Limit	**21**	**21**	**25**	**21**	**21**
Plasticity Index	**41**	**43**	**48**	**43**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.3	11.8	6.4	7.2	4.9
Fines (%)	93.7	88.2	93.6	92.8	95.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	76	77	78		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	125+02	129+99	110+95		
Offset	F.S. +43.0'	F.S. +28'	C/L +4.5'		
Lift No	2	2	10		
Latitude (°N)	29.940029	29.939903	29.942135		
Longitude (°W)	86.088935	86.087373	86.091598		
Elevation (ft)	4.6	5.2	13.0		
Estimated Retained No 40 (%)					
Sample Air Dried					
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	29	28		
Tare No	T51	T24	T20		
Wet Soil + Tare Mass (g)	29.63	24.51	32.40		
Dry Soil + Tare Mass (g)	24.87	20.21	26.74		
Tare Mass (g)	17.50	13.81	17.85		
Moisture Content (%)	65.2	68.4	64.5		
Trial No 2 / Blow Count	26	28	28		
Tare No	T38	T13	T50		
Wet Soil + Tare Mass (g)	32.44	31.82	35.75		
Dry Soil + Tare Mass (g)	26.28	26.27	29.30		
Tare Mass (g)	16.79	18.03	19.14		
Moisture Content (%)	65.2	68.3	64.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T8	T15	T25		
Wet Soil + Tare Mass (g)	34.49	32.19	29.51		
Dry Soil + Tare Mass (g)	31.93	28.98	27.31		
Tare Mass (g)	20.21	15.75	16.54		
Moisture Content (%)	21.8	24.3	20.4		
Trial No 2 / Tare No	T26	T23	T12		
Wet Soil + Tare Mass (g)	31.24	27.36	32.54		
Dry Soil + Tare Mass (g)	29.04	24.80	30.37		
Tare Mass (g)	18.92	14.25	19.63		
Moisture Content (%)	21.7	24.3	20.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	390.78	363.86	391.23		
Dry Soil Mass after Washing (g)	278.97	262.30	284.00		
Test Status					
Liquid Limit	**65**	**68**	**64**		
Plastic Limit	**22**	**24**	**20**		
Plasticity Index	**43**	**44**	**44**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	4.5	4.3		
Fines (%)	94.7	95.5	95.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	76	77	78		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	125+02	129+99	110+95		
Offset	F.S. +43.0'	F.S. +28'	C/L +4.5'		
Lift No	2	2	10		
Latitude (°N)	29.872135	29.872057	29.874158		
Longitude (°W)	90.135531	90.133965	90.138275		
Elevation (ft)	4.6	5.2	13.0		
Estimated Retained No 40 (%)					
Sample Air Dried					
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	29	28		
Tare No	T51	T24	T20		
Wet Soil + Tare Mass (g)	29.63	24.51	32.40		
Dry Soil + Tare Mass (g)	24.87	20.21	26.74		
Tare Mass (g)	17.50	13.81	17.85		
Moisture Content (%)	65.2	68.4	64.5		
Trial No 2 / Blow Count	26	28	28		
Tare No	T38	T13	T50		
Wet Soil + Tare Mass (g)	32.44	31.82	35.75		
Dry Soil + Tare Mass (g)	26.28	26.27	29.30		
Tare Mass (g)	16.79	18.03	19.14		
Moisture Content (%)	65.2	68.3	64.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T8	T15	T25		
Wet Soil + Tare Mass (g)	34.49	32.19	29.51		
Dry Soil + Tare Mass (g)	31.93	28.98	27.31		
Tare Mass (g)	20.21	15.75	16.54		
Moisture Content (%)	21.8	24.3	20.4		
Trial No 2 / Tare No	T26	T23	T12		
Wet Soil + Tare Mass (g)	31.24	27.36	32.54		
Dry Soil + Tare Mass (g)	29.04	24.80	30.37		
Tare Mass (g)	18.92	14.25	19.63		
Moisture Content (%)	21.7	24.3	20.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	390.78	363.86	391.23		
Dry Soil Mass after Washing (g)	278.97	262.30	284.00		
Test Status					
Liquid Limit	**65**	**68**	**64**		
Plastic Limit	**22**	**24**	**20**		
Plasticity Index	**43**	**44**	**44**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	4.5	4.3		
Fines (%)	94.7	95.5	95.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	76	77	78		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	125+02	129+99	110+95		
Offset	F.S. +43.0'	F.S. +28'	C/L +4.5'		
Lift No	2	2	10		
Latitude (°N)	29.940029	29.939903	29.942135		
Longitude (°W)	86.088935	86.087373	86.091598		
Elevation (ft)	4.6	5.2	13.0		
Estimated Retained No 40 (%)					
Sample Air Dried					
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	29	28		
Tare No	T51	T24	T20		
Wet Soil + Tare Mass (g)	29.63	24.51	32.40		
Dry Soil + Tare Mass (g)	24.87	20.21	26.74		
Tare Mass (g)	17.50	13.81	17.85		
Moisture Content (%)	65.2	68.4	64.5		
Trial No 2 / Blow Count	26	28	28		
Tare No	T38	T13	T50		
Wet Soil + Tare Mass (g)	32.44	31.82	35.75		
Dry Soil + Tare Mass (g)	26.28	26.27	29.30		
Tare Mass (g)	16.79	18.03	19.14		
Moisture Content (%)	65.2	68.3	64.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T8	T15	T25		
Wet Soil + Tare Mass (g)	34.49	32.19	29.51		
Dry Soil + Tare Mass (g)	31.93	28.98	27.31		
Tare Mass (g)	20.21	15.75	16.54		
Moisture Content (%)	21.8	24.3	20.4		
Trial No 2 / Tare No	T26	T23	T12		
Wet Soil + Tare Mass (g)	31.24	27.36	32.54		
Dry Soil + Tare Mass (g)	29.04	24.80	30.37		
Tare Mass (g)	18.92	14.25	19.63		
Moisture Content (%)	21.7	24.3	20.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	390.78	363.86	391.23		
Dry Soil Mass after Washing (g)	278.97	262.30	284.00		
Test Status					
Liquid Limit	**65**	**68**	**64**		
Plastic Limit	**22**	**24**	**20**		
Plasticity Index	**43**	**44**	**44**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	4.5	4.3		
Fines (%)	94.7	95.5	95.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	79	80	81	82	83
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	110+56	107+05	103+06	135+97	140+02
Offset	C/L	F.S. +8.8	C/L +2.5	F.S. +22'	F.S. +4.7
Lift No	11	1	1	2	2
Latitude (°N)	29.942235	29.943171	29.944216	29.939724	29.939578
Longitude (°W)	86.091552	86.091264	86.090892	86.085496	86.084229
Elevation (ft)	3.6	5.0	5.8	5.3	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	27	25	20	20
Tare No	T11	T21	T39	T100	T32
Wet Soil + Tare Mass (g)	30.88	28.14	32.64	41.39	42.22
Dry Soil + Tare Mass (g)	24.74	22.38	27.05	35.66	32.46
Tare Mass (g)	15.15	15.49	20.79	28.75	17.65
Moisture Content (%)	62.3	84.4	89.3	80.7	64.1
Trial No 2 / Blow Count	21	27	26	21	20
Tare No	T7	T40	T42	T101	T29
Wet Soil + Tare Mass (g)	37.34	35.23	30.33	38.33	46.60
Dry Soil + Tare Mass (g)	30.45	27.98	23.86	33.18	35.34
Tare Mass (g)	19.73	19.30	16.56	26.86	18.19
Moisture Content (%)	62.9	84.3	89.1	79.8	63.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T6	T22	T17	T36	T43
Wet Soil + Tare Mass (g)	31.77	34.25	25.66	32.87	27.22
Dry Soil + Tare Mass (g)	29.64	30.85	23.41	30.11	25.99
Tare Mass (g)	19.18	18.97	14.71	18.47	18.53
Moisture Content (%)	20.4	28.6	25.9	23.7	16.5
Trial No 2 / Tare No	T52	T27	T30	T37	T19
Wet Soil + Tare Mass (g)	35.22	32.78	32.59	31.98	26.55
Dry Soil + Tare Mass (g)	32.25	29.95	30.03	29.22	25.33
Tare Mass (g)	20.30	19.86	20.24	17.59	17.80
Moisture Content (%)	24.9	28.0	26.1	23.7	16.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	349.03	370.97	365.94	383.78	394.95
Dry Soil Mass after Washing (g)	279.34	287.46	285.01	282.73	276.39
Test Status					
Liquid Limit	**63**	**84**	**89**	**80**	**64**
Plastic Limit	**23**	**28**	**26**	**24**	**16**
Plasticity Index	**40**	**56**	**63**	**56**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.1	8.1	2.9	3.0	2.9
Fines (%)	97.9	91.9	97.1	97.0	97.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	79	80	81	82	83
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	110+56	107+05	103+06	135+97	140+02
Offset	C/L	F.S. +8.8	C/L +2.5	F.S. +22'	F.S. +4.7
Lift No	11	1	1	2	2
Latitude (°N)	29.874259	29.875204	29.876259	29.871936	29.871829
Longitude (°W)	90.138233	90.137983	90.137654	90.132084	90.130812
Elevation (ft)	3.6	5.0	5.8	5.3	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	27	25	20	20
Tare No	T11	T21	T39	T100	T32
Wet Soil + Tare Mass (g)	30.88	28.14	32.64	41.39	42.22
Dry Soil + Tare Mass (g)	24.74	22.38	27.05	35.66	32.46
Tare Mass (g)	15.15	15.49	20.79	28.75	17.65
Moisture Content (%)	62.3	84.4	89.3	80.7	64.1
Trial No 2 / Blow Count	21	27	26	21	20
Tare No	T7	T40	T42	T101	T29
Wet Soil + Tare Mass (g)	37.34	35.23	30.33	38.33	46.60
Dry Soil + Tare Mass (g)	30.45	27.98	23.86	33.18	35.34
Tare Mass (g)	19.73	19.30	16.56	26.86	18.19
Moisture Content (%)	62.9	84.3	89.1	79.8	63.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T6	T22	T17	T36	T43
Wet Soil + Tare Mass (g)	31.77	34.25	25.66	32.87	27.22
Dry Soil + Tare Mass (g)	29.64	30.85	23.41	30.11	25.99
Tare Mass (g)	19.18	18.97	14.71	18.47	18.53
Moisture Content (%)	20.4	28.6	25.9	23.7	16.5
Trial No 2 / Tare No	T52	T27	T30	T37	T19
Wet Soil + Tare Mass (g)	35.22	32.78	32.59	31.98	26.55
Dry Soil + Tare Mass (g)	32.25	29.95	30.03	29.22	25.33
Tare Mass (g)	20.30	19.86	20.24	17.59	17.80
Moisture Content (%)	24.9	28.0	26.1	23.7	16.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	349.03	370.97	365.94	383.78	394.95
Dry Soil Mass after Washing (g)	279.34	287.46	285.01	282.73	276.39
Test Status					
Liquid Limit	**63**	**84**	**89**	**80**	**64**
Plastic Limit	**23**	**28**	**26**	**24**	**16**
Plasticity Index	**40**	**56**	**63**	**56**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.1	8.1	2.9	3.0	2.9
Fines (%)	97.9	91.9	97.1	97.0	97.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	84	85	86		
Retest of Test ID			3002 80		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+94	110+93	107+05		
Offset	F.S. +89'	F.S. +4.6	F.S. +8.8'		
Lift No	3	12	1		
Latitude (°N)	29.942206	29.942142	29.943171		
Longitude (°W)	86.091851	86.091595	86.091263		
Elevation (ft)	4.9	14.0	5.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23		
Tare No	T18	T47	T31		
Wet Soil + Tare Mass (g)	36.60	39.19	48.33		
Dry Soil + Tare Mass (g)	29.21	30.55	35.30		
Tare Mass (g)	17.32	16.86	19.53		
Moisture Content (%)	62.2	63.4	81.8		
Trial No 2 / Blow Count	26	26	24		
Tare No	T45	T421	T46		
Wet Soil + Tare Mass (g)	46.57	46.53	44.18		
Dry Soil + Tare Mass (g)	36.08	36.21	33.19		
Tare Mass (g)	19.22	19.75	19.88		
Moisture Content (%)	62.5	63.0	82.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T10	T14		
Wet Soil + Tare Mass (g)	27.16	25.72	25.85		
Dry Soil + Tare Mass (g)	25.46	23.89	23.60		
Tare Mass (g)	17.89	15.49	15.26		
Moisture Content (%)	22.5	21.8	27.0		
Trial No 2 / Tare No	T34	T33	T35		
Wet Soil + Tare Mass (g)	27.47	25.43	25.86		
Dry Soil + Tare Mass (g)	25.63	23.56	23.63		
Tare Mass (g)	17.50	14.92	15.59		
Moisture Content (%)	22.6	21.6	27.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	355.67	381.06	362.64		
Dry Soil Mass after Washing (g)	261.03	273.17	267.66		
Test Status					
Liquid Limit	**62**	**63**	**82**		
Plastic Limit	**23**	**22**	**27**		
Plasticity Index	**39**	**41**	**55**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	3.9	2.8		
Fines (%)	96.4	96.1	97.2		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	84	85	86		
Retest of Test ID			3002 80		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+94	110+93	107+05		
Offset	F.S. +89'	F.S. +4.6	F.S. +8.8'		
Lift No	3	12	1		
Latitude (°N)	29.874221	29.874165	29.875204		
Longitude (°W)	90.138531	90.138272	90.137983		
Elevation (ft)	4.9	14.0	5.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23		
Tare No	T18	T47	T31		
Wet Soil + Tare Mass (g)	36.60	39.19	48.33		
Dry Soil + Tare Mass (g)	29.21	30.55	35.30		
Tare Mass (g)	17.32	16.86	19.53		
Moisture Content (%)	62.2	63.4	81.8		
Trial No 2 / Blow Count	26	26	24		
Tare No	T45	T421	T46		
Wet Soil + Tare Mass (g)	46.57	46.53	44.18		
Dry Soil + Tare Mass (g)	36.08	36.21	33.19		
Tare Mass (g)	19.22	19.75	19.88		
Moisture Content (%)	62.5	63.0	82.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T10	T14		
Wet Soil + Tare Mass (g)	27.16	25.72	25.85		
Dry Soil + Tare Mass (g)	25.46	23.89	23.60		
Tare Mass (g)	17.89	15.49	15.26		
Moisture Content (%)	22.5	21.8	27.0		
Trial No 2 / Tare No	T34	T33	T35		
Wet Soil + Tare Mass (g)	27.47	25.43	25.86		
Dry Soil + Tare Mass (g)	25.63	23.56	23.63		
Tare Mass (g)	17.50	14.92	15.59		
Moisture Content (%)	22.6	21.6	27.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	355.67	381.06	362.64		
Dry Soil Mass after Washing (g)	261.03	273.17	267.66		
Test Status					
Liquid Limit	**62**	**63**	**82**		
Plastic Limit	**23**	**22**	**27**		
Plasticity Index	**39**	**41**	**55**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	3.9	2.8		
Fines (%)	96.4	96.1	97.2		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	84	85	86		
Retest of Test ID			80		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+94	110+93	107+05		
Offset	F.S. +89'	F.S. +4.6	F.S. +8.8'		
Lift No	3	12	1		
Latitude (°N)	29.942206	29.942142	29.943171		
Longitude (°W)	86.091851	86.091595	86.091263		
Elevation (ft)	4.9	14.0	5.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23		
Tare No	T18	T47	T31		
Wet Soil + Tare Mass (g)	36.60	39.19	48.33		
Dry Soil + Tare Mass (g)	29.21	30.55	35.30		
Tare Mass (g)	17.32	16.86	19.53		
Moisture Content (%)	62.2	63.4	81.8		
Trial No 2 / Blow Count	26	26	24		
Tare No	T45	T421	T46		
Wet Soil + Tare Mass (g)	46.57	46.53	44.18		
Dry Soil + Tare Mass (g)	36.08	36.21	33.19		
Tare Mass (g)	19.22	19.75	19.88		
Moisture Content (%)	62.5	63.0	82.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T10	T14		
Wet Soil + Tare Mass (g)	27.16	25.72	25.85		
Dry Soil + Tare Mass (g)	25.46	23.89	23.60		
Tare Mass (g)	17.89	15.49	15.26		
Moisture Content (%)	22.5	21.8	27.0		
Trial No 2 / Tare No	T34	T33	T35		
Wet Soil + Tare Mass (g)	27.47	25.43	25.86		
Dry Soil + Tare Mass (g)	25.63	23.56	23.63		
Tare Mass (g)	17.50	14.92	15.59		
Moisture Content (%)	22.6	21.6	27.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	355.67	381.06	362.64		
Dry Soil Mass after Washing (g)	261.03	273.17	267.66		
Test Status					
Liquid Limit	**62**	**63**	**82**		
Plastic Limit	**23**	**22**	**27**		
Plasticity Index	**39**	**41**	**55**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	3.9	2.8		
Fines (%)	96.4	96.1	97.2		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3028
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/28/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	87	88	89	90	91
Retest of Test ID	80				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Jobsite
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-BR CLAY
Station	107+05	97+57	143+97	149+98	103+00
Offset	F.S. +8.8	F.S. +14.0	F.S. +8.3	F.S. +31.9	UMCOMPACTED FILL
Lift No	1	1	1	2	
Latitude (°N)	29.875204	29.877729	29.871790	29.871599	
Longitude (°W)	90.137983	90.137246	90.129564	90.127678	
Elevation (ft)	5.0	4.6	5.4	4.9	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	26	28	27
Tare No	T26	T9	T35	T15	T33
Wet Soil + Tare Mass (g)	32.03	35.83	29.72	24.65	28.25
Dry Soil + Tare Mass (g)	26.66	29.77	24.57	20.88	22.89
Tare Mass (g)	18.95	19.70	16.60	15.75	14.92
Moisture Content (%)	69.0	60.2	64.9	74.5	67.9
Trial No 2 / Blow Count	24	23	25	28	27
Tare No	T41	T32	T44	T12	T46
Wet Soil + Tare Mass (g)	28.18	27.17	28.01	30.55	28.95
Dry Soil + Tare Mass (g)	24.58	23.58	22.89	25.92	25.30
Tare Mass (g)	19.38	17.67	14.94	19.62	19.89
Moisture Content (%)	68.9	60.1	64.4	74.5	68.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T16	T23	T13	T20
Wet Soil + Tare Mass (g)	26.87	29.20	24.14	26.81	30.38
Dry Soil + Tare Mass (g)	25.15	27.58	22.26	25.03	27.95
Tare Mass (g)	17.50	19.98	14.25	18.05	17.87
Moisture Content (%)	22.5	21.3	23.5	25.5	24.1
Trial No 2 / Tare No	T51	T14	T25	T37	T36
Wet Soil + Tare Mass (g)	27.92	23.80	27.57	27.67	29.46
Dry Soil + Tare Mass (g)	26.31	22.32	25.44	25.62	27.34
Tare Mass (g)	19.24	15.26	16.57	17.58	18.49
Moisture Content (%)	22.8	21.0	24.0	25.5	24.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	388.44	353.95	384.40	372.22	365.38
Dry Soil Mass after Washing (g)	282.60	256.24	277.59	283.50	280.75
Test Status					
Liquid Limit	**69**	**60**	**65**	**75**	**68**
Plastic Limit	**23**	**21**	**24**	**25**	**24**
Plasticity Index	**46**	**39**	**41**	**50**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.4	4.7	2.6	3.6	4.3
Fines (%)	94.6	95.3	97.4	96.4	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3028
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/28/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	87	88	89	90	91
Retest of Test ID	80				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Jobsite
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-BR CLAY
Station	107+05	97+57	143+97	149+98	103+00
Offset	F.S. +8.8	F.S. +14.0	F.S. +8.3	F.S. +31.9	UMCOMPACTED FILL
Lift No	1	1	1	2	
Latitude (°N)	29.943171	29.945672	29.939500	29.939251	
Longitude (°W)	86.091263	86.090424	86.082823	86.081104	
Elevation (ft)	5.0	4.6	5.4	4.9	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	26	28	27
Tare No	T26	T9	T35	T15	T33
Wet Soil + Tare Mass (g)	32.03	35.83	29.72	24.65	28.25
Dry Soil + Tare Mass (g)	26.66	29.77	24.57	20.88	22.89
Tare Mass (g)	18.95	19.70	16.60	15.75	14.92
Moisture Content (%)	69.0	60.2	64.9	74.5	67.9
Trial No 2 / Blow Count	24	23	25	28	27
Tare No	T41	T32	T44	T12	T46
Wet Soil + Tare Mass (g)	28.18	27.17	28.01	30.55	28.95
Dry Soil + Tare Mass (g)	24.58	23.58	22.89	25.92	25.30
Tare Mass (g)	19.38	17.67	14.94	19.62	19.89
Moisture Content (%)	68.9	60.1	64.4	74.5	68.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T16	T23	T13	T20
Wet Soil + Tare Mass (g)	26.87	29.20	24.14	26.81	30.38
Dry Soil + Tare Mass (g)	25.15	27.58	22.26	25.03	27.95
Tare Mass (g)	17.50	19.98	14.25	18.05	17.87
Moisture Content (%)	22.5	21.3	23.5	25.5	24.1
Trial No 2 / Tare No	T51	T14	T25	T37	T36
Wet Soil + Tare Mass (g)	27.92	23.80	27.57	27.67	29.46
Dry Soil + Tare Mass (g)	26.31	22.32	25.44	25.62	27.34
Tare Mass (g)	19.24	15.26	16.57	17.58	18.49
Moisture Content (%)	22.8	21.0	24.0	25.5	24.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	388.44	353.95	384.40	372.22	365.38
Dry Soil Mass after Washing (g)	282.60	256.24	277.59	283.50	280.75
Test Status					
Liquid Limit	**69**	**60**	**65**	**75**	**68**
Plastic Limit	**23**	**21**	**24**	**25**	**24**
Plasticity Index	**46**	**39**	**41**	**50**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.4	4.7	2.6	3.6	4.3
Fines (%)	94.6	95.3	97.4	96.4	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3034
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/29/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	92	93	94	95	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	BR. CL. W/ SI.	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	
Station	99+25	121+92	126+23	128+03	
Offset	Proctor	F.S. +7.8'	F.S. +78'	F.S. +76.8	
Lift No		1	1	1	
Latitude (°N)		29.872112	29.872011	29.871972	
Longitude (°W)		90.136514	90.135161	90.134593	
Elevation (ft)		4.7	4.1	4.3	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	27	24	
Tare No	T51	T10	T11	T29	
Wet Soil + Tare Mass (g)	27.09	25.49	30.22	33.34	
Dry Soil + Tare Mass (g)	23.26	21.45	24.04	26.80	
Tare Mass (g)	17.49	15.52	15.16	18.19	
Moisture Content (%)	67.0	68.1	70.2	75.6	
Trial No 2 / Blow Count	27	24	27	28	
Tare No	T26	T17	T7	T43	
Wet Soil + Tare Mass (g)	32.55	28.75	34.00	29.78	
Dry Soil + Tare Mass (g)	27.13	23.05	28.13	24.98	
Tare Mass (g)	18.93	14.73	19.75	18.53	
Moisture Content (%)	66.7	68.2	70.7	75.4	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T41	T30	T28	T45	
Wet Soil + Tare Mass (g)	27.86	29.83	25.24	26.91	
Dry Soil + Tare Mass (g)	26.21	27.95	23.74	25.14	
Tare Mass (g)	19.38	20.24	17.88	19.22	
Moisture Content (%)	24.2	24.4	25.6	29.9	
Trial No 2 / Tare No	T24	T40	T34	T18	
Wet Soil + Tare Mass (g)	22.29	28.56	24.30	23.93	
Dry Soil + Tare Mass (g)	20.63	26.77	22.91	22.37	
Tare Mass (g)	13.80	19.30	17.49	17.36	
Moisture Content (%)	24.3	24.0	25.6	31.1	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	338.18	335.11	387.53	360.08	
Dry Soil Mass after Washing (g)	257.94	226.65	280.36	277.92	
Test Status					
Liquid Limit	**67**	**68**	**70**	**76**	
Plastic Limit	**24**	**24**	**26**	**31**	
Plasticity Index	**43**	**44**	**44**	**45**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.5	4.3	2.9	4.2	
Fines (%)	95.5	95.7	97.1	95.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3034
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/29/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	92	93	94	95	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	BR. CL. W/ SI.	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	
Station	99+25	121+92	122+23	128+03	
Offset	Proctor	F.S. +7.8'	F.S. +78'	F.S. +76.8	
Lift No		1	1	1	
Latitude (°N)		29.940035	29.939893	29.939837	
Longitude (°W)		86.089919	86.088571	86.088004	
Elevation (ft)		4.7	4.1	4.3	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	27	24	
Tare No	T51	T10	T11	T29	
Wet Soil + Tare Mass (g)	27.09	25.49	30.22	33.34	
Dry Soil + Tare Mass (g)	23.26	21.45	24.04	26.80	
Tare Mass (g)	17.49	15.52	15.16	18.19	
Moisture Content (%)	67.0	68.1	70.2	75.6	
Trial No 2 / Blow Count	27	24	27	28	
Tare No	T26	T17	T7	T43	
Wet Soil + Tare Mass (g)	32.55	28.75	34.00	29.78	
Dry Soil + Tare Mass (g)	27.13	23.05	28.13	24.98	
Tare Mass (g)	18.93	14.73	19.75	18.53	
Moisture Content (%)	66.7	68.2	70.7	75.4	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T41	T30	T28	T45	
Wet Soil + Tare Mass (g)	27.86	29.83	25.24	26.91	
Dry Soil + Tare Mass (g)	26.21	27.95	23.74	25.14	
Tare Mass (g)	19.38	20.24	17.88	19.22	
Moisture Content (%)	24.2	24.4	25.6	29.9	
Trial No 2 / Tare No	T24	T40	T34	T18	
Wet Soil + Tare Mass (g)	22.29	28.56	24.30	23.93	
Dry Soil + Tare Mass (g)	20.63	26.77	22.91	22.37	
Tare Mass (g)	13.80	19.30	17.49	17.36	
Moisture Content (%)	24.3	24.0	25.6	31.1	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	338.18	335.11	387.53	360.08	
Dry Soil Mass after Washing (g)	257.94	226.65	280.36	277.92	
Test Status					
Liquid Limit	**67**	**68**	**70**	**76**	
Plastic Limit	**24**	**24**	**26**	**31**	
Plasticity Index	**43**	**44**	**44**	**45**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.5	4.3	2.9	4.2	
Fines (%)	95.5	95.7	97.1	95.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3059
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	96	97	98	99	
Retest of Test ID		81			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	
Station	93+17	103+06	154+88	138+00	
Offset	F.S. +15.6'	C/L +2.5'	F.S. +37'	UNCOMPACTED FILL	
Lift No	1	1	2		
Latitude (°N)	29.878890	29.876259	29.871480		
Longitude (°W)	90.136856	90.137654	90.126138		
Elevation (ft)	4.5	5.8	5.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	23	24	
Tare No	T41	T51	T32	T9	
Wet Soil + Tare Mass (g)	48.41	42.76	45.74	46.03	
Dry Soil + Tare Mass (g)	37.44	31.07	34.86	34.66	
Tare Mass (g)	19.39	17.49	17.67	19.70	
Moisture Content (%)	60.5	86.1	62.7	75.6	
Trial No 2 / Blow Count	24	25	24	24	
Tare No	T24	T26	T16	T5	
Wet Soil + Tare Mass (g)	36.01	43.33	46.86	47.98	
Dry Soil + Tare Mass (g)	27.61	32.05	36.44	35.56	
Tare Mass (g)	13.80	18.94	19.99	19.25	
Moisture Content (%)	60.5	86.0	63.0	75.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T23	T35	T12	T15	
Wet Soil + Tare Mass (g)	25.31	27.71	31.46	27.92	
Dry Soil + Tare Mass (g)	23.23	24.95	29.17	25.17	
Tare Mass (g)	14.24	15.60	19.65	15.76	
Moisture Content (%)	23.1	29.5	24.1	29.2	
Trial No 2 / Tare No	T44	T14	T13	T25	
Wet Soil + Tare Mass (g)	27.04	26.71	30.08	28.34	
Dry Soil + Tare Mass (g)	24.78	24.11	27.76	25.68	
Tare Mass (g)	14.96	15.28	18.06	16.56	
Moisture Content (%)	23.0	29.4	23.9	29.2	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	356.59	388.78	381.17	394.89	
Dry Soil Mass after Washing (g)	255.04	279.51	281.80	285.01	
Test Status					
Liquid Limit	**61**	**86**	**63**	**76**	
Plastic Limit	**23**	**29**	**24**	**29**	
Plasticity Index	**38**	**57**	**39**	**47**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.5	4.2	4.7	4.2	
Fines (%)	96.5	95.8	95.3	95.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3059
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	96	97	98	99	
Retest of Test ID		81			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	
Station	93+17	103+06	154+88	138+00	
Offset	F.S. +15.6'	C/L +2.5'	F.S. +37'	UNCOMPACTED FILL	
Lift No	1	1	2		
Latitude (°N)	29.946820	29.944215	29.939085		
Longitude (°W)	86.089986	86.090891	86.079568		
Elevation (ft)	4.5	5.8	5.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	23	24	
Tare No	T41	T51	T32	T9	
Wet Soil + Tare Mass (g)	48.41	42.76	45.74	46.03	
Dry Soil + Tare Mass (g)	37.44	31.07	34.86	34.66	
Tare Mass (g)	19.39	17.49	17.67	19.70	
Moisture Content (%)	60.5	86.1	62.7	75.6	
Trial No 2 / Blow Count	24	25	24	24	
Tare No	T24	T26	T16	T5	
Wet Soil + Tare Mass (g)	36.01	43.33	46.86	47.98	
Dry Soil + Tare Mass (g)	27.61	32.05	36.44	35.56	
Tare Mass (g)	13.80	18.94	19.99	19.25	
Moisture Content (%)	60.5	86.0	63.0	75.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T23	T35	T12	T15	
Wet Soil + Tare Mass (g)	25.31	27.71	31.46	27.92	
Dry Soil + Tare Mass (g)	23.23	24.95	29.17	25.17	
Tare Mass (g)	14.24	15.60	19.65	15.76	
Moisture Content (%)	23.1	29.5	24.1	29.2	
Trial No 2 / Tare No	T44	T14	T13	T25	
Wet Soil + Tare Mass (g)	27.04	26.71	30.08	28.34	
Dry Soil + Tare Mass (g)	24.78	24.11	27.76	25.68	
Tare Mass (g)	14.96	15.28	18.06	16.56	
Moisture Content (%)	23.0	29.4	23.9	29.2	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	356.59	388.78	381.17	394.89	
Dry Soil Mass after Washing (g)	255.04	279.51	281.80	285.01	
Test Status					
Liquid Limit	**61**	**86**	**63**	**76**	
Plastic Limit	**23**	**29**	**24**	**29**	
Plasticity Index	**38**	**57**	**39**	**47**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.5	4.2	4.7	4.2	
Fines (%)	96.5	95.8	95.3	95.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3066
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/1/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	100	101			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	G.-Br. Clay			
Station	121+99	107+97			
Offset	F.S. +42.5	UNCOMPACTED FILL			
Lift No	3				
Latitude (°N)	29.872207				
Longitude (°W)	90.136483				
Elevation (ft)	6.7				
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	27			
Tare No	T44	T35			
Wet Soil + Tare Mass (g)	24.45	25.17			
Dry Soil + Tare Mass (g)	20.53	21.14			
Tare Mass (g)	14.96	15.59			
Moisture Content (%)	69.3	73.3			
Trial No 2 / Blow Count	23	28			
Tare No	T23	T41			
Wet Soil + Tare Mass (g)	26.61	29.51			
Dry Soil + Tare Mass (g)	21.50	25.25			
Tare Mass (g)	14.25	19.37			
Moisture Content (%)	69.8	73.4			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T10	T12			
Wet Soil + Tare Mass (g)	24.79	27.07			
Dry Soil + Tare Mass (g)	22.94	25.29			
Tare Mass (g)	15.49	19.63			
Moisture Content (%)	24.8	31.4			
Trial No 2 / Tare No	T40	T13			
Wet Soil + Tare Mass (g)	27.98	25.50			
Dry Soil + Tare Mass (g)	26.25	23.79			
Tare Mass (g)	19.30	18.04			
Moisture Content (%)	24.9	29.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	380.48	346.71			
Dry Soil Mass after Washing (g)	278.90	248.48			
Test Status					
Liquid Limit	**70**	**73**			
Plastic Limit	**25**	**31**			
Plasticity Index	**45**	**42**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.3	3.7			
Fines (%)	95.7	96.3			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3066
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/1/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	100	101			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	G.-Br. Clay			
Station	121+99	107+97			
Offset	F.S. +42.5	UNCOMPACTED FILL			
Lift No	3				
Latitude (°N)	29.940130				
Longitude (°W)	86.089884				
Elevation (ft)	6.7				
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	27			
Tare No	T44	T35			
Wet Soil + Tare Mass (g)	24.45	25.17			
Dry Soil + Tare Mass (g)	20.53	21.14			
Tare Mass (g)	14.96	15.59			
Moisture Content (%)	69.3	73.3			
Trial No 2 / Blow Count	23	28			
Tare No	T23	T41			
Wet Soil + Tare Mass (g)	26.61	29.51			
Dry Soil + Tare Mass (g)	21.50	25.25			
Tare Mass (g)	14.25	19.37			
Moisture Content (%)	69.8	73.4			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T10	T12			
Wet Soil + Tare Mass (g)	24.79	27.07			
Dry Soil + Tare Mass (g)	22.94	25.29			
Tare Mass (g)	15.49	19.63			
Moisture Content (%)	24.8	31.4			
Trial No 2 / Tare No	T40	T13			
Wet Soil + Tare Mass (g)	27.98	25.50			
Dry Soil + Tare Mass (g)	26.25	23.79			
Tare Mass (g)	19.30	18.04			
Moisture Content (%)	24.9	29.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	380.48	346.71			
Dry Soil Mass after Washing (g)	278.90	248.48			
Test Status					
Liquid Limit	**70**	**73**			
Plastic Limit	**25**	**31**			
Plasticity Index	**45**	**42**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.3	3.7			
Fines (%)	95.7	96.3			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3094
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/2/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	102	103	104	105	106
Retest of Test ID					81
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	128+00	131+00	133+05	180+00	103+06
Offset	F.S. +63'	F.S. +68'	F.S. +70'	UNCOMPACTED FILL	C/L +2.5'
Lift No	2	2	1		1
Latitude (°N)	29.939876	29.939762	29.939689		29.944215
Longitude (°W)	86.088007	86.087071	86.086427		86.090891
Elevation (ft)	5.3	5.0	4.2		5.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	29	21	26	26
Tare No	T52	T28	T40	T14	T35
Wet Soil + Tare Mass (g)	48.65	27.10	29.75	26.76	26.71
Dry Soil + Tare Mass (g)	37.19	23.55	25.53	23.26	21.42
Tare Mass (g)	20.29	17.84	19.29	15.27	15.59
Moisture Content (%)	67.8	63.3	66.2	44.0	91.2
Trial No 2 / Blow Count	25	28	21	26	26
Tare No	T37	T8	T44	T12	T42
Wet Soil + Tare Mass (g)	38.47	35.83	25.01	33.71	27.84
Dry Soil + Tare Mass (g)	30.04	29.81	20.98	29.40	22.48
Tare Mass (g)	17.58	20.23	14.97	19.63	16.58
Moisture Content (%)	67.7	63.7	65.7	44.3	91.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T11	T38	T27	T23	T13
Wet Soil + Tare Mass (g)	26.70	26.88	31.83	30.57	32.01
Dry Soil + Tare Mass (g)	24.59	25.11	29.54	27.52	28.74
Tare Mass (g)	15.18	16.80	19.99	14.26	18.05
Moisture Content (%)	22.4	21.3	24.0	23.0	30.6
Trial No 2 / Tare No	T30	T21	T10	T24	T41
Wet Soil + Tare Mass (g)	32.39	27.49	26.58	27.76	32.88
Dry Soil + Tare Mass (g)	30.12	25.37	24.44	25.17	29.70
Tare Mass (g)	20.24	15.49	15.51	13.82	19.38
Moisture Content (%)	23.0	21.5	24.0	22.8	30.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	350.07	320.64	381.54	366.35	388.18
Dry Soil Mass after Washing (g)	257.74	225.42	280.65	255.96	285.09
Test Status					
Liquid Limit	**68**	**64**	**66**	**44**	**91**
Plastic Limit	**23**	**21**	**24**	**23**	**31**
Plasticity Index	**45**	**43**	**42**	**21**	**60**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.7	3.6	3.2	4.0	4.4
Fines (%)	96.3	96.4	96.8	96.0	95.6
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3094
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/2/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	102	103	104	105	106
Retest of Test ID					81
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	128+00	131+00	133+05	180+00	103+06
Offset	F.S. +63'	F.S. +68'	F.S. +70'	UNCOMPACTED FILL	C/L +2.5'
Lift No	2	2	1		1
Latitude (°N)	29.872011	29.871926	29.871872		29.876259
Longitude (°W)	90.134598	90.133658	90.133012		90.137654
Elevation (ft)	5.3	5.0	4.2		5.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	29	21	26	26
Tare No	T52	T28	T40	T14	T35
Wet Soil + Tare Mass (g)	48.65	27.10	29.75	26.76	26.71
Dry Soil + Tare Mass (g)	37.19	23.55	25.53	23.26	21.42
Tare Mass (g)	20.29	17.84	19.29	15.27	15.59
Moisture Content (%)	67.8	63.3	66.2	44.0	91.2
Trial No 2 / Blow Count	25	28	21	26	26
Tare No	T37	T8	T44	T12	T42
Wet Soil + Tare Mass (g)	38.47	35.83	25.01	33.71	27.84
Dry Soil + Tare Mass (g)	30.04	29.81	20.98	29.40	22.48
Tare Mass (g)	17.58	20.23	14.97	19.63	16.58
Moisture Content (%)	67.7	63.7	65.7	44.3	91.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T11	T38	T27	T23	T13
Wet Soil + Tare Mass (g)	26.70	26.88	31.83	30.57	32.01
Dry Soil + Tare Mass (g)	24.59	25.11	29.54	27.52	28.74
Tare Mass (g)	15.18	16.80	19.99	14.26	18.05
Moisture Content (%)	22.4	21.3	24.0	23.0	30.6
Trial No 2 / Tare No	T30	T21	T10	T24	T41
Wet Soil + Tare Mass (g)	32.39	27.49	26.58	27.76	32.88
Dry Soil + Tare Mass (g)	30.12	25.37	24.44	25.17	29.70
Tare Mass (g)	20.24	15.49	15.51	13.82	19.38
Moisture Content (%)	23.0	21.5	24.0	22.8	30.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	350.07	320.64	381.54	366.35	388.18
Dry Soil Mass after Washing (g)	257.74	225.42	280.65	255.96	285.09
Test Status					
Liquid Limit	**68**	**64**	**66**	**44**	**91**
Plastic Limit	**23**	**21**	**24**	**23**	**31**
Plasticity Index	**45**	**43**	**42**	**21**	**60**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.7	3.6	3.2	4.0	4.4
Fines (%)	96.3	96.4	96.8	96.0	95.6
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3094
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/2/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	107	108			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	BR. FAT CLAY			
Station	88+02	77+00			
Offset	F.S. +36'	PROCTOR			
Lift No	1				
Latitude (°N)	29.948180				
Longitude (°W)	86.089529				
Elevation (ft)	3.1				
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	29	27			
Tare No	T16	T25			
Wet Soil + Tare Mass (g)	48.98	26.99			
Dry Soil + Tare Mass (g)	37.76	22.46			
Tare Mass (g)	20.01	16.57			
Moisture Content (%)	64.4	77.6			
Trial No 2 / Blow Count	30	27			
Tare No	T32	T15			
Wet Soil + Tare Mass (g)	39.10	26.83			
Dry Soil + Tare Mass (g)	30.78	22.02			
Tare Mass (g)	17.70	15.77			
Moisture Content (%)	65.0	77.7			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T46			
Wet Soil + Tare Mass (g)	33.26	26.06			
Dry Soil + Tare Mass (g)	30.45	24.77			
Tare Mass (g)	17.53	19.89			
Moisture Content (%)	21.7	26.4			
Trial No 2 / Tare No	T26	T45			
Wet Soil + Tare Mass (g)	34.11	25.25			
Dry Soil + Tare Mass (g)	31.40	23.99			
Tare Mass (g)	18.96	19.21			
Moisture Content (%)	21.8	26.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	330.31	371.96			
Dry Soil Mass after Washing (g)	276.64	280.02			
Test Status					
Liquid Limit	**65**	**78**			
Plastic Limit	**22**	**26**			
Plasticity Index	**43**	**52**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.4	3.2			
Fines (%)	96.6	96.8			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3094
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	2
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/2/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	107	108			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	BR. FAT CLAY			
Station	88+02	77+00			
Offset	F.S. +36'	PROCTOR			
Lift No	1				
Latitude (°N)	29.880263				
Longitude (°W)	90.136454				
Elevation (ft)	3.1				
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	29	27			
Tare No	T16	T25			
Wet Soil + Tare Mass (g)	48.98	26.99			
Dry Soil + Tare Mass (g)	37.76	22.46			
Tare Mass (g)	20.01	16.57			
Moisture Content (%)	64.4	77.6			
Trial No 2 / Blow Count	30	27			
Tare No	T32	T15			
Wet Soil + Tare Mass (g)	39.10	26.83			
Dry Soil + Tare Mass (g)	30.78	22.02			
Tare Mass (g)	17.70	15.77			
Moisture Content (%)	65.0	77.7			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T46			
Wet Soil + Tare Mass (g)	33.26	26.06			
Dry Soil + Tare Mass (g)	30.45	24.77			
Tare Mass (g)	17.53	19.89			
Moisture Content (%)	21.7	26.4			
Trial No 2 / Tare No	T26	T45			
Wet Soil + Tare Mass (g)	34.11	25.25			
Dry Soil + Tare Mass (g)	31.40	23.99			
Tare Mass (g)	18.96	19.21			
Moisture Content (%)	21.8	26.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	330.31	371.96			
Dry Soil Mass after Washing (g)	276.64	280.02			
Test Status					
Liquid Limit	**65**	**78**			
Plastic Limit	**22**	**26**			
Plasticity Index	**43**	**52**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.4	3.2			
Fines (%)	96.6	96.8			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3095
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	109	110	111		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-Br. Clay	G.-Br. Clay	G.-BR. CLAY		
Station	110+93	110+37	179+00		
Offset	P.S. -160	P.S. -147	UNCOMPACTED FILL		
Lift No	1	2			
Latitude (°N)	29.874053	29.874217			
Longitude (°W)	90.137768	90.137761			
Elevation (ft)	0.1	1.6			
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	26		
Tare No	T104	T106	T85		
Wet Soil + Tare Mass (g)	28.23	47.44	42.71		
Dry Soil + Tare Mass (g)	23.68	34.78	34.44		
Tare Mass (g)	17.71	15.83	17.48		
Moisture Content (%)	76.6	67.1	49.0		
Trial No 2 / Blow Count	26	26	26		
Tare No	T102	T107	T84		
Wet Soil + Tare Mass (g)	29.56	47.83	42.49		
Dry Soil + Tare Mass (g)	25.30	36.00	35.78		
Tare Mass (g)	19.71	18.24	22.05		
Moisture Content (%)	76.6	66.9	49.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T93	T91	T83		
Wet Soil + Tare Mass (g)	29.23	27.32	24.74		
Dry Soil + Tare Mass (g)	27.34	25.90	23.26		
Tare Mass (g)	19.34	19.71	16.56		
Moisture Content (%)	23.6	22.9	22.1		
Trial No 2 / Tare No	T94	T90	T87		
Wet Soil + Tare Mass (g)	24.55	26.79	28.83		
Dry Soil + Tare Mass (g)	22.83	25.46	27.20		
Tare Mass (g)	15.56	19.67	19.85		
Moisture Content (%)	23.7	23.0	22.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.48	367.17	389.80		
Dry Soil Mass after Washing (g)	285.58	269.02	290.64		
Test Status					
Liquid Limit	**77**	**67**	**49**		
Plastic Limit	**24**	**23**	**22**		
Plasticity Index	**53**	**44**	**27**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.3	4.0	4.5		
Fines (%)	95.7	96.0	95.5		
Group Symbol	CH	CH	CL		
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3095
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	109	110	111		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-Br. Clay	G.-Br. Clay	G.-BR. CLAY		
Station	110+93	110+37	179+00		
Offset	P.S. -160	P.S. -147	UNCOMPACTED FILL		
Lift No	1	2			
Latitude (°N)	29.942014	29.942178			
Longitude (°W)	86.091095	86.091081			
Elevation (ft)	0.1	1.6			
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	26		
Tare No	T104	T106	T85		
Wet Soil + Tare Mass (g)	28.23	47.44	42.71		
Dry Soil + Tare Mass (g)	23.68	34.78	34.44		
Tare Mass (g)	17.71	15.83	17.48		
Moisture Content (%)	76.6	67.1	49.0		
Trial No 2 / Blow Count	26	26	26		
Tare No	T102	T107	T84		
Wet Soil + Tare Mass (g)	29.56	47.83	42.49		
Dry Soil + Tare Mass (g)	25.30	36.00	35.78		
Tare Mass (g)	19.71	18.24	22.05		
Moisture Content (%)	76.6	66.9	49.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T93	T91	T83		
Wet Soil + Tare Mass (g)	29.23	27.32	24.74		
Dry Soil + Tare Mass (g)	27.34	25.90	23.26		
Tare Mass (g)	19.34	19.71	16.56		
Moisture Content (%)	23.6	22.9	22.1		
Trial No 2 / Tare No	T94	T90	T87		
Wet Soil + Tare Mass (g)	24.55	26.79	28.83		
Dry Soil + Tare Mass (g)	22.83	25.46	27.20		
Tare Mass (g)	15.56	19.67	19.85		
Moisture Content (%)	23.7	23.0	22.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.48	367.17	389.80		
Dry Soil Mass after Washing (g)	285.58	269.02	290.64		
Test Status					
Liquid Limit	**77**	**67**	**49**		
Plastic Limit	**24**	**23**	**22**		
Plasticity Index	**53**	**44**	**27**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.3	4.0	4.5		
Fines (%)	95.7	96.0	95.5		
Group Symbol	CH	CH	CL		
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3097
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	112	113	114		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+69	82+58	110+50		
Offset	P.S. -155	F.S. +35.5	P.S. -130		
Lift No	3	1	4		
Latitude (°N)	29.874120	29.881696	29.874187		
Longitude (°W)	90.137763	90.135963	90.137830		
Elevation (ft)	1.9	3.2	3.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	N0		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	24		
Tare No	T101	T64	T68		
Wet Soil + Tare Mass (g)	28.08	26.77	27.80		
Dry Soil + Tare Mass (g)	23.74	22.89	24.99		
Tare Mass (g)	17.11	17.04	20.71		
Moisture Content (%)	66.1	66.6	65.3		
Trial No 2 / Blow Count	27	26	25		
Tare No	T103	T62	T72		
Wet Soil + Tare Mass (g)	29.88	31.04	33.72		
Dry Soil + Tare Mass (g)	24.94	25.74	29.59		
Tare Mass (g)	17.42	17.77	23.28		
Moisture Content (%)	66.3	66.8	65.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T100	T61		
Wet Soil + Tare Mass (g)	26.18	22.86	23.59		
Dry Soil + Tare Mass (g)	24.83	21.10	22.13		
Tare Mass (g)	18.98	14.82	15.70		
Moisture Content (%)	23.1	28.0	22.7		
Trial No 2 / Tare No	T102	T63	T67		
Wet Soil + Tare Mass (g)	24.14	27.26	26.79		
Dry Soil + Tare Mass (g)	22.45	25.53	25.32		
Tare Mass (g)	15.15	19.31	18.91		
Moisture Content (%)	23.2	27.8	22.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.24	365.24	385.26		
Dry Soil Mass after Washing (g)	285.49	288.02	275.42		
Test Status					
Liquid Limit	**66**	**67**	**65**		
Plastic Limit	**23**	**28**	**23**		
Plasticity Index	**43**	**39**	**42**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	3.1	4.2		
Fines (%)	94.7	96.9	95.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3097
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	112	113	114		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+69	82+58	110+50		
Offset	P.S. -155	F.S. +35.5	P.S. -130		
Lift No	3	1	4		
Latitude (°N)	29.942081	29.949597	29.942150		
Longitude (°W)	86.091090	86.088980	86.091151		
Elevation (ft)	1.9	3.2	3.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	N0		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	24		
Tare No	T101	T64	T68		
Wet Soil + Tare Mass (g)	28.08	26.77	27.80		
Dry Soil + Tare Mass (g)	23.74	22.89	24.99		
Tare Mass (g)	17.11	17.04	20.71		
Moisture Content (%)	66.1	66.6	65.3		
Trial No 2 / Blow Count	27	26	25		
Tare No	T103	T62	T72		
Wet Soil + Tare Mass (g)	29.88	31.04	33.72		
Dry Soil + Tare Mass (g)	24.94	25.74	29.59		
Tare Mass (g)	17.42	17.77	23.28		
Moisture Content (%)	66.3	66.8	65.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T100	T61		
Wet Soil + Tare Mass (g)	26.18	22.86	23.59		
Dry Soil + Tare Mass (g)	24.83	21.10	22.13		
Tare Mass (g)	18.98	14.82	15.70		
Moisture Content (%)	23.1	28.0	22.7		
Trial No 2 / Tare No	T102	T63	T67		
Wet Soil + Tare Mass (g)	24.14	27.26	26.79		
Dry Soil + Tare Mass (g)	22.45	25.53	25.32		
Tare Mass (g)	15.15	19.31	18.91		
Moisture Content (%)	23.2	27.8	22.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.24	365.24	385.26		
Dry Soil Mass after Washing (g)	285.49	288.02	275.42		
Test Status					
Liquid Limit	**66**	**67**	**65**		
Plastic Limit	**23**	**28**	**23**		
Plasticity Index	**43**	**39**	**42**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	3.1	4.2		
Fines (%)	94.7	96.9	95.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3115
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	115	116	117	118	119
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	BR. - GR. CL.	BR. - GR. CL.	BR. - GR. CL.	BR. - GR. CL.	BR. - GR. CL.
Station	106+00	170+00	172+00	176+00	108+00
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	21	27	23
Tare No	T81	T39	T30	T18	T92
Wet Soil + Tare Mass (g)	29.21	29.52	32.23	26.64	49.59
Dry Soil + Tare Mass (g)	26.35	25.83	28.37	23.29	40.35
Tare Mass (g)	20.75	20.90	20.24	17.31	25.44
Moisture Content (%)	50.8	75.5	46.5	56.5	61.3
Trial No 2 / Blow Count	24	26	21	27	24
Tare No	T82	T17	T28	T95	T94
Wet Soil + Tare Mass (g)	27.60	21.54	26.55	32.05	42.65
Dry Soil + Tare Mass (g)	24.44	18.60	23.75	27.85	32.25
Tare Mass (g)	18.23	14.72	17.84	20.41	15.56
Moisture Content (%)	50.6	76.1	46.4	57.0	62.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T31	T103	T64	T7	T32
Wet Soil + Tare Mass (g)	31.55	31.04	28.97	27.46	28.49
Dry Soil + Tare Mass (g)	29.33	28.20	26.75	25.83	26.41
Tare Mass (g)	19.54	17.45	17.04	19.76	17.72
Moisture Content (%)	22.7	26.4	22.9	26.9	23.9
Trial No 2 / Tare No	T50	T101	T62	T8	T16
Wet Soil + Tare Mass (g)	33.21	32.19	32.16	26.89	30.33
Dry Soil + Tare Mass (g)	30.63	29.08	29.48	25.48	28.35
Tare Mass (g)	19.16	17.15	17.78	20.23	20.04
Moisture Content (%)	22.5	26.1	22.9	26.9	23.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	354.36	360.57	394.39	390.99	374.35
Dry Soil Mass after Washing (g)	287.78	276.88	287.63	281.84	262.63
Test Status					
Liquid Limit	**51**	**76**	**46**	**57**	**62**
Plastic Limit	**23**	**26**	**23**	**27**	**24**
Plasticity Index	**28**	**50**	**23**	**30**	**38**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	6.9	5.7	1.8	3.7
Fines (%)	96.9	93.1	94.3	98.2	96.3
Group Symbol	CH	CH	CL	CH	CH
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

Remarks	UNCOMPACTED FILL
Version	**MVNQS06-100903**

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3115
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	120				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	BR. - GR. CL.				
Station	171+00				
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21				
Tare No	T93				
Wet Soil + Tare Mass (g)	47.12				
Dry Soil + Tare Mass (g)	38.12				
Tare Mass (g)	19.35				
Moisture Content (%)	46.9				
Trial No 2 / Blow Count	21				
Tare No	T41				
Wet Soil + Tare Mass (g)	52.57				
Dry Soil + Tare Mass (g)	41.81				
Tare Mass (g)	19.38				
Moisture Content (%)	47.0				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T96				
Wet Soil + Tare Mass (g)	25.81				
Dry Soil + Tare Mass (g)	24.33				
Tare Mass (g)	17.54				
Moisture Content (%)	21.8				
Trial No 2 / Tare No	T97				
Wet Soil + Tare Mass (g)	23.94				
Dry Soil + Tare Mass (g)	22.40				
Tare Mass (g)	15.36				
Moisture Content (%)	21.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	343.92				
Dry Soil Mass after Washing (g)	279.55				
Test Status					
Liquid Limit	**47**				
Plastic Limit	**22**				
Plasticity Index	**25**				
Gravel Content (%)	0.0				
Sand Content (%)	3.9				
Fines (%)	96.1				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks	UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3115
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	120				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	BR. - GR. CL.				
Station	171+00				
Offset	UNCOMPACTED FILL				
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21				
Tare No	T93				
Wet Soil + Tare Mass (g)	47.12				
Dry Soil + Tare Mass (g)	38.12				
Tare Mass (g)	19.35				
Moisture Content (%)	46.9				
Trial No 2 / Blow Count	21				
Tare No	T41				
Wet Soil + Tare Mass (g)	52.57				
Dry Soil + Tare Mass (g)	41.81				
Tare Mass (g)	19.38				
Moisture Content (%)	47.0				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T96				
Wet Soil + Tare Mass (g)	25.81				
Dry Soil + Tare Mass (g)	24.33				
Tare Mass (g)	17.54				
Moisture Content (%)	21.8				
Trial No 2 / Tare No	T97				
Wet Soil + Tare Mass (g)	23.94				
Dry Soil + Tare Mass (g)	22.40				
Tare Mass (g)	15.36				
Moisture Content (%)	21.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	343.92				
Dry Soil Mass after Washing (g)	279.55				
Test Status					
Liquid Limit	**47**				
Plastic Limit	**22**				
Plasticity Index	**25**				
Gravel Content (%)	0.0				
Sand Content (%)	3.9				
Fines (%)	96.1				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3131
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	121	122			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	G.-Br. Clay			
Station	105+96	96+00			
Offset	F.S. +37	F.S. +18			
Lift No	2	2			
Latitude (°N)	29.875511	29.878145			
Longitude (°W)	90.137986	90.137116			
Elevation (ft)	4.1	5.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	29			
Tare No	T38	CF1			
Wet Soil + Tare Mass (g)	47.69	30.36			
Dry Soil + Tare Mass (g)	35.09	18.33			
Tare Mass (g)	16.80	1.04			
Moisture Content (%)	67.8	70.8			
Trial No 2 / Blow Count	22	29			
Tare No	T42	CF2			
Wet Soil + Tare Mass (g)	43.96	27.52			
Dry Soil + Tare Mass (g)	32.80	16.67			
Tare Mass (g)	16.59	1.02			
Moisture Content (%)	67.8	70.6			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T100			
Wet Soil + Tare Mass (g)	30.49	24.09			
Dry Soil + Tare Mass (g)	28.22	22.32			
Tare Mass (g)	19.00	14.81			
Moisture Content (%)	24.6	23.6			
Trial No 2 / Tare No	T102	T63			
Wet Soil + Tare Mass (g)	30.40	28.94			
Dry Soil + Tare Mass (g)	27.38	27.10			
Tare Mass (g)	15.16	19.32			
Moisture Content (%)	24.7	23.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	344.77	333.62			
Dry Soil Mass after Washing (g)	255.60	225.47			
Test Status					
Liquid Limit	**68**	**71**			
Plastic Limit	**25**	**24**			
Plasticity Index	**43**	**47**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.6	3.3			
Fines (%)	95.4	96.7			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3131
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	121	122			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-Br. Clay	G.-Br. Clay			
Station	105+96	96+00			
Offset	F.S. +37	F.S. +18			
Lift No	2	2			
Latitude (°N)	29.943478	29.946084			
Longitude (°W)	86.091254	86.090277			
Elevation (ft)	4.1	5.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	29			
Tare No	T38	CF1			
Wet Soil + Tare Mass (g)	47.69	30.36			
Dry Soil + Tare Mass (g)	35.09	18.33			
Tare Mass (g)	16.80	1.04			
Moisture Content (%)	67.8	70.8			
Trial No 2 / Blow Count	22	29			
Tare No	T42	CF2			
Wet Soil + Tare Mass (g)	43.96	27.52			
Dry Soil + Tare Mass (g)	32.80	16.67			
Tare Mass (g)	16.59	1.02			
Moisture Content (%)	67.8	70.6			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T100			
Wet Soil + Tare Mass (g)	30.49	24.09			
Dry Soil + Tare Mass (g)	28.22	22.32			
Tare Mass (g)	19.00	14.81			
Moisture Content (%)	24.6	23.6			
Trial No 2 / Tare No	T102	T63			
Wet Soil + Tare Mass (g)	30.40	28.94			
Dry Soil + Tare Mass (g)	27.38	27.10			
Tare Mass (g)	15.16	19.32			
Moisture Content (%)	24.7	23.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	344.77	333.62			
Dry Soil Mass after Washing (g)	255.60	225.47			
Test Status					
Liquid Limit	**68**	**71**			
Plastic Limit	**25**	**24**			
Plasticity Index	**43**	**47**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.6	3.3			
Fines (%)	95.4	96.7			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3140
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/8/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	123	124			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. CL.	G. SA. CL.			
Station	105+00	167+00			
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	24			
Tare No	CF3	CF5			
Wet Soil + Tare Mass (g)	23.71	31.56			
Dry Soil + Tare Mass (g)	15.69	23.14			
Tare Mass (g)	3.11	3.17			
Moisture Content (%)	63.1	42.0			
Trial No 2 / Blow Count	23	24			
Tare No	CF4	CF6			
Wet Soil + Tare Mass (g)	40.03	32.01			
Dry Soil + Tare Mass (g)	25.34	23.92			
Tare Mass (g)	2.10	5.22			
Moisture Content (%)	62.6	43.0			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T68	T21			
Wet Soil + Tare Mass (g)	31.36	22.46			
Dry Soil + Tare Mass (g)	29.31	21.32			
Tare Mass (g)	20.77	15.56			
Moisture Content (%)	24.0	19.8			
Trial No 2 / Tare No	T72	T40			
Wet Soil + Tare Mass (g)	33.10	27.09			
Dry Soil + Tare Mass (g)	31.22	25.84			
Tare Mass (g)	23.32	19.39			
Moisture Content (%)	23.8	19.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	361.65	349.67			
Dry Soil Mass after Washing (g)	282.06	262.49			
Test Status					
Liquid Limit	**63**	**43**			
Plastic Limit	**24**	**20**			
Plasticity Index	**39**	**23**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.9	7.9			
Fines (%)	96.1	92.1			
Group Symbol	CH	CL			
Group Name	FAT CLAY	LEAN CLAY			
Test Result	**Pass**	**Pass**			
Remarks	UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3177
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/13/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	134	135	136	137	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	
Station	77+94	72+98	67+92	63+00	
Offset	F.S. +22	F.S. +21	F.S. +46'	F.S. +22'	
Lift No	1	1	1	1	
Latitude (°N)	29.882907	29.884216	29.885201	29.885827	
Longitude (°W)	90.135504	90.135054	90.135245	90.136639	
Elevation (ft)	4.4	4.5	3.0	4.2	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	21	26	20	
Tare No	t60	t78	T76	T34	
Wet Soil + Tare Mass (g)	28.76	26.32	23.67	28.06	
Dry Soil + Tare Mass (g)	24.15	22.92	20.77	23.80	
Tare Mass (g)	18.46	17.86	16.13	17.50	
Moisture Content (%)	79.3	65.8	62.8	65.8	
Trial No 2 / Blow Count	21	21	26	20	
Tare No	t69	t77	T75	T74	
Wet Soil + Tare Mass (g)	30.97	31.76	24.40	28.91	
Dry Soil + Tare Mass (g)	25.87	27.73	21.23	25.23	
Tare Mass (g)	19.57	21.69	16.17	19.77	
Moisture Content (%)	79.3	65.3	62.9	65.6	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T82	T99	T65	T105	
Wet Soil + Tare Mass (g)	28.40	27.48	30.25	24.96	
Dry Soil + Tare Mass (g)	26.25	25.52	28.10	23.17	
Tare Mass (g)	18.23	16.55	17.60	15.62	
Moisture Content (%)	26.8	21.9	20.5	23.7	
Trial No 2 / Tare No	T43	T70	T65	T5	
Wet Soil + Tare Mass (g)	28.56	28.49	31.92	29.14	
Dry Soil + Tare Mass (g)	26.43	26.74	29.71	27.28	
Tare Mass (g)	18.51	18.65	19.17	19.29	
Moisture Content (%)	26.9	21.6	21.0	23.3	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	380.29	388.48	380.03	347.64	
Dry Soil Mass after Washing (g)	280.68	270.34	286.71	258.82	
Test Status					
Liquid Limit	**79**	**66**	**63**	**66**	
Plastic Limit	**27**	**22**	**21**	**23**	
Plasticity Index	**52**	**44**	**42**	**43**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.7	4.1	6.7	4.1	
Fines (%)	96.3	95.9	93.3	95.9	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3178
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	125				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	North End				
Offset	500' from North Pit Limit				
Lift No					
Latitude (°N)	30.023050				
Longitude (°W)	90.605790				
Elevation (ft)	2.6				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G26				
Wet Soil + Tare Mass (g)	32.59				
Dry Soil + Tare Mass (g)	26.26				
Tare Mass (g)	16.99				
Moisture Content (%)	68.3				
Trial No 2 / Blow Count	25				
Tare No	G10				
Wet Soil + Tare Mass (g)	35.39				
Dry Soil + Tare Mass (g)	27.97				
Tare Mass (g)	17.08				
Moisture Content (%)	68.1				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G42				
Wet Soil + Tare Mass (g)	28.96				
Dry Soil + Tare Mass (g)	27.00				
Tare Mass (g)	17.50				
Moisture Content (%)	20.6				
Trial No 2 / Tare No	G50				
Wet Soil + Tare Mass (g)	29.02				
Dry Soil + Tare Mass (g)	27.08				
Tare Mass (g)	17.42				
Moisture Content (%)	20.1				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.97				
Test Status					
Liquid Limit	**68**				
Plastic Limit	**20**				
Plasticity Index	**48**				
Gravel Content (%)	0.0				
Sand Content (%)	1.9				
Fines (%)	98.1				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3179
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	126				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	North End				
Offset	500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605590				
Elevation (ft)	-4.0				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G46				
Wet Soil + Tare Mass (g)	39.43				
Dry Soil + Tare Mass (g)	33.16				
Tare Mass (g)	18.78				
Moisture Content (%)	43.6				
Trial No 2 / Blow Count	25				
Tare No	G21				
Wet Soil + Tare Mass (g)	38.98				
Dry Soil + Tare Mass (g)	32.99				
Tare Mass (g)	19.30				
Moisture Content (%)	43.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G46				
Wet Soil + Tare Mass (g)	30.29				
Dry Soil + Tare Mass (g)	28.56				
Tare Mass (g)	19.42				
Moisture Content (%)	18.9				
Trial No 2 / Tare No	G33				
Wet Soil + Tare Mass (g)	29.31				
Dry Soil + Tare Mass (g)	27.51				
Tare Mass (g)	17.87				
Moisture Content (%)	18.7				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	1.47				
Test Status					
Liquid Limit	**44**				
Plastic Limit	**19**				
Plasticity Index	**25**				
Gravel Content (%)	0.0				
Sand Content (%)	2.9				
Fines (%)	97.1				
Group Symbol	CL				
Group Name	LEAN CLAY w/SAND				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3180
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	127				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	North End				
Offset	500' from North Pit Limit				
Lift No					
Latitude (°N)	30.023050				
Longitude (°W)	90.605790				
Elevation (ft)	2.6				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G28				
Wet Soil + Tare Mass (g)	36.01				
Dry Soil + Tare Mass (g)	28.56				
Tare Mass (g)	16.17				
Moisture Content (%)	60.1				
Trial No 2 / Blow Count	25				
Tare No	G11				
Wet Soil + Tare Mass (g)	35.41				
Dry Soil + Tare Mass (g)	28.36				
Tare Mass (g)	16.67				
Moisture Content (%)	60.3				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G43				
Wet Soil + Tare Mass (g)	29.52				
Dry Soil + Tare Mass (g)	27.44				
Tare Mass (g)	17.51				
Moisture Content (%)	20.9				
Trial No 2 / Tare No	G3				
Wet Soil + Tare Mass (g)	29.72				
Dry Soil + Tare Mass (g)	27.67				
Tare Mass (g)	17.68				
Moisture Content (%)	20.5				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	1.10				
Test Status					
Liquid Limit	**60**				
Plastic Limit	**21**				
Plasticity Index	**39**				
Gravel Content (%)	0.0				
Sand Content (%)	2.2				
Fines (%)	97.8				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3181
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	128				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	Middle				
Offset	1500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020299				
Longitude (°W)	90.605593				
Elevation (ft)	2.1				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G7				
Wet Soil + Tare Mass (g)	33.69				
Dry Soil + Tare Mass (g)	25.36				
Tare Mass (g)	14.67				
Moisture Content (%)	77.9				
Trial No 2 / Blow Count	25				
Tare No	G45				
Wet Soil + Tare Mass (g)	35.87				
Dry Soil + Tare Mass (g)	27.26				
Tare Mass (g)	16.21				
Moisture Content (%)	77.9				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G41				
Wet Soil + Tare Mass (g)	31.46				
Dry Soil + Tare Mass (g)	29.50				
Tare Mass (g)	20.58				
Moisture Content (%)	22.0				
Trial No 2 / Tare No	G20				
Wet Soil + Tare Mass (g)	30.37				
Dry Soil + Tare Mass (g)	27.94				
Tare Mass (g)	17.50				
Moisture Content (%)	23.3				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.19				
Test Status					
Liquid Limit	**78**				
Plastic Limit	**23**				
Plasticity Index	**55**				
Gravel Content (%)	0.0				
Sand Content (%)	0.4				
Fines (%)	99.6				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3182
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	129				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	Middle				
Offset	1500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605590				
Elevation (ft)	-5.0				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G16				
Wet Soil + Tare Mass (g)	34.39				
Dry Soil + Tare Mass (g)	25.79				
Tare Mass (g)	15.93				
Moisture Content (%)	87.2				
Trial No 2 / Blow Count	25				
Tare No	G30				
Wet Soil + Tare Mass (g)	35.50				
Dry Soil + Tare Mass (g)	27.14				
Tare Mass (g)	17.55				
Moisture Content (%)	87.2				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G15				
Wet Soil + Tare Mass (g)	29.73				
Dry Soil + Tare Mass (g)	27.54				
Tare Mass (g)	18.72				
Moisture Content (%)	24.8				
Trial No 2 / Tare No	G36				
Wet Soil + Tare Mass (g)	28.84				
Dry Soil + Tare Mass (g)	26.11				
Tare Mass (g)	15.14				
Moisture Content (%)	24.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.12				
Test Status					
Liquid Limit	**87**				
Plastic Limit	**25**				
Plasticity Index	**62**				
Gravel Content (%)	0.0				
Sand Content (%)	0.2				
Fines (%)	99.8				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3183
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	130				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	Middle				
Offset	1500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605590				
Elevation (ft)	-5.0				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G18				
Wet Soil + Tare Mass (g)	39.68				
Dry Soil + Tare Mass (g)	30.86				
Tare Mass (g)	19.94				
Moisture Content (%)	80.8				
Trial No 2 / Blow Count	25				
Tare No	G29				
Wet Soil + Tare Mass (g)	41.25				
Dry Soil + Tare Mass (g)	32.19				
Tare Mass (g)	20.92				
Moisture Content (%)	80.4				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G23				
Wet Soil + Tare Mass (g)	32.61				
Dry Soil + Tare Mass (g)	30.08				
Tare Mass (g)	20.02				
Moisture Content (%)	25.1				
Trial No 2 / Tare No	G9				
Wet Soil + Tare Mass (g)	28.99				
Dry Soil + Tare Mass (g)	26.65				
Tare Mass (g)	17.11				
Moisture Content (%)	24.5				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.20				
Test Status					
Liquid Limit	**81**				
Plastic Limit	**25**				
Plasticity Index	**56**				
Gravel Content (%)	0.0				
Sand Content (%)	0.4				
Fines (%)	99.6				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3183
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/14/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	138	139	140	141	142
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	159+45	100+50	101+50	157+00	159+00
Offset	F.S. +54'				
Lift No	2				
Latitude (°N)	29.871336				
Longitude (°W)	90.124706				
Elevation (ft)	4.5				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	20	27	27
Tare No	T69	T99	T34	T102	T79
Wet Soil + Tare Mass (g)	50.20	42.88	47.99	27.22	25.24
Dry Soil + Tare Mass (g)	37.87	32.46	38.01	24.40	22.49
Tare Mass (g)	19.57	16.54	17.50	19.70	16.16
Moisture Content (%)	68.0	65.8	47.4	60.6	43.9
Trial No 2 / Blow Count	27	26	20	28	27
Tare No	T60	T70	T45	T107	T86
Wet Soil + Tare Mass (g)	44.76	48.72	48.43	26.41	24.38
Dry Soil + Tare Mass (g)	34.15	36.85	38.83	23.36	22.03
Tare Mass (g)	18.46	18.65	19.21	18.24	16.63
Moisture Content (%)	68.3	65.5	47.6	60.4	43.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T82	T77	T74	T75	T83
Wet Soil + Tare Mass (g)	29.97	31.31	26.84	23.70	30.34
Dry Soil + Tare Mass (g)	27.61	29.25	25.46	22.02	27.87
Tare Mass (g)	18.23	21.69	19.74	16.15	16.57
Moisture Content (%)	25.2	27.2	24.1	28.6	21.9
Trial No 2 / Tare No	T43	T78	T105	T76	T20
Wet Soil + Tare Mass (g)	30.08	30.61	24.38	24.35	30.50
Dry Soil + Tare Mass (g)	27.73	27.89	22.64	22.54	28.24
Tare Mass (g)	18.51	17.85	15.59	16.12	17.86
Moisture Content (%)	25.5	27.1	24.7	28.2	21.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	397.36	365.36	384.56	361.44	311.16
Dry Soil Mass after Washing (g)	282.99	261.96	278.24	273.64	227.78
Test Status					
Liquid Limit	**68**	**66**	**47**	**60**	**44**
Plastic Limit	**25**	**27**	**24**	**28**	**22**
Plasticity Index	**43**	**39**	**23**	**32**	**22**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.7	3.5	6.5	3.3	6.7
Fines (%)	95.3	96.5	93.5	96.7	93.3
Group Symbol	CH	CH	CL	CH	CL
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

Remarks	TEST ID 139 - 142 UNCOMPACTED FILL
Version	**MVNQS06-100903**

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3184
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	131				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	South End				
Offset	2500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605593				
Elevation (ft)	2.3				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G31				
Wet Soil + Tare Mass (g)	43.61				
Dry Soil + Tare Mass (g)	34.75				
Tare Mass (g)	22.21				
Moisture Content (%)	70.7				
Trial No 2 / Blow Count	25				
Tare No	G6				
Wet Soil + Tare Mass (g)	35.73				
Dry Soil + Tare Mass (g)	27.80				
Tare Mass (g)	16.64				
Moisture Content (%)	71.1				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G24				
Wet Soil + Tare Mass (g)	28.05				
Dry Soil + Tare Mass (g)	25.76				
Tare Mass (g)	16.06				
Moisture Content (%)	23.6				
Trial No 2 / Tare No	G35				
Wet Soil + Tare Mass (g)	30.24				
Dry Soil + Tare Mass (g)	27.56				
Tare Mass (g)	16.09				
Moisture Content (%)	23.4				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50+.42				
Dry Soil Mass after Washing (g)					
Test Status					
Liquid Limit	**71**				
Plastic Limit	**23**				
Plasticity Index	**48**				
Gravel Content (%)	0.0				
Sand Content (%)	0.8				
Fines (%)	99.2				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3185
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	132				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	South End				
Offset	2500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605593				
Elevation (ft)	-5.3				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G23				
Wet Soil + Tare Mass (g)	41.04				
Dry Soil + Tare Mass (g)	32.05				
Tare Mass (g)	20.03				
Moisture Content (%)	74.8				
Trial No 2 / Blow Count	25				
Tare No	G29				
Wet Soil + Tare Mass (g)	40.02				
Dry Soil + Tare Mass (g)	31.90				
Tare Mass (g)	20.94				
Moisture Content (%)	74.1				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G18				
Wet Soil + Tare Mass (g)	34.00				
Dry Soil + Tare Mass (g)	31.42				
Tare Mass (g)	19.96				
Moisture Content (%)	22.5				
Trial No 2 / Tare No	G36				
Wet Soil + Tare Mass (g)	29.72				
Dry Soil + Tare Mass (g)	27.04				
Tare Mass (g)	15.13				
Moisture Content (%)	22.5				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.42				
Test Status					
Liquid Limit	**74**				
Plastic Limit	**23**				
Plasticity Index	**51**				
Gravel Content (%)	0.0				
Sand Content (%)	0.8				
Fines (%)	99.2				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3186
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CMW	**Reviewed By**	WENDY	**Submitted By**	B. LANDERS
Test No	133				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-Br. Clay				
Station	South End				
Offset	2500' from North Pit Limit				
Lift No					
Latitude (°N)	30.020290				
Longitude (°W)	90.605593				
Elevation (ft)	-5.3				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	G9				
Wet Soil + Tare Mass (g)	36.13				
Dry Soil + Tare Mass (g)	28.46				
Tare Mass (g)	17.11				
Moisture Content (%)	67.6				
Trial No 2 / Blow Count	25				
Tare No	G31				
Wet Soil + Tare Mass (g)	40.99				
Dry Soil + Tare Mass (g)	33.45				
Tare Mass (g)	22.24				
Moisture Content (%)	67.3				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G24				
Wet Soil + Tare Mass (g)	28.78				
Dry Soil + Tare Mass (g)	26.50				
Tare Mass (g)	16.06				
Moisture Content (%)	21.8				
Trial No 2 / Tare No	G35				
Wet Soil + Tare Mass (g)	31.81				
Dry Soil + Tare Mass (g)	28.73				
Tare Mass (g)	16.11				
Moisture Content (%)	24.4				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	0.53				
Test Status					
Liquid Limit	**67**				
Plastic Limit	**23**				
Plasticity Index	**44**				
Gravel Content (%)	0.0				
Sand Content (%)	1.1				
Fines (%)	98.9				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3194
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/15/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	143	144	145		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	103+00	152+00	155+00		
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	28	20		
Tare No	T99	T105	T75		
Wet Soil + Tare Mass (g)	25.37	22.86	24.31		
Dry Soil + Tare Mass (g)	22.07	19.81	21.38		
Tare Mass (g)	16.57	15.60	16.16		
Moisture Content (%)	60.3	73.4	54.6		
Trial No 2 / Blow Count	26	27	20		
Tare No	T78	T102	T86		
Wet Soil + Tare Mass (g)	24.37	28.31	23.26		
Dry Soil + Tare Mass (g)	21.91	24.71	20.90		
Tare Mass (g)	17.85	19.73	16.67		
Moisture Content (%)	60.9	73.0	54.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T77	T34	T107		
Wet Soil + Tare Mass (g)	31.29	27.80	30.74		
Dry Soil + Tare Mass (g)	29.27	25.68	28.40		
Tare Mass (g)	21.68	17.55	18.25		
Moisture Content (%)	26.6	26.1	23.1		
Trial No 2 / Tare No	T45	T74	T76		
Wet Soil + Tare Mass (g)	27.78	28.49	28.95		
Dry Soil + Tare Mass (g)	25.99	26.67	26.55		
Tare Mass (g)	19.23	19.75	16.11		
Moisture Content (%)	26.5	26.3	23.0		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	378.41	341.41	349.15		
Dry Soil Mass after Washing (g)	273.87	247.19	258.00		
Test Status					
Liquid Limit	**61**	**73**	**54**		
Plastic Limit	**27**	**26**	**23**		
Plasticity Index	**34**	**47**	**31**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	2.8	2.6	4.0		
Fines (%)	97.2	97.4	96.0		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks	UNCOMPACTED FILL TEST				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3200
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/16/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	146	147	148	149	150
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	55+69	52+23	48+62	42+43	164+53
Offset	F.S. +57	F.S. +4	F.S. +14'	F.S. +18	F.S. +46
Lift No	1	1	1	1	2
Latitude (°N)	29.886461	29.886399	29.886575	29.887135	29.871245
Longitude (°W)	90.138671	90.139659	90.140788	90.167946	90.123105
Elevation (ft)	4.0	5.1	4.1	4.5	4.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	20	24	28	27
Tare No	T45	T74	T107	T85	T33
Wet Soil + Tare Mass (g)	30.60	26.96	25.70	26.02	22.51
Dry Soil + Tare Mass (g)	26.03	24.39	22.84	22.49	19.03
Tare Mass (g)	19.23	19.74	18.25	17.49	14.93
Moisture Content (%)	66.5	53.8	62.0	71.6	85.7
Trial No 2 / Blow Count	23	20	24	29	27
Tare No	T99	T34	T75	T10	T83
Wet Soil + Tare Mass (g)	25.94	26.89	24.92	24.21	25.64
Dry Soil + Tare Mass (g)	22.19	23.55	21.54	20.62	21.49
Tare Mass (g)	16.56	17.51	16.16	15.50	16.57
Moisture Content (%)	65.9	53.8	62.5	71.4	85.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T78	T102	T76	T20	T82
Wet Soil + Tare Mass (g)	31.88	31.30	31.75	29.79	32.69
Dry Soil + Tare Mass (g)	29.22	29.26	28.78	27.36	29.66
Tare Mass (g)	17.86	19.71	16.11	17.86	18.24
Moisture Content (%)	23.4	21.4	23.4	25.6	26.5
Trial No 2 / Tare No	T77	T105	T86	T79	T43
Wet Soil + Tare Mass (g)	36.08	27.64	30.45	26.99	32.62
Dry Soil + Tare Mass (g)	33.36	25.54	27.85	24.80	29.48
Tare Mass (g)	21.70	15.60	16.70	16.18	18.51
Moisture Content (%)	23.3	21.1	23.3	25.4	28.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	364.33	362.33	345.85	374.47	378.39
Dry Soil Mass after Washing (g)	276.93	284.43	286.61	274.54	277.23
Test Status					
Liquid Limit	**66**	**54**	**62**	**71**	**85**
Plastic Limit	**23**	**21**	**23**	**25**	**28**
Plasticity Index	**43**	**33**	**39**	**46**	**57**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	7.0	5.1	4.1	1.5	2.3
Fines (%)	93.0	94.9	95.9	98.5	97.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3200
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/16/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	151	152			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	98+00	150+00			
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	23			
Tare No	T90	T92			
Wet Soil + Tare Mass (g)	28.67	34.47			
Dry Soil + Tare Mass (g)	25.09	30.68			
Tare Mass (g)	19.69	25.44			
Moisture Content (%)	67.2	71.6			
Trial No 2 / Blow Count	29	23			
Tare No	T91	T94			
Wet Soil + Tare Mass (g)	29.31	26.39			
Dry Soil + Tare Mass (g)	25.47	21.84			
Tare Mass (g)	19.72	15.58			
Moisture Content (%)	68.0	72.0			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T52	T60			
Wet Soil + Tare Mass (g)	29.67	31.92			
Dry Soil + Tare Mass (g)	27.85	29.20			
Tare Mass (g)	20.30	18.52			
Moisture Content (%)	24.1	25.5			
Trial No 2 / Tare No	T106	T69			
Wet Soil + Tare Mass (g)	26.49	32.11			
Dry Soil + Tare Mass (g)	24.40	29.56			
Tare Mass (g)	15.87	19.60			
Moisture Content (%)	24.5	25.6			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	344.84	361.29			
Dry Soil Mass after Washing (g)	266.31	278.61			
Test Status					
Liquid Limit	**68**	**72**			
Plastic Limit	**24**	**26**			
Plasticity Index	**44**	**46**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	1.8	1.8			
Fines (%)	98.2	98.2			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks	UNCOMPACTED FILL TEST				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3202
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/17/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	153	154	155	156	157
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	38+02	32+16	148+50	146+00	95+00
Offset	F.S +8	F.S. +10			
Lift No	1	1			
Latitude (°N)	29.887179	29.887499			
Longitude (°W)	90.144058	90.145869			
Elevation (ft)	4.6	4.3			
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	25	24	25
Tare No	T45	T102	T76	T79	T83
Wet Soil + Tare Mass (g)	26.67	24.94	23.49	25.02	23.18
Dry Soil + Tare Mass (g)	23.55	22.74	21.23	22.15	21.05
Tare Mass (g)	19.22	19.71	16.11	16.17	16.58
Moisture Content (%)	72.7	73.0	44.1	47.8	47.7
Trial No 2 / Blow Count	27	27	25	25	25
Tare No	T99	T105	T86	T20	T33
Wet Soil + Tare Mass (g)	25.67	23.67	24.15	25.66	23.19
Dry Soil + Tare Mass (g)	21.85	20.28	21.86	23.12	20.53
Tare Mass (g)	16.54	15.60	16.70	17.83	14.93
Moisture Content (%)	72.6	73.1	44.4	48.0	47.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T78	T74	T75	T10	T43
Wet Soil + Tare Mass (g)	25.09	26.59	22.48	22.20	24.89
Dry Soil + Tare Mass (g)	23.65	25.23	21.15	20.82	23.45
Tare Mass (g)	17.84	19.75	16.15	15.46	18.50
Moisture Content (%)	24.8	24.8	26.6	25.7	29.1
Trial No 2 / Tare No	T77	T34	T107	T85	Y82
Wet Soil + Tare Mass (g)	28.05	23.68	24.55	24.93	24.81
Dry Soil + Tare Mass (g)	26.80	22.49	23.21	23.40	23.29
Tare Mass (g)	21.68	17.48	18.24	17.48	18.24
Moisture Content (%)	24.4	23.8	27.0	25.8	30.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	354.27	358.86	331.29	343.37	359.80
Dry Soil Mass after Washing (g)	272.56	276.77	267.78	279.78	287.66
Test Status					
Liquid Limit	**73**	**73**	**44**	**48**	**48**
Plastic Limit	**25**	**24**	**27**	**26**	**30**
Plasticity Index	**48**	**49**	**17**	**22**	**18**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	2.4	4.4	4.1	4.8
Fines (%)	96.9	97.6	95.6	95.9	95.2
Group Symbol	CH	CH	CL	CL	CL
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

Remarks	TEST ID 155 - 157 UNCOMPACTED FILL
Version	**MVNQS06-100903**

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3218
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/19/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	158	159	160	161	162
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	77+07	71+99	81+04	28+07	87+00
Offset	F.S. +16.8	F.S. +36	F.S. +25	F.S. +34	
Lift No	2	2	2	1	
Latitude (°N)	29.883132	29.884487	29.882097	29.887666	
Longitude (°W)	90.135411	90.135009	90.135792	90.147150	
Elevation (ft)	5.6	4.8	5.0	4.1	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	20	20	26	27
Tare No	T102	T77	T90	T106	T104
Wet Soil + Tare Mass (g)	27.81	30.60	28.98	25.97	26.89
Dry Soil + Tare Mass (g)	24.40	27.50	25.47	21.87	23.21
Tare Mass (g)	19.71	21.69	19.73	15.86	17.72
Moisture Content (%)	73.7	51.9	59.5	68.5	67.7
Trial No 2 / Blow Count	28	20	20	26	27
Tare No	T105	T78	T91	T52	T70
Wet Soil + Tare Mass (g)	23.83	25.55	27.14	29.64	26.80
Dry Soil + Tare Mass (g)	20.36	22.85	24.30	25.87	23.54
Tare Mass (g)	15.61	17.86	19.73	20.31	18.67
Moisture Content (%)	74.1	52.7	60.5	68.1	67.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T34	T45	T92	T69	T64
Wet Soil + Tare Mass (g)	27.64	32.60	38.63	31.73	28.16
Dry Soil + Tare Mass (g)	25.68	30.37	36.28	29.44	25.98
Tare Mass (g)	17.49	19.22	25.46	19.65	17.06
Moisture Content (%)	23.9	20.0	21.7	23.4	24.4
Trial No 2 / Tare No	T74	T99	T94	T60	T95
Wet Soil + Tare Mass (g)	29.91	27.30	27.94	31.61	32.08
Dry Soil + Tare Mass (g)	27.96	25.55	25.76	29.15	29.82
Tare Mass (g)	19.74	16.55	15.60	18.53	20.45
Moisture Content (%)	23.7	19.4	21.5	23.2	24.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	342.53	362.15	366.04	361.42	317.07
Dry Soil Mass after Washing (g)	274.43	280.71	290.78	282.18	257.85
Test Status					
Liquid Limit	**74**	**52**	**60**	**68**	**68**
Plastic Limit	**24**	**20**	**22**	**23**	**24**
Plasticity Index	**50**	**32**	**38**	**45**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.3	4.2	6.5	2.5	0.7
Fines (%)	97.7	95.8	93.5	97.5	99.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

Remarks	TEST ID 162 UNCOMPACTED FILL
Version	**MVNQS06-100903**

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3218
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/19/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	163				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	144+00				
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	T62				
Wet Soil + Tare Mass (g)	26.01				
Dry Soil + Tare Mass (g)	22.83				
Tare Mass (g)	17.79				
Moisture Content (%)	63.4				
Trial No 2 / Blow Count	26				
Tare No	T30				
Wet Soil + Tare Mass (g)	29.48				
Dry Soil + Tare Mass (g)	25.92				
Tare Mass (g)	20.24				
Moisture Content (%)	63.0				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T61				
Wet Soil + Tare Mass (g)	24.87				
Dry Soil + Tare Mass (g)	22.77				
Tare Mass (g)	15.74				
Moisture Content (%)	29.9				
Trial No 2 / Tare No	T67				
Wet Soil + Tare Mass (g)	28.99				
Dry Soil + Tare Mass (g)	26.69				
Tare Mass (g)	18.93				
Moisture Content (%)	29.6				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	342.59				
Dry Soil Mass after Washing (g)	272.05				
Test Status					
Liquid Limit	**63**				
Plastic Limit	**30**				
Plasticity Index	**33**				
Gravel Content (%)	0.0				
Sand Content (%)	2.9				
Fines (%)	97.1				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks	UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3236
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/21/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	164	165	166	167	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	22+54	17+89	87+00	88+00	
Offset	F.S. +30	F.S. +22			
Lift No	1	1			
Latitude (°N)	29.887983	29.888264			
Longitude (°W)	90.148855	90.150286			
Elevation (ft)	3.0	4.0			
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	26	28	
Tare No	T20	T83	T107	T82	
Wet Soil + Tare Mass (g)	28.15	26.41	27.52	31.72	
Dry Soil + Tare Mass (g)	24.39	22.12	24.14	26.89	
Tare Mass (g)	17.82	16.59	18.25	18.24	
Moisture Content (%)	57.8	78.3	57.7	56.6	
Trial No 2 / Blow Count	26	27	26	28	
Tare No	T75	T86	T76	T79	
Wet Soil + Tare Mass (g)	25.58	24.89	25.39	27.04	
Dry Soil + Tare Mass (g)	22.15	21.29	22.02	23.13	
Tare Mass (g)	16.14	16.66	16.12	16.18	
Moisture Content (%)	57.3	78.5	57.4	57.0	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T33	T85	T74	T65	
Wet Soil + Tare Mass (g)	21.53	24.13	25.65	24.18	
Dry Soil + Tare Mass (g)	20.36	22.65	24.47	22.87	
Tare Mass (g)	14.91	17.49	19.76	17.60	
Moisture Content (%)	21.5	28.7	25.1	24.9	
Trial No 2 / Tare No	T43	T10	T34	T80	
Wet Soil + Tare Mass (g)	24.61	22.00	23.60	22.98	
Dry Soil + Tare Mass (g)	23.52	20.57	22.38	21.73	
Tare Mass (g)	18.52	15.49	17.50	16.56	
Moisture Content (%)	21.8	28.1	25.0	24.2	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	374.51	332.18	335.91	355.33	
Dry Soil Mass after Washing (g)	259.71	225.61	259.96	269.47	
Test Status					
Liquid Limit	**58**	**78**	**58**	**57**	
Plastic Limit	**22**	**28**	**25**	**25**	
Plasticity Index	**36**	**50**	**33**	**32**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.6	3.4	2.1	4.6	
Fines (%)	95.4	96.6	97.9	95.4	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks	TEST 166 & 167 UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3266
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/26/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	168	169	170	171	172
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	179+04	174+35	169+78	101+97	91+01
Offset	F.S. +67	F.S. +65	F.S. +4.5	F.S. +26	F.S. +28
Lift No	1	1	1	2	2
Latitude (°N)	29.870821	29.870821	29.871040	29.876567	29.879469
Longitude (°W)	90.118594	90.118594	90.121463	90.137643	90.136701
Elevation (ft)	3.8	4.2	4.5	4.7	4.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	23	23	22	25
Tare No	T84	T103	T13	T95	T24
Wet Soil + Tare Mass (g)	36.60	31.31	32.73	31.88	29.40
Dry Soil + Tare Mass (g)	31.16	25.97	26.76	27.38	22.24
Tare Mass (g)	22.07	17.43	18.09	20.42	13.78
Moisture Content (%)	58.9	61.9	68.2	63.7	84.6
Trial No 2 / Blow Count	22	22	22	22	24
Tare No	T17	T81	T70	T52	T44
Wet Soil + Tare Mass (g)	26.01	31.99	29.74	35.79	27.47
Dry Soil + Tare Mass (g)	21.80	27.66	25.20	29.70	21.72
Tare Mass (g)	14.73	20.75	18.68	20.29	14.94
Moisture Content (%)	58.6	61.7	68.6	63.7	84.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T75	T30	T104	T61	T67
Wet Soil + Tare Mass (g)	25.28	24.68	24.44	22.40	26.13
Dry Soil + Tare Mass (g)	23.59	23.93	23.18	21.13	24.48
Tare Mass (g)	16.16	20.24	17.73	15.71	18.93
Moisture Content (%)	22.7	20.3	23.1	23.4	29.7
Trial No 2 / Tare No	T87	T62	T64	T106	T421
Wet Soil + Tare Mass (g)	27.90	23.11	23.70	23.14	26.33
Dry Soil + Tare Mass (g)	26.45	22.16	22.49	21.78	24.79
Tare Mass (g)	19.86	17.80	17.07	15.86	19.74
Moisture Content (%)	22.0	21.8	22.3	23.0	30.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.62	331.73	398.02	388.79	352.53
Dry Soil Mass after Washing (g)	279.75	225.90	282.05	269.17	255.73
Test Status					
Liquid Limit	**59**	**62**	**68**	**64**	**85**
Plastic Limit	**22**	**21**	**23**	**23**	**30**
Plasticity Index	**37**	**41**	**45**	**41**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	3.7	6.2	3.4	4.3
Fines (%)	96.0	96.3	93.8	96.6	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3266
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/26/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	173	174	175	176	177
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	86+05	66+64	61+98	75+00	78+00
Offset	F.S. +24	F.S. +26	F.S. +14		
Lift No	2	2	2		
Latitude (°N)	29.880773	29.885375	29.886008		
Longitude (°W)	90.136242	90.135603	90.136884		
Elevation (ft)	5.1	4.9	5.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	23	22	20	21
Tare No	T69	T78	T71	T83	T101
Wet Soil + Tare Mass (g)	28.95	27.80	28.33	23.76	27.12
Dry Soil + Tare Mass (g)	25.35	24.22	25.24	20.83	23.08
Tare Mass (g)	19.63	17.90	19.79	16.60	17.15
Moisture Content (%)	61.3	56.1	55.8	67.4	66.7
Trial No 2 / Blow Count	20	23	23	20	20
Tare No	T60	T77	T90	T107	T73
Wet Soil + Tare Mass (g)	29.27	31.01	27.23	29.63	26.58
Dry Soil + Tare Mass (g)	25.12	27.66	24.52	24.97	22.23
Tare Mass (g)	18.53	21.73	19.71	18.29	15.85
Moisture Content (%)	61.3	55.9	55.8	67.9	66.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T99	T93	T40	T14	T101
Wet Soil + Tare Mass (g)	23.07	26.88	26.06	23.48	22.44
Dry Soil + Tare Mass (g)	21.78	25.51	24.83	21.54	20.82
Tare Mass (g)	16.56	19.37	19.31	15.27	15.50
Moisture Content (%)	24.7	22.3	22.3	30.9	30.5
Trial No 2 / Tare No	T45	T66	T72	T15	T43
Wet Soil + Tare Mass (g)	25.83	21.84	31.25	21.81	25.45
Dry Soil + Tare Mass (g)	24.49	20.64	29.80	20.40	23.86
Tare Mass (g)	19.24	15.29	23.31	15.76	18.51
Moisture Content (%)	25.5	22.4	22.3	30.4	29.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	398.07	384.53	351.37	352.78	384.78
Dry Soil Mass after Washing (g)	295.19	284.57	261.26	283.08	273.96
Test Status					
Liquid Limit	**61**	**56**	**56**	**68**	**67**
Plastic Limit	**25**	**22**	**22**	**31**	**30**
Plasticity Index	**36**	**34**	**34**	**37**	**37**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.1	7.1	4.0	3.9	3.4
Fines (%)	93.9	92.9	96.0	96.1	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**

Remarks	ID 176 & 177 UNCOMPACTED FILL
Version	**MVNQS06-100903**

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3266
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/26/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	178				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	82+00				
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21				
Tare No	T41				
Wet Soil + Tare Mass (g)	25.18				
Dry Soil + Tare Mass (g)	22.87				
Tare Mass (g)	19.39				
Moisture Content (%)	65.0				
Trial No 2 / Blow Count	21				
Tare No	T8				
Wet Soil + Tare Mass (g)	32.50				
Dry Soil + Tare Mass (g)	27.60				
Tare Mass (g)	20.28				
Moisture Content (%)	65.5				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T96				
Wet Soil + Tare Mass (g)	24.43				
Dry Soil + Tare Mass (g)	22.83				
Tare Mass (g)	17.58				
Moisture Content (%)	30.5				
Trial No 2 / Tare No	T7				
Wet Soil + Tare Mass (g)	26.24				
Dry Soil + Tare Mass (g)	24.76				
Tare Mass (g)	19.79				
Moisture Content (%)	29.8				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	366.89				
Dry Soil Mass after Washing (g)	279.69				
Test Status					
Liquid Limit	**65**				
Plastic Limit	**30**				
Plasticity Index	**35**				
Gravel Content (%)	0.0				
Sand Content (%)	3.0				
Fines (%)	97.0				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks	ID 178 UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3284
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/28/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	179	180	181	182	183
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	51+37	46+43	41+60	7+41	12+45
Offset	P.S. -92	P.S. -93	P.S. -90	F.S. +9	F.S. +9
Lift No	1	1	1	1	1
Latitude (°N)	29.886706	29.886982	29.887246	29.888877	29.888600
Longitude (°W)	90.139867	90.141393	90.142891	90.153521	90.151960
Elevation (ft)	2.5	1.8	2.0	5.4	4.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	26	26	22	27
Tare No	T420	T84	T81	T24	T30
Wet Soil + Tare Mass (g)	26.92	34.04	33.82	22.65	29.68
Dry Soil + Tare Mass (g)	23.64	29.69	29.34	19.34	25.66
Tare Mass (g)	17.81	22.07	20.76	13.81	20.24
Moisture Content (%)	54.8	57.4	52.5	58.9	74.9
Trial No 2 / Blow Count	20	26	26	21	28
Tare No	T68	T17	T103	T99	T62
Wet Soil + Tare Mass (g)	28.52	24.22	27.69	27.75	26.98
Dry Soil + Tare Mass (g)	25.73	20.78	24.18	23.56	23.06
Tare Mass (g)	20.76	14.73	17.46	16.55	17.80
Moisture Content (%)	54.6	57.1	52.5	58.5	75.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T87	T86	T104	T45	T13
Wet Soil + Tare Mass (g)	26.64	22.77	24.28	26.01	24.12
Dry Soil + Tare Mass (g)	25.49	21.56	23.12	24.69	22.84
Tare Mass (g)	19.87	16.68	17.73	19.23	18.07
Moisture Content (%)	20.5	24.8	21.5	24.2	26.8
Trial No 2 / Tare No	T75	T20	T64	T69	T70
Wet Soil + Tare Mass (g)	22.84	24.64	23.79	25.62	24.85
Dry Soil + Tare Mass (g)	21.71	23.31	22.62	24.40	23.54
Tare Mass (g)	16.16	17.85	17.05	19.63	18.67
Moisture Content (%)	20.4	24.4	21.0	25.6	26.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	363.35	360.57	384.97	353.10	368.01
Dry Soil Mass after Washing (g)	281.46	282.63	290.93	275.95	283.11
Test Status					
Liquid Limit	**55**	**57**	**52**	**59**	**75**
Plastic Limit	**20**	**25**	**21**	**25**	**27**
Plasticity Index	**35**	**32**	**31**	**34**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	7.2	5.0	6.2	4.9	4.8
Fines (%)	92.8	95.0	93.8	95.1	95.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3291
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/29/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	184	185			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	169+80	180+00			
Offset		F.S. +69			
Lift No		2			
Latitude (°N)		29.870753			
Longitude (°W)		90.118301			
Elevation (ft)		4.7			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25			
Tare No	T92	T76			
Wet Soil + Tare Mass (g)	53.78	48.85			
Dry Soil + Tare Mass (g)	42.84	36.76			
Tare Mass (g)	25.47	16.13			
Moisture Content (%)	63.9	58.6			
Trial No 2 / Blow Count	28	26			
Tare No	T82	T74			
Wet Soil + Tare Mass (g)	46.85	49.26			
Dry Soil + Tare Mass (g)	35.81	38.38			
Tare Mass (g)	18.30	19.79			
Moisture Content (%)	63.9	58.8			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T80	T65			
Wet Soil + Tare Mass (g)	27.02	28.18			
Dry Soil + Tare Mass (g)	25.28	26.33			
Tare Mass (g)	16.63	17.66			
Moisture Content (%)	20.1	21.3			
Trial No 2 / Tare No	T94	T79			
Wet Soil + Tare Mass (g)	24.39	25.91			
Dry Soil + Tare Mass (g)	22.92	24.21			
Tare Mass (g)	16.61	16.19			
Moisture Content (%)	23.3	21.2			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00	50.00			
Dry Soil Mass after Washing (g)	1.10	2.10			
Test Status					
Liquid Limit	**64**	**59**			
Plastic Limit	**22**	**21**			
Plasticity Index	**42**	**38**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	2.2	4.2			
Fines (%)	97.8	95.8			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks	TEST ID 184 PROCTOR SAMPLED FROM SITE				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3297
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	186	187	188	189	190
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	3+41	160+00	161+00	58+34	51+92
Offset	F.S. 17	F.S. 45	F.S. 66	F.S. 60	F.S. 27
Lift No	1	1	1	2	2
Latitude (°N)	29.889078	29.871045	29.871270	29.886307	29.886354
Longitude (°W)	90.154759	90.122646	90.124224	90.137885	90.139774
Elevation (ft)	4.4	5.0	4.4	4.7	4.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	20	28	28	26
Tare No	T102	T77	T90	T14	T75
Wet Soil + Tare Mass (g)	47.13	53.23	47.97	48.60	46.88
Dry Soil + Tare Mass (g)	36.99	41.83	37.89	36.07	35.44
Tare Mass (g)	19.71	21.73	19.72	15.27	16.16
Moisture Content (%)	59.0	55.2	56.2	61.1	59.6
Trial No 2 / Blow Count	26	22	26	28	26
Tare No	T91	T40	T15	T24	T87
Wet Soil + Tare Mass (g)	49.37	53.17	44.68	45.05	54.42
Dry Soil + Tare Mass (g)	38.43	40.94	34.36	33.32	41.56
Tare Mass (g)	19.81	19.32	15.76	13.81	19.86
Moisture Content (%)	59.0	55.7	55.7	61.0	59.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T105	T72	T420	T20	T89
Wet Soil + Tare Mass (g)	27.97	36.73	28.05	30.56	34.26
Dry Soil + Tare Mass (g)	25.79	34.77	26.43	28.26	31.65
Tare Mass (g)	15.61	23.31	17.83	17.87	19.60
Moisture Content (%)	21.4	17.1	18.8	22.1	21.7
Trial No 2 / Tare No	T78	T71	T84	T86	T43
Wet Soil + Tare Mass (g)	27.07	33.52	34.34	29.21	32.16
Dry Soil + Tare Mass (g)	25.56	31.54	32.35	26.91	29.74
Tare Mass (g)	17.94	19.80	22.07	16.68	18.51
Moisture Content (%)	19.8	16.9	19.4	22.5	21.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	383.34	370.51	389.24	336.92	339.46
Dry Soil Mass after Washing (g)	112.40	115.50	108.26	58.19	87.77
Test Status					
Liquid Limit	**59**	**55**	**56**	**61**	**60**
Plastic Limit	**21**	**17**	**19**	**22**	**22**
Plasticity Index	**38**	**38**	**37**	**39**	**38**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.9	4.4	5.1	9.1	4.3
Fines (%)	96.1	95.6	94.9	90.9	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3297
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	191	192	193	194	195
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	47+92	42+93	35+96	34+01	26+76
Offset	F.S. +26	F.S. +25	F.S. +11.1	F.S. +20	F.S. + 26
Lift No	2	2	2	2	2
Latitude (°N)	29.886578	29.886857	29.887286	29.887370	29.887747
Longitude (°W)	90.141010	90.142550	90.144695	90.145305	90.147487
Elevation (ft)	4.5	5.2	5.0	4.8	4.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	20	27	26	21
Tare No	T96	T107	T61	T62	T18
Wet Soil + Tare Mass (g)	47.03	41.15	48.64	44.42	45.57
Dry Soil + Tare Mass (g)	34.23	32.30	36.95	34.68	35.57
Tare Mass (g)	17.57	18.27	15.70	17.81	17.30
Moisture Content (%)	76.8	61.4	55.5	58.0	53.6
Trial No 2 / Blow Count	25	20	27	26	22
Tare No	T8	T73	T30	T28	T421
Wet Soil + Tare Mass (g)	51.83	46.94	50.10	46.61	47.49
Dry Soil + Tare Mass (g)	38.14	35.16	39.52	36.07	37.66
Tare Mass (g)	20.28	16.65	20.23	17.85	19.75
Moisture Content (%)	76.7	61.9	55.4	58.1	54.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T10	T73	T99	T17	T21
Wet Soil + Tare Mass (g)	27.90	29.50	26.23	27.71	28.87
Dry Soil + Tare Mass (g)	25.12	26.92	24.48	25.29	26.71
Tare Mass (g)	15.51	15.85	16.56	14.75	15.51
Moisture Content (%)	28.9	23.3	22.1	23.0	19.3
Trial No 2 / Tare No	T101	T73	T103	T33	T23
Wet Soil + Tare Mass (g)	28.21	32.04	29.19	26.56	25.45
Dry Soil + Tare Mass (g)	25.72	29.76	27.05	24.38	23.68
Tare Mass (g)	17.16	19.77	17.45	14.92	14.27
Moisture Content (%)	29.1	22.8	22.3	23.0	18.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	361.18	349.21	372.96	351.10	373.54
Dry Soil Mass after Washing (g)	90.40	104.60	100.20	80.90	98.70
Test Status					
Liquid Limit	**77**	**62**	**55**	**58**	**54**
Plastic Limit	**29**	**23**	**22**	**23**	**19**
Plasticity Index	**48**	**39**	**33**	**35**	**35**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.8	3.5	5.4	4.3	4.4
Fines (%)	97.2	96.5	94.6	95.7	95.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3297
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	196	197	198	199	200
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	24+02	59+00	61+00	66+00	70+00
Offset	F.S. +30				
Lift No	2				
Latitude (°N)	29.887898				
Longitude (°W)	90.148398				
Elevation (ft)	4.8				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	20	27	27	27
Tare No	T67	T74	T95	T45	T52
Wet Soil + Tare Mass (g)	44.48	53.42	45.77	44.94	55.65
Dry Soil + Tare Mass (g)	35.44	43.43	38.72	34.50	41.66
Tare Mass (g)	18.94	19.74	20.42	19.20	20.29
Moisture Content (%)	54.2	41.0	38.9	68.9	66.1
Trial No 2 / Blow Count	22	20	27	28	26
Tare No	T68	T94	T104	T92	T69
Wet Soil + Tare Mass (g)	44.62	48.87	46.89	47.87	46.00
Dry Soil + Tare Mass (g)	36.15	38.99	38.80	38.80	35.59
Tare Mass (g)	20.75	15.59	17.71	25.45	19.56
Moisture Content (%)	54.2	41.1	38.7	68.9	65.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T100	T76	T60	T79	T93
Wet Soil + Tare Mass (g)	26.74	27.72	28.95	23.74	33.35
Dry Soil + Tare Mass (g)	24.46	25.99	27.30	22.22	30.80
Tare Mass (g)	14.84	16.11	18.44	16.17	19.34
Moisture Content (%)	23.7	17.5	18.6	25.1	22.3
Trial No 2 / Tare No	T63	T13	T97	T70	T64
Wet Soil + Tare Mass (g)	29.78	27.51	26.85	27.09	30.96
Dry Soil + Tare Mass (g)	27.79	26.08	25.05	25.41	28.41
Tare Mass (g)	19.34	18.03	15.35	18.65	17.04
Moisture Content (%)	23.6	17.8	18.6	24.9	22.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	375.34	379.32	383.43	393.36	351.64
Dry Soil Mass after Washing (g)	96.20	114.40	97.40	111.70	100.00
Test Status					
Liquid Limit	**54**	**41**	**39**	**69**	**66**
Plastic Limit	**24**	**18**	**19**	**25**	**22**
Plasticity Index	**30**	**23**	**20**	**44**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.6	2.0	2.6	2.6	8.4
Fines (%)	95.4	98.0	97.4	97.4	91.6
Group Symbol	CH	CL	CL	CH	CH
Group Name	FAT CLAY	LEAN CLAY	LEAN CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks	test id 197 - 200 uncompacted fill				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3297
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/30/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	201	202			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	73+00	88+00			
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	23			
Tare No	T70	T65			
Wet Soil + Tare Mass (g)	33.95	38.33			
Dry Soil + Tare Mass (g)	27.83	29.80			
Tare Mass (g)	18.66	17.59			
Moisture Content (%)	65.7	69.2			
Trial No 2 / Blow Count	22	23			
Tare No	T97	T67			
Wet Soil + Tare Mass (g)	37.24	39.12			
Dry Soil + Tare Mass (g)	28.48	30.81			
Tare Mass (g)	15.36	18.90			
Moisture Content (%)	65.7	69.1			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T71	T13			
Wet Soil + Tare Mass (g)	28.31	26.76			
Dry Soil + Tare Mass (g)	26.55	24.65			
Tare Mass (g)	19.75	18.03			
Moisture Content (%)	25.9	31.9			
Trial No 2 / Tare No	T8	T69			
Wet Soil + Tare Mass (g)	29.53	27.54			
Dry Soil + Tare Mass (g)	27.63	25.68			
Tare Mass (g)	20.29	19.81			
Moisture Content (%)	25.9	31.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	373.25	391.03			
Dry Soil Mass after Washing (g)	101.20	114.50			
Test Status					
Liquid Limit	**66**	**69**			
Plastic Limit	**26**	**32**			
Plasticity Index	**40**	**37**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	6.9	5.1			
Fines (%)	93.1	94.9			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks	test id 201 - 202 uncompacted fill				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3299
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/31/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	203	204	205	206	207
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	173+01	166+13	161+05	165+02	13+00
Offset	F.S. +100	F.S. +83	F.S. +94	F.S. +92	F.S. +24
Lift No	2	2	2	2	2
Latitude (°N)	29.870921	29.871116	29.871192	29.871113	29.888527
Longitude (°W)	90.120451	90.122613	90.124214	90.122963	90.151800
Elevation (ft)	4.2	4.8	4.1	4.1	4.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	21	27	25	27
Tare No	T78	T107	T77	T92	T104
Wet Soil + Tare Mass (g)	46.11	46.26	37.44	42.55	30.79
Dry Soil + Tare Mass (g)	35.30	36.30	31.60	35.75	25.88
Tare Mass (g)	17.88	18.24	21.73	25.47	17.73
Moisture Content (%)	61.1	54.0	59.7	66.1	60.8
Trial No 2 / Blow Count	22	21	27	25	27
Tare No	T77	T8	T64	T94	T93
Wet Soil + Tare Mass (g)	48.61	45.82	31.64	29.78	31.47
Dry Soil + Tare Mass (g)	38.35	36.75	26.22	24.13	26.91
Tare Mass (g)	21.71	20.21	17.03	15.57	19.34
Moisture Content (%)	60.7	53.7	59.5	66.0	60.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T15	T96	T79	T45	T76
Wet Soil + Tare Mass (g)	24.28	25.03	22.91	27.51	23.90
Dry Soil + Tare Mass (g)	22.74	23.55	21.80	25.95	22.58
Tare Mass (g)	15.77	17.54	16.17	19.25	16.12
Moisture Content (%)	22.1	24.6	19.7	23.3	20.4
Trial No 2 / Tare No	T71	T65	T52	T60	T95
Wet Soil + Tare Mass (g)	27.26	25.31	27.29	26.53	30.71
Dry Soil + Tare Mass (g)	25.93	23.75	26.14	25.01	28.94
Tare Mass (g)	19.75	17.58	20.40	18.44	20.55
Moisture Content (%)	21.5	25.3	20.0	23.1	21.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	324.75	327.99	360.66	357.04	359.60
Dry Soil Mass after Washing (g)	91.70	106.20	90.60	102.90	108.20
Test Status					
Liquid Limit	**61**	**54**	**60**	**66**	**61**
Plastic Limit	**22**	**25**	**20**	**23**	**21**
Plasticity Index	**39**	**29**	**40**	**43**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.3	3.5	4.4	2.8	4.3
Fines (%)	95.7	96.5	95.6	97.2	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3299
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/31/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	208	209	210		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	7+98	3+00	17+95		
Offset	F.S. +22	F.S. +24	F.S. +19		
Lift No	2	2	2		
Latitude (°N)	29.888810	29.889081	29.888266		
Longitude (°W)	90.153352	90.154890	90.150266		
Elevation (ft)	4.9	4.8	5.2		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	23		
Tare No	T42	T90	T103		
Wet Soil + Tare Mass (g)	32.65	35.19	38.45		
Dry Soil + Tare Mass (g)	26.64	29.45	29.06		
Tare Mass (g)	16.55	19.69	17.42		
Moisture Content (%)	59.8	58.8	79.9		
Trial No 2 / Blow Count	27	25	23		
Tare No	T37	T72	T33		
Wet Soil + Tare Mass (g)	30.69	41.66	42.65		
Dry Soil + Tare Mass (g)	25.76	34.88	30.29		
Tare Mass (g)	17.56	23.31	14.89		
Moisture Content (%)	60.7	58.6	79.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T102	T15	T74		
Wet Soil + Tare Mass (g)	26.22	24.11	29.11		
Dry Soil + Tare Mass (g)	25.03	22.71	26.97		
Tare Mass (g)	19.69	15.73	19.83		
Moisture Content (%)	22.3	20.1	30.0		
Trial No 2 / Tare No	T23	T107	T96		
Wet Soil + Tare Mass (g)	20.35	28.06	27.52		
Dry Soil + Tare Mass (g)	19.24	26.42	25.21		
Tare Mass (g)	14.22	18.28	17.54		
Moisture Content (%)	22.1	20.1	30.1		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	387.32	367.60	353.51		
Dry Soil Mass after Washing (g)	111.90	87.40	96.10		
Test Status					
Liquid Limit	**60**	**59**	**80**		
Plastic Limit	**22**	**20**	**30**		
Plasticity Index	**38**	**39**	**50**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.6	6.8	2.5		
Fines (%)	95.4	93.2	97.5		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3301
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	211	212	213	214	215
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	58+00	108+99	103+92	98+86	93+99
Offset		F.S. +82	F.S. +89	F.S. +82	F.S. +75
Lift No		1	1	1	1
Latitude (°N)		29.874747	29.876088	29.877433	29.878719
Longitude (°W)		90.138357	90.137988	90.137571	90.137109
Elevation (ft)		4.1	3.5	3.7	4.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	24	25	27	26
Tare No	T40	T82	T30	T421	T18
Wet Soil + Tare Mass (g)	35.52	34.46	37.07	37.85	33.83
Dry Soil + Tare Mass (g)	29.34	28.84	31.13	30.75	27.64
Tare Mass (g)	19.28	18.22	20.22	19.71	17.28
Moisture Content (%)	60.5	52.7	54.4	64.9	60.0
Trial No 2 / Blow Count	22	25	26	28	25
Tare No	T91	T80	T28	T21	T73
Wet Soil + Tare Mass (g)	34.41	31.51	34.36	30.85	31.48
Dry Soil + Tare Mass (g)	28.82	26.30	28.50	24.89	25.57
Tare Mass (g)	19.72	16.56	17.81	15.46	15.82
Moisture Content (%)	60.5	53.5	55.1	64.1	60.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T105	T7	T99	T61	T103
Wet Soil + Tare Mass (g)	30.30	30.73	23.50	25.09	26.87
Dry Soil + Tare Mass (g)	27.61	28.93	22.27	23.24	25.08
Tare Mass (g)	15.58	19.72	16.53	15.69	17.42
Moisture Content (%)	22.4	19.5	21.4	24.5	23.4
Trial No 2 / Tare No	T70	T83	T17	T62	T33
Wet Soil + Tare Mass (g)	30.91	27.37	22.85	27.77	26.21
Dry Soil + Tare Mass (g)	28.03	25.59	21.40	25.82	24.02
Tare Mass (g)	15.47	16.56	14.68	17.78	14.89
Moisture Content (%)	22.9	19.7	21.6	24.3	24.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00	50.00	50.00	50.00	50.00
Dry Soil Mass after Washing (g)	1.49	2.45	2.39	2.01	2.02
Test Status					
Liquid Limit	**60**	**53**	**55**	**64**	**60**
Plastic Limit	**23**	**20**	**22**	**24**	**24**
Plasticity Index	**37**	**33**	**33**	**40**	**36**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.0	4.9	4.8	4.0	4.0
Fines (%)	97.0	95.1	95.2	96.0	96.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks	TEST ID 211 UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3301
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	216				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	153+09				
Offset	F.S. +80				
Lift No	1				
Latitude (°N)	29.871399				
Longitude (°W)	90.126712				
Elevation (ft)	4.7				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T72				
Wet Soil + Tare Mass (g)	39.24				
Dry Soil + Tare Mass (g)	33.49				
Tare Mass (g)	23.29				
Moisture Content (%)	56.4				
Trial No 2 / Blow Count	25				
Tare No	T90				
Wet Soil + Tare Mass (g)	36.77				
Dry Soil + Tare Mass (g)	30.60				
Tare Mass (g)	19.68				
Moisture Content (%)	56.5				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T102				
Wet Soil + Tare Mass (g)	31.48				
Dry Soil + Tare Mass (g)	29.41				
Tare Mass (g)	19.70				
Moisture Content (%)	21.3				
Trial No 2 / Tare No	T23				
Wet Soil + Tare Mass (g)	26.68				
Dry Soil + Tare Mass (g)	24.50				
Tare Mass (g)	14.22				
Moisture Content (%)	21.2				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00				
Dry Soil Mass after Washing (g)	2.38				
Test Status					
Liquid Limit	**56**				
Plastic Limit	**21**				
Plasticity Index	**35**				
Gravel Content (%)	0.0				
Sand Content (%)	4.8				
Fines (%)	95.2				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3354
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/6/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	217	218	219		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	124+84	86+96	82+10		
Offset	F.S. +91	F.S. +83	F.S. +77		
Lift No	2	1	1		
Latitude (°N)	29.872005	29.880580	29.881855		
Longitude (°W)	90.135601	90.136501	90.136046		
Elevation (ft)	4.3	4.1	4.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	24		
Tare No	T73	T21	T28		
Wet Soil + Tare Mass (g)	30.41	29.96	35.65		
Dry Soil + Tare Mass (g)	24.60	24.97	29.07		
Tare Mass (g)	15.85	15.49	17.84		
Moisture Content (%)	66.4	52.4	58.3		
Trial No 2 / Blow Count	25	25	24		
Tare No	T18	T421	T30		
Wet Soil + Tare Mass (g)	31.46	34.57	34.14		
Dry Soil + Tare Mass (g)	25.83	29.45	29.03		
Tare Mass (g)	17.30	19.72	20.23		
Moisture Content (%)	66.0	52.6	57.8		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T62	T99	T7		
Wet Soil + Tare Mass (g)	30.25	23.88	30.80		
Dry Soil + Tare Mass (g)	27.86	22.59	28.64		
Tare Mass (g)	17.79	16.53	19.71		
Moisture Content (%)	23.7	21.3	24.2		
Trial No 2 / Tare No	T61	T17	T83		
Wet Soil + Tare Mass (g)	28.45	20.62	27.56		
Dry Soil + Tare Mass (g)	25.94	19.57	25.37		
Tare Mass (g)	15.69	14.69	16.56		
Moisture Content (%)	24.5	21.5	24.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.57	107.39	104.81		
Dry Soil Mass after Washing (g)	7.43	4.85	4.04		
Test Status					
Liquid Limit	**66**	**52**	**58**		
Plastic Limit	**24**	**21**	**25**		
Plasticity Index	**42**	**31**	**33**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	7.5	4.5	3.9		
Fines (%)	92.5	95.5	96.1		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3356
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	220	221	222	223	224
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	75+98	74+05	67+99	62+95	58+90
Offset	F.S. +77	F.S. +67	F.S. +72	F.S. +53	F.S. +85
Lift No	1	1	1	1	1
Latitude (°N)	29.883470	29.883971	29.885126	29.885764	29.886208
Longitude (°W)	90.135496	90.135292	90.135252	90.136709	90.137696
Elevation (ft)	4.6	4.8	4.3	5.0	4.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	23	28	21	23
Tare No	T76	T69	T82	T97	T44
Wet Soil + Tare Mass (g)	30.80	41.58	37.85	40.45	26.64
Dry Soil + Tare Mass (g)	25.61	33.45	30.11	31.28	22.33
Tare Mass (g)	16.12	19.63	18.26	15.43	14.95
Moisture Content (%)	53.5	58.2	66.2	56.6	57.8
Trial No 2 / Blow Count	21	23	28	21	22
Tare No	T95	T80	T105	T40	T41
Wet Soil + Tare Mass (g)	43.49	30.68	30.44	34.31	34.98
Dry Soil + Tare Mass (g)	35.32	25.44	24.55	28.82	29.24
Tare Mass (g)	20.44	16.57	15.58	19.31	19.36
Moisture Content (%)	53.8	58.5	66.6	56.5	57.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T93	T80	T105	T66	T6
Wet Soil + Tare Mass (g)	27.75	30.84	25.84	25.29	35.20
Dry Soil + Tare Mass (g)	26.26	28.80	23.75	23.48	32.32
Tare Mass (g)	19.36	20.25	15.47	15.25	19.12
Moisture Content (%)	21.6	23.9	25.2	22.0	21.8
Trial No 2 / Tare No	T104	T70	T91	T101	T5
Wet Soil + Tare Mass (g)	26.80	28.97	28.22	27.95	34.75
Dry Soil + Tare Mass (g)	25.20	26.99	26.53	25.99	32.02
Tare Mass (g)	17.76	18.68	19.75	17.12	19.22
Moisture Content (%)	21.5	23.8	24.9	22.1	21.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.27	88.16	120.47	130.88	118.63
Dry Soil Mass after Washing (g)	5.35	4.57	3.38	6.94	6.13
Test Status					
Liquid Limit	**54**	**58**	**66**	**57**	**58**
Plastic Limit	**22**	**24**	**25**	**22**	**22**
Plasticity Index	**32**	**34**	**41**	**35**	**36**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.5	5.2	2.8	5.3	5.2
Fines (%)	95.5	94.8	97.2	94.7	94.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3356
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	225	226			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	178+39	180+58			
Offset	F.S. +74	F.S. +69			
Lift No	3	3			
Latitude (°N)	29.870845	29.870714			
Longitude (°W)	90.118797	90.118124			
Elevation (ft)	6.2	6.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	27			
Tare No	T52	T71			
Wet Soil + Tare Mass (g)	39.65	42.79			
Dry Soil + Tare Mass (g)	32.95	34.84			
Tare Mass (g)	20.33	19.77			
Moisture Content (%)	52.3	53.2			
Trial No 2 / Blow Count	22	27			
Tare No	T79	T13			
Wet Soil + Tare Mass (g)	31.52	40.88			
Dry Soil + Tare Mass (g)	26.20	33.02			
Tare Mass (g)	16.17	18.08			
Moisture Content (%)	52.2	53.1			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T43	T64			
Wet Soil + Tare Mass (g)	29.12	29.09			
Dry Soil + Tare Mass (g)	27.23	27.02			
Tare Mass (g)	18.52	17.05			
Moisture Content (%)	21.7	20.8			
Trial No 2 / Tare No	T420	T67			
Wet Soil + Tare Mass (g)	28.24	31.80			
Dry Soil + Tare Mass (g)	26.38	29.56			
Tare Mass (g)	17.77	18.94			
Moisture Content (%)	21.6	21.1			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	112.66	123.90			
Dry Soil Mass after Washing (g)	4.49	5.51			
Test Status					
Liquid Limit	**52**	**53**			
Plastic Limit	**22**	**21**			
Plasticity Index	**30**	**32**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.0	4.4			
Fines (%)	96.0	95.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3363
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/9/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	227	228	229	230	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	107+60	101+91	175+72	147+88	
Offset	F.S. +91	F.S. +96	F.S. +56	F.S. +88	
Lift No	2	2	3	1	
Latitude (°N)	29.875111	29.876630	29.870986	29.871489	
Longitude (°W)	90.138281	90.137852	90.119588	90.128355	
Elevation (ft)	5.2	4.8	6.6	3.8	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	21	26	26	
Tare No	T93	T69	T97	T26	
Wet Soil + Tare Mass (g)	34.65	35.43	30.44	31.45	
Dry Soil + Tare Mass (g)	28.53	29.93	24.76	26.59	
Tare Mass (g)	19.36	19.64	15.41	18.94	
Moisture Content (%)	66.7	52.3	61.0	63.8	
Trial No 2 / Blow Count	25	21	27	27	
Tare No	T8	T95	T105	T71	
Wet Soil + Tare Mass (g)	35.43	35.85	30.27	36.04	
Dry Soil + Tare Mass (g)	29.36	30.52	24.72	29.73	
Tare Mass (g)	20.23	20.46	15.59	19.79	
Moisture Content (%)	66.5	51.9	61.4	64.1	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104	T76	T82	T13	
Wet Soil + Tare Mass (g)	32.23	32.85	32.56	31.18	
Dry Soil + Tare Mass (g)	29.43	29.76	29.82	28.93	
Tare Mass (g)	17.74	16.17	18.26	18.05	
Moisture Content (%)	24.0	22.7	23.7	20.7	
Trial No 2 / Tare No	T80	T40	T46	T103	
Wet Soil + Tare Mass (g)	35.27	34.57	36.05	32.53	
Dry Soil + Tare Mass (g)	31.76	31.76	32.91	29.93	
Tare Mass (g)	16.57	19.31	19.88	17.45	
Moisture Content (%)	23.1	22.6	24.1	20.8	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.33	145.57	134.45	120.93	
Dry Soil Mass after Washing (g)	4.13	6.58	5.06	5.59	
Test Status					
Liquid Limit	**67**	**52**	**61**	**64**	
Plastic Limit	**24**	**23**	**24**	**21**	
Plasticity Index	**43**	**29**	**37**	**43**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.2	4.5	3.8	4.6	
Fines (%)	95.8	95.5	96.2	95.4	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3371
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/10/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	231	232	233	234	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	96+83	92+31	143+72	137+67	
Offset	F.S. +64	F.S. +53	F.S. +101	F.S. +84	
Lift No	2	2	1	1	
Latitude (°N)	29.877961	29.879144	29.871542	29.871725	
Longitude (°W)	90.137333	90.136893	90.129666	90.131567	
Elevation (ft)	5.5	6.0	3.4	4.7	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	23	22	27	
Tare No	T32	T44	T96	T42	
Wet Soil + Tare Mass (g)	30.26	29.02	34.12	29.30	
Dry Soil + Tare Mass (g)	25.55	23.01	27.52	24.44	
Tare Mass (g)	17.63	14.95	17.54	16.57	
Moisture Content (%)	58.2	73.8	65.1	62.3	
Trial No 2 / Blow Count	21	24	23	27	
Tare No	T102	T41	T77	T78	
Wet Soil + Tare Mass (g)	26.89	33.18	36.49	34.16	
Dry Soil + Tare Mass (g)	22.52	27.30	30.63	27.98	
Tare Mass (g)	15.15	19.37	21.71	17.88	
Moisture Content (%)	58.1	73.8	65.0	61.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T89	T45	T66	T86	
Wet Soil + Tare Mass (g)	33.82	32.38	20.24	21.63	
Dry Soil + Tare Mass (g)	31.37	29.62	19.31	20.80	
Tare Mass (g)	19.56	19.73	15.25	16.64	
Moisture Content (%)	20.7	27.9	22.9	20.0	
Trial No 2 / Tare No	T11	T9	T101	T20	
Wet Soil + Tare Mass (g)	30.52	31.92	22.73	24.62	
Dry Soil + Tare Mass (g)	27.85	29.26	21.68	23.47	
Tare Mass (g)	15.16	19.67	17.11	17.84	
Moisture Content (%)	21.0	27.7	23.0	20.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.00	100.00	100.00	100.00	
Dry Soil Mass after Washing (g)	4.72	6.26	4.70	3.58	
Test Status					
Liquid Limit	**58**	**74**	**65**	**62**	
Plastic Limit	**21**	**28**	**23**	**20**	
Plasticity Index	**37**	**46**	**42**	**42**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.7	6.3	4.7	3.6	
Fines (%)	95.3	93.7	95.3	96.4	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3371
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/10/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	235	236			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station					
Offset					
Lift No					
Latitude (°N)					
Longitude (°W)					
Elevation (ft)					
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	23			
Tare No	T22	T102			
Wet Soil + Tare Mass (g)	33.45	33.59			
Dry Soil + Tare Mass (g)	27.40	27.68			
Tare Mass (g)	18.95	19.71			
Moisture Content (%)	71.2	73.4			
Trial No 2 / Blow Count	25	23			
Tare No	T81	T23			
Wet Soil + Tare Mass (g)	35.20	27.86			
Dry Soil + Tare Mass (g)	29.18	22.08			
Tare Mass (g)	20.74	14.22			
Moisture Content (%)	71.3	72.8			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T14	T90			
Wet Soil + Tare Mass (g)	22.53	27.15			
Dry Soil + Tare Mass (g)	21.08	25.70			
Tare Mass (g)	15.23	19.69			
Moisture Content (%)	24.8	24.1			
Trial No 2 / Tare No	T84	T37			
Wet Soil + Tare Mass (g)	28.29	25.34			
Dry Soil + Tare Mass (g)	27.08	23.82			
Tare Mass (g)	22.06	17.55			
Moisture Content (%)	24.1	24.2			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.00	100.00			
Dry Soil Mass after Washing (g)	0.92	0.27			
Test Status					
Liquid Limit	**71**	**73**			
Plastic Limit	**24**	**24**			
Plasticity Index	**47**	**49**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	0.9	0.3			
Fines (%)	99.1	99.7			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks	TEST SAMPLED FROM STOCKPILE IN RIVER BURCH PIT AREA D UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3379
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/11/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	237	238	239	240	241
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	172+24	169+75	167+25	164+71	68+46
Offset	F.S. +63	F.S. +55	F.S. +51	F.S. +76	F.S. +86
Lift No	3	3	3	3	3
Latitude (°N)	29.871040	29.871115	29.871179	29.871163	29.885044
Longitude (°W)	90.120684	90.121146	90.122250	90.123056	90.135129
Elevation (ft)	6.3	6.2	6.2	5.3	4.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	23	21	24	25
Tare No	T39	T80	T17	T35	T103
Wet Soil + Tare Mass (g)	34.21	32.45	27.82	30.62	32.28
Dry Soil + Tare Mass (g)	28.44	25.80	22.59	24.93	26.18
Tare Mass (g)	20.82	16.57	14.73	15.55	17.46
Moisture Content (%)	75.3	71.3	65.2	60.4	70.0
Trial No 2 / Blow Count	23	23	21	24	25
Tare No	T1021	T99	T38	T421	T50
Wet Soil + Tare Mass (g)	30.65	29.82	29.95	33.87	34.15
Dry Soil + Tare Mass (g)	24.03	24.27	24.74	28.54	27.96
Tare Mass (g)	15.18	16.54	16.89	19.75	19.13
Moisture Content (%)	74.1	71.1	65.0	60.3	70.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T31	T63	T51	T46
Wet Soil + Tare Mass (g)	31.44	31.77	27.66	27.25	27.22
Dry Soil + Tare Mass (g)	28.67	29.36	26.10	25.57	25.69
Tare Mass (g)	17.86	19.52	19.33	17.48	19.90
Moisture Content (%)	25.6	24.5	23.0	20.8	26.4
Trial No 2 / Tare No	T15	T60	T72	T13	T76
Wet Soil + Tare Mass (g)	28.91	30.17	31.31	27.81	23.65
Dry Soil + Tare Mass (g)	26.23	27.94	29.82	26.12	22.09
Tare Mass (g)	15.75	18.45	23.33	18.05	16.14
Moisture Content (%)	25.6	23.5	23.0	20.9	26.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00	50.00	50.00	50.00	50.00
Dry Soil Mass after Washing (g)	3.11	2.35	3.72	3.05	5.66
Test Status					
Liquid Limit	**75**	**71**	**65**	**60**	**70**
Plastic Limit	**26**	**24**	**23**	**21**	**26**
Plasticity Index	**49**	**47**	**42**	**39**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.2	4.7	7.4	6.1	11.3
Fines (%)	93.8	95.3	92.6	93.9	88.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3379
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/11/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	242	243	244		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	66+06	63+50	61+12		
Offset	F.S. +55	F.S. +42	F.S. +85		
Lift No	3	3	3		
Latitude (°N)	29.885354	29.885699	29.886083		
Longitude (°W)	90.135802	90.136547	90.137272		
Elevation (ft)	5.6	5.9	5.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	23	24		
Tare No	T41	T86	T81		
Wet Soil + Tare Mass (g)	33.06	28.97	34.67		
Dry Soil + Tare Mass (g)	27.70	23.96	29.09		
Tare Mass (g)	19.38	16.65	20.76		
Moisture Content (%)	64.7	67.8	66.7		
Trial No 2 / Blow Count	26	23	24		
Tare No	T45	T78	T1022		
Wet Soil + Tare Mass (g)	32.41	30.70	35.02		
Dry Soil + Tare Mass (g)	27.27	25.51	28.90		
Tare Mass (g)	19.23	17.88	19.71		
Moisture Content (%)	64.2	67.3	66.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T32	T42	T82		
Wet Soil + Tare Mass (g)	28.70	28.16	31.11		
Dry Soil + Tare Mass (g)	26.61	26.12	28.52		
Tare Mass (g)	17.65	16.57	18.27		
Moisture Content (%)	23.3	21.4	25.3		
Trial No 2 / Tare No	T66	T107	T62		
Wet Soil + Tare Mass (g)	24.97	29.74	31.22		
Dry Soil + Tare Mass (g)	23.13	27.72	28.47		
Tare Mass (g)	15.25	18.29	17.86		
Moisture Content (%)	23.4	21.4	25.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	50.00	50.00	50.00		
Dry Soil Mass after Washing (g)	1.59	4.15	3.92		
Test Status					
Liquid Limit	**64**	**68**	**66**		
Plastic Limit	**23**	**21**	**26**		
Plasticity Index	**41**	**47**	**40**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.2	8.3	7.8		
Fines (%)	96.8	91.7	92.2		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3384
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/12/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	245	246	247	248	249
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	181+02	162+97	160+16	158+50	85+93
Offset	C/L	F.S. +77	F.S. +81	F.S. +71	F.S. +62
Lift No	4	3	3	3	2
Latitude (°N)	29.870864	29.871198	29.871261	29.871311	29.880966
Longitude (°W)	90.117936	90.123605	90.126059	90.125015	90.136301
Elevation (ft)	9.1	5.3	5.2	5.5	6.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	24	25	29	28
Tare No	T92	T101	T86	T41	T46
Wet Soil + Tare Mass (g)	47.01	45.23	41.65	48.05	40.30
Dry Soil + Tare Mass (g)	37.99	34.65	32.53	36.04	31.57
Tare Mass (g)	25.52	17.16	16.65	19.41	19.88
Moisture Content (%)	72.7	60.2	57.4	73.5	75.7
Trial No 2 / Blow Count	26	23	25	29	29
Tare No	T61	T25	T66	T76	T50
Wet Soil + Tare Mass (g)	40.77	42.29	40.31	45.92	45.40
Dry Soil + Tare Mass (g)	30.28	32.65	31.17	33.53	34.20
Tare Mass (g)	15.74	16.57	15.26	16.14	19.17
Moisture Content (%)	72.5	59.3	57.4	72.5	75.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104	T91	T420	T32	T103
Wet Soil + Tare Mass (g)	27.21	27.41	27.42	25.20	26.88
Dry Soil + Tare Mass (g)	25.19	25.88	25.70	23.65	24.91
Tare Mass (g)	17.76	19.79	17.81	17.64	17.21
Moisture Content (%)	27.2	25.1	21.8	25.8	25.6
Trial No 2 / Tare No	T104	T12	T78	T45	T13
Wet Soil + Tare Mass (g)	27.21	27.36	26.08	27.79	26.38
Dry Soil + Tare Mass (g)	25.19	25.84	24.63	26.03	24.68
Tare Mass (g)	17.76	19.63	17.90	19.24	18.05
Moisture Content (%)	27.2	24.5	21.5	25.9	25.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.34	124.08	109.60	109.69	118.33
Dry Soil Mass after Washing (g)	2.50	4.97	15.34	6.48	3.34
Test Status					
Liquid Limit	**73**	**60**	**57**	**73**	**76**
Plastic Limit	**27**	**25**	**22**	**26**	**26**
Plasticity Index	**46**	**35**	**35**	**47**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.5	4.0	14.0	5.9	2.8
Fines (%)	97.5	96.0	86.0	94.1	97.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3384
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/12/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	250	251	252	253	254
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	84+02	175+12	169+06	164+04	71+99
Offset	F.S. +50	P.S. -10	C/L	C/L	F.S. +71
Lift No	2	4	4	4	2
Latitude (°N)	29.881327	29.871181	29.871267	29.871354	29.884517
Longitude (°W)	90.136139	90.119762	90.121674	90.123253	90.135119
Elevation (ft)	6.1	8.7	8.4	8.2	5.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	30	20	22	27	20
Tare No	T51	T63	T31	T1021	T93
Wet Soil + Tare Mass (g)	44.53	39.34	46.27	41.25	43.57
Dry Soil + Tare Mass (g)	34.31	31.45	36.52	32.15	34.61
Tare Mass (g)	17.48	19.36	19.53	15.19	19.36
Moisture Content (%)	62.1	63.5	56.5	54.2	57.2
Trial No 2 / Blow Count	30	20	22	27	21
Tare No	T421	T38	T99	T28	T52
Wet Soil + Tare Mass (g)	44.89	41.85	44.57	43.79	46.55
Dry Soil + Tare Mass (g)	35.43	31.99	34.36	34.74	36.81
Tare Mass (g)	19.75	16.91	16.56	17.86	20.34
Moisture Content (%)	61.7	63.6	56.5	54.1	57.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T35	T17	T80	T39	T79
Wet Soil + Tare Mass (g)	22.73	22.53	24.34	27.84	22.66
Dry Soil + Tare Mass (g)	21.38	21.06	22.81	26.62	21.53
Tare Mass (g)	15.56	14.77	16.59	20.81	16.20
Moisture Content (%)	23.2	23.4	24.6	21.0	21.2
Trial No 2 / Tare No	T72	T60	T15	T82	T16
Wet Soil + Tare Mass (g)	31.85	26.63	23.57	25.40	26.78
Dry Soil + Tare Mass (g)	30.25	25.07	22.03	24.16	25.58
Tare Mass (g)	23.32	18.48	15.75	18.27	19.99
Moisture Content (%)	23.1	23.7	24.5	21.1	21.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	64.26	117.37	83.65	115.31	122.42
Dry Soil Mass after Washing (g)	2.71	4.54	5.62	7.55	4.15
Test Status					
Liquid Limit	**62**	**64**	**56**	**54**	**58**
Plastic Limit	**23**	**24**	**25**	**21**	**21**
Plasticity Index	**39**	**40**	**31**	**33**	**37**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.2	3.9	6.7	6.5	3.4
Fines (%)	95.8	96.1	93.3	93.5	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3384
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/12/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	255				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	78+03				
Offset	F.S. +61				
Lift No	2				
Latitude (°N)	29.882914				
Longitude (°W)	90.135632				
Elevation (ft)	5.1				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23				
Tare No	T47				
Wet Soil + Tare Mass (g)	40.72				
Dry Soil + Tare Mass (g)	32.49				
Tare Mass (g)	16.84				
Moisture Content (%)	52.1				
Trial No 2 / Blow Count	24				
Tare No	T73				
Wet Soil + Tare Mass (g)	44.24				
Dry Soil + Tare Mass (g)	34.41				
Tare Mass (g)	15.85				
Moisture Content (%)	52.7				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T21				
Wet Soil + Tare Mass (g)	23.77				
Dry Soil + Tare Mass (g)	22.42				
Tare Mass (g)	15.51				
Moisture Content (%)	19.5				
Trial No 2 / Tare No	T19				
Wet Soil + Tare Mass (g)	27.23				
Dry Soil + Tare Mass (g)	25.66				
Tare Mass (g)	17.79				
Moisture Content (%)	19.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	87.58				
Dry Soil Mass after Washing (g)	4.09				
Test Status					
Liquid Limit	**52**				
Plastic Limit	**20**				
Plasticity Index	**32**				
Gravel Content (%)	0.0				
Sand Content (%)	4.7				
Fines (%)	95.3				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3391
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/14/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	262	263	264	265	266
Retest of Test ID		3384-245			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	94+00	181+02	91+92	89+13	87+49
Offset	C/L	C/L	C/L	C/L	C/L
Lift No	3	4	3	3	3
Latitude (°N)	29.878653	29.870878	29.879212	29.879943	29.880354
Longitude (°W)	90.136868	90.117935	90.136715	90.136453	90.136263
Elevation (ft)	7.4	5.6	7.6	7.4	7.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	20	24	21	22
Tare No	T24	T43	T27	T68	T23
Wet Soil + Tare Mass (g)	34.02	34.96	32.05	37.79	32.76
Dry Soil + Tare Mass (g)	26.67	28.47	27.02	30.69	27.62
Tare Mass (g)	13.80	18.66	19.96	20.92	19.33
Moisture Content (%)	55.6	64.4	70.9	71.2	61.1
Trial No 2 / Blow Count	20	20	24	21	22
Tare No	T75	T99	T14	T12	T60
Wet Soil + Tare Mass (g)	29.11	34.69	26.19	32.74	33.13
Dry Soil + Tare Mass (g)	24.38	27.47	21.60	27.17	27.50
Tare Mass (g)	16.18	16.61	15.25	19.62	18.45
Moisture Content (%)	56.1	64.7	71.9	72.2	61.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T32	T39	T30	T71
Wet Soil + Tare Mass (g)	24.14	26.92	28.64	25.19	25.13
Dry Soil + Tare Mass (g)	22.71	25.12	27.09	24.22	24.09
Tare Mass (g)	16.20	17.66	20.84	20.36	19.88
Moisture Content (%)	22.0	24.1	24.8	25.1	24.7
Trial No 2 / Tare No	T16	T420	T107	T34	T80
Wet Soil + Tare Mass (g)	29.92	26.79	26.15	22.85	22.09
Dry Soil + Tare Mass (g)	28.12	25.05	24.58	21.78	21.02
Tare Mass (g)	19.99	17.79	18.27	17.54	16.58
Moisture Content (%)	22.1	24.0	24.9	25.2	24.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)					
Dry Soil Mass after Washing (g)					
Test Status					
Liquid Limit	**56**	**65**	**71**	**72**	**61**
Plastic Limit	**22**	**24**	**25**	**25**	**24**
Plasticity Index	**34**	**41**	**46**	**47**	**37**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.4	4.3	4.5	2.9	3.2
Fines (%)	94.6	95.7	95.5	97.1	96.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3423
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/19/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	272	273	274	275	276
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	127+62	130+00	132+50	135+03	137+52
Offset	C/L	C/L	C/L	P.S. -6'	C/L
Lift No	3	3	3	3	3
Latitude (°N)	29.872209	29.872137	29.872091	29.872037	29.871950
Longitude (°W)	90.134701	90.133955	90.133169	90.132367	90.131591
Elevation (ft)	8.1	8.3	8.6	8.3	8.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	29	29	27	25
Tare No	T71	T85	T23	T34	T69
Wet Soil + Tare Mass (g)	32.51	36.46	29.70	30.67	39.22
Dry Soil + Tare Mass (g)	28.09	29.12	23.16	25.43	32.21
Tare Mass (g)	19.88	17.50	14.33	17.54	20.87
Moisture Content (%)	52.7	64.3	75.4	67.0	61.8
Trial No 2 / Blow Count	21	29	29	27	25
Tare No	T80	T76	T60	T30	T12
Wet Soil + Tare Mass (g)	30.86	31.56	34.65	36.79	37.13
Dry Soil + Tare Mass (g)	25.85	25.64	27.72	30.24	30.45
Tare Mass (g)	16.58	16.19	18.48	20.34	19.62
Moisture Content (%)	52.9	63.8	76.4	66.8	61.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T14	T420	T43	T18	T91
Wet Soil + Tare Mass (g)	23.92	28.72	27.66	28.70	32.39
Dry Soil + Tare Mass (g)	22.36	26.60	25.58	26.42	31.04
Tare Mass (g)	15.29	17.79	18.59	17.34	25.53
Moisture Content (%)	22.1	24.1	29.8	25.1	24.5
Trial No 2 / Tare No	T27	T32	T99	T5	T51
Wet Soil + Tare Mass (g)	30.23	27.52	25.40	32.56	25.14
Dry Soil + Tare Mass (g)	28.39	25.60	23.40	29.89	23.65
Tare Mass (g)	19.99	17.64	16.62	19.23	17.53
Moisture Content (%)	21.9	24.1	29.5	25.0	24.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	80.20	94.43	102.40	95.55	93.82
Dry Soil Mass after Washing (g)	4.62	4.61	6.65	2.84	2.83
Test Status					
Liquid Limit	**53**	**64**	**76**	**67**	**62**
Plastic Limit	**22**	**24**	**30**	**25**	**24**
Plasticity Index	**31**	**40**	**46**	**42**	**38**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.8	4.9	6.5	3.0	3.0
Fines (%)	94.2	95.1	93.5	97.0	97.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3423
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/19/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	277				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	139+96				
Offset	C/L				
Lift No	3				
Latitude (°N)	29.871893				
Longitude (°W)	90.130825				
Elevation (ft)	7.9				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	T39				
Wet Soil + Tare Mass (g)	31.56				
Dry Soil + Tare Mass (g)	27.11				
Tare Mass (g)	20.84				
Moisture Content (%)	71.6				
Trial No 2 / Blow Count	27				
Tare No	T107				
Wet Soil + Tare Mass (g)	34.32				
Dry Soil + Tare Mass (g)	27.76				
Tare Mass (g)	18.28				
Moisture Content (%)	69.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T421				
Wet Soil + Tare Mass (g)	32.21				
Dry Soil + Tare Mass (g)	29.64				
Tare Mass (g)	19.83				
Moisture Content (%)	26.2				
Trial No 2 / Tare No	T87				
Wet Soil + Tare Mass (g)	31.80				
Dry Soil + Tare Mass (g)	29.32				
Tare Mass (g)	19.89				
Moisture Content (%)	26.3				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	83.21				
Dry Soil Mass after Washing (g)	2.28				
Test Status					
Liquid Limit	**71**				
Plastic Limit	**26**				
Plasticity Index	**45**				
Gravel Content (%)	0.0				
Sand Content (%)	2.7				
Fines (%)	97.3				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3429
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/21/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	278	279	280	281	282
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	64+00	71+22	73+25	76+53	79+00
Offset	C/L	C/L	C/L	C/L	F.S. +9
Lift No	4	3	3	3	3
Latitude (°N)	29.885738	29.884661	29.884122	29.883269	29.882617
Longitude (°W)	90.136325	90.134831	90.134992	90.135335	90.135564
Elevation (ft)	7.4	8.1	8.0	7.8	8.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	20	20	28	26
Tare No	T85	T23	T30	T12	T8
Wet Soil + Tare Mass (g)	43.12	26.84	32.34	30.30	29.42
Dry Soil + Tare Mass (g)	32.60	21.53	27.07	25.78	25.67
Tare Mass (g)	17.53	14.32	20.23	19.63	20.25
Moisture Content (%)	70.8	71.7	75.0	74.5	69.5
Trial No 2 / Blow Count	28	20	20	28	25
Tare No	T76	T60	T34	T68	T62
Wet Soil + Tare Mass (g)	29.81	38.96	37.50	40.80	36.63
Dry Soil + Tare Mass (g)	24.23	30.30	28.79	32.29	28.94
Tare Mass (g)	16.18	18.46	17.54	20.77	17.85
Moisture Content (%)	70.3	71.2	75.4	74.9	69.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T32	T99	T18	T92	T62
Wet Soil + Tare Mass (g)	30.18	23.35	25.64	30.65	26.49
Dry Soil + Tare Mass (g)	27.42	22.00	23.85	29.44	24.84
Tare Mass (g)	17.67	16.59	17.33	25.53	19.18
Moisture Content (%)	28.3	25.0	27.5	30.9	29.2
Trial No 2 / Tare No	T420	T43	T5	T51	T104
Wet Soil + Tare Mass (g)	30.59	25.18	28.90	24.60	25.28
Dry Soil + Tare Mass (g)	27.76	23.84	26.83	22.91	23.58
Tare Mass (g)	17.79	18.58	19.24	17.53	17.77
Moisture Content (%)	28.4	25.5	27.3	31.4	29.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	109.62	104.40	104.95	120.41	118.41
Dry Soil Mass after Washing (g)	4.42	2.53	7.07	4.56	4.77
Test Status					
Liquid Limit	**71**	**71**	**75**	**75**	**69**
Plastic Limit	**28**	**25**	**27**	**31**	**29**
Plasticity Index	**43**	**46**	**48**	**44**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	2.4	6.7	3.8	4.0
Fines (%)	96.0	97.6	93.3	96.2	96.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3429
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/21/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	283	284	285	286	287
Retest of Test ID	3391-267			3388-260	
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+90	87+54	94+58	98+48	103+27
Offset	C/L	P.S. -12	C/L	C/L -2.0	C/L
Lift No	3	4	4	3	4
Latitude (°N)	29.881579	29.880353	29.878508	29.877487	29.876198
Longitude (°W)	90.135852	90.136265	90.136956	90.137324	90.137645
Elevation (ft)	7.2	8.0	8.0	7.2	7.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	28	22	24	25
Tare No	T82	T79	T24	T83	T421
Wet Soil + Tare Mass (g)	37.18	25.38	36.78	37.10	38.50
Dry Soil + Tare Mass (g)	29.18	21.36	26.44	28.74	31.87
Tare Mass (g)	18.28	16.21	13.81	16.63	19.79
Moisture Content (%)	72.3	79.1	80.6	68.7	54.9
Trial No 2 / Blow Count	22	28	22	24	25
Tare No	T94	T29	T16	T39	T107
Wet Soil + Tare Mass (g)	37.10	34.55	36.32	34.94	41.23
Dry Soil + Tare Mass (g)	28.01	27.37	28.97	29.17	33.10
Tare Mass (g)	15.64	18.19	19.99	20.84	18.28
Moisture Content (%)	72.4	79.3	80.6	68.9	54.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T35	T101	T91	T75	T61
Wet Soil + Tare Mass (g)	24.60	24.09	27.35	25.00	26.41
Dry Soil + Tare Mass (g)	22.64	22.38	25.56	23.20	24.55
Tare Mass (g)	15.57	17.21	19.77	16.19	15.77
Moisture Content (%)	27.7	33.1	30.9	25.7	21.2
Trial No 2 / Tare No	T78	T103	T66	T15	T87
Wet Soil + Tare Mass (g)	27.55	24.05	21.53	23.58	27.40
Dry Soil + Tare Mass (g)	25.46	22.42	20.07	22.01	26.08
Tare Mass (g)	17.93	17.47	15.29	15.81	19.90
Moisture Content (%)	27.8	32.9	30.5	25.3	21.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	86.08	112.91	106.00	117.90	98.03
Dry Soil Mass after Washing (g)	4.31	3.48	4.05	5.24	5.70
Test Status					
Liquid Limit	**72**	**79**	**81**	**69**	**55**
Plastic Limit	**28**	**33**	**31**	**26**	**21**
Plasticity Index	**44**	**46**	**50**	**43**	**34**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	3.1	3.8	4.4	5.8
Fines (%)	94.2	95.6	96.2	96.9	95.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3429
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/21/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	288	289	290		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	108+13	98+91	94+59		
Offset	F.S. +12	P.S. -152	P.S. -152		
Lift No	4	1	1		
Latitude (°N)	29.874916	29.877260	29.878384		
Longitude (°W)	90.138078	90.136858	90.136475		
Elevation (ft)	8.4	-0.1	-1.4		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25	23		
Tare No	T41	T36	T13		
Wet Soil + Tare Mass (g)	33.64	36.73	43.24		
Dry Soil + Tare Mass (g)	27.69	28.87	32.86		
Tare Mass (g)	19.39	18.52	18.06		
Moisture Content (%)	72.7	75.9	69.4		
Trial No 2 / Blow Count	28	25	23		
Tare No	T86	T31	T81		
Wet Soil + Tare Mass (g)	38.90	33.31	30.87		
Dry Soil + Tare Mass (g)	29.57	27.39	26.71		
Tare Mass (g)	16.66	19.55	20.80		
Moisture Content (%)	73.3	75.5	69.7		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T50	T65	T22		
Wet Soil + Tare Mass (g)	27.10	27.21	28.56		
Dry Soil + Tare Mass (g)	25.38	25.19	26.48		
Tare Mass (g)	19.19	17.65	19.06		
Moisture Content (%)	27.8	26.8	28.0		
Trial No 2 / Tare No	T95	T106	T96		
Wet Soil + Tare Mass (g)	26.64	24.71	23.57		
Dry Soil + Tare Mass (g)	25.32	22.86	22.22		
Tare Mass (g)	20.50	15.89	17.58		
Moisture Content (%)	27.4	26.5	29.1		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	92.72	120.26	105.19		
Dry Soil Mass after Washing (g)	3.64	4.32	5.24		
Test Status					
Liquid Limit	**73**	**76**	**70**		
Plastic Limit	**28**	**27**	**29**		
Plasticity Index	**45**	**49**	**41**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.9	3.6	5.0		
Fines (%)	96.1	96.4	95.0		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3439
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	294	295	296	297	298
Retest of Test ID	3429-284	3429-283	3429-282	3429-281	
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	87+54	82+90	79+00	76+53	69+06
Offset	P.S. -12	C/L	F.S. +19	C/L	F.S. +39
Lift No	4	3	3	3	4
Latitude (°N)	29.880353	29.881579	29.882617	29.883269	29.885114
Longitude (°W)	90.136265	90.135852	90.135564	90.135335	90.134926
Elevation (ft)	8.0	7.2	8.4	7.8	6.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	29	27	21	24	29
Tare No	T83	T91	T16	T103	T79
Wet Soil + Tare Mass (g)	41.18	37.76	38.27	35.12	34.26
Dry Soil + Tare Mass (g)	30.53	29.68	29.98	26.82	26.90
Tare Mass (g)	16.63	19.76	20.01	17.47	16.21
Moisture Content (%)	78.0	82.2	81.4	88.3	70.1
Trial No 2 / Blow Count	29	27	21	24	29
Tare No	T39	T66	T24	T101	T29
Wet Soil + Tare Mass (g)	35.31	30.35	27.97	30.85	28.87
Dry Soil + Tare Mass (g)	29.06	23.60	21.53	24.43	24.48
Tare Mass (g)	20.83	15.30	13.84	17.18	18.19
Moisture Content (%)	77.3	82.1	82.0	88.1	71.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T32	T76	T43	T23	T18
Wet Soil + Tare Mass (g)	22.93	22.56	24.98	22.72	26.93
Dry Soil + Tare Mass (g)	21.88	21.15	23.56	20.73	25.12
Tare Mass (g)	17.67	16.18	18.58	14.33	17.34
Moisture Content (%)	24.9	28.4	28.5	31.1	23.3
Trial No 2 / Tare No	T420	T85	T99	T60	T30
Wet Soil + Tare Mass (g)	22.31	24.29	22.37	25.40	28.80
Dry Soil + Tare Mass (g)	21.43	22.80	21.10	23.77	27.23
Tare Mass (g)	17.80	17.54	16.59	18.49	20.24
Moisture Content (%)	24.2	28.3	28.2	30.9	22.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.00	108.67	107.55	110.59	90.17
Dry Soil Mass after Washing (g)	10.38	4.02	3.70	2.46	5.50
Test Status					
Liquid Limit	**78**	**82**	**82**	**88**	**71**
Plastic Limit	**25**	**28**	**28**	**31**	**23**
Plasticity Index	**53**	**54**	**54**	**57**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	9.6	3.7	3.4	2.2	6.1
Fines (%)	90.4	96.3	96.6	97.8	93.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3439
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	299				
Retest of Test ID	3429-278				
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	64+00				
Offset	C/L				
Lift No	4				
Latitude (°N)	29.885738				
Longitude (°W)	90.136325				
Elevation (ft)	7.4				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	T5				
Wet Soil + Tare Mass (g)	34.15				
Dry Soil + Tare Mass (g)	27.71				
Tare Mass (g)	19.25				
Moisture Content (%)	76.5				
Trial No 2 / Blow Count	26				
Tare No	T51				
Wet Soil + Tare Mass (g)	35.51				
Dry Soil + Tare Mass (g)	27.73				
Tare Mass (g)	17.52				
Moisture Content (%)	76.6				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T34				
Wet Soil + Tare Mass (g)	23.93				
Dry Soil + Tare Mass (g)	22.69				
Tare Mass (g)	17.54				
Moisture Content (%)	24.1				
Trial No 2 / Tare No	T92				
Wet Soil + Tare Mass (g)	35.35				
Dry Soil + Tare Mass (g)	33.43				
Tare Mass (g)	25.53				
Moisture Content (%)	24.3				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.64				
Dry Soil Mass after Washing (g)	3.55				
Test Status					
Liquid Limit	**77**				
Plastic Limit	**24**				
Plasticity Index	**53**				
Gravel Content (%)	0.0				
Sand Content (%)	3.0				
Fines (%)	97.0				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3448
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/24/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	300	301	302	303	304
Retest of Test ID	3423-275	3429-290			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	C. BR. CL.
Station	135+03	94+59	88+03	83+07	78+02
Offset	P.S. -6'	P.S. -152	P.S. -143	P.S. -151	P.S. -142
Lift No	3	1	1	1	1
Latitude (°N)	29.872037	29.878384	29.880115	29.881426	29.882758
Longitude (°W)	90.132367	90.136475	90.135915	90.135899	90.135014
Elevation (ft)	8.3	-1.4	-1.1	-0.8	-0.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	28	21	23	21
Tare No	T92	T79	T60	T103	T85
Wet Soil + Tare Mass (g)	41.93	38.18	28.84	34.20	35.68
Dry Soil + Tare Mass (g)	35.18	28.32	24.21	26.76	28.83
Tare Mass (g)	25.53	16.30	18.48	17.49	17.54
Moisture Content (%)	68.5	83.2	79.1	79.5	59.4
Trial No 2 / Blow Count	21	28	21	23	21
Tare No	T34	T29	T23	T101	T76
Wet Soil + Tare Mass (g)	39.63	29.05	39.33	36.20	39.11
Dry Soil + Tare Mass (g)	30.54	24.15	28.21	27.76	30.46
Tare Mass (g)	17.53	18.21	14.31	17.18	16.17
Moisture Content (%)	68.4	83.6	78.3	79.0	59.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T30	T16	T32	T83
Wet Soil + Tare Mass (g)	27.57	27.16	27.85	25.28	24.89
Dry Soil + Tare Mass (g)	25.40	25.42	26.02	23.50	23.28
Tare Mass (g)	17.52	20.24	20.00	17.66	16.62
Moisture Content (%)	27.5	33.6	30.4	30.5	24.2
Trial No 2 / Tare No	T5	T18	T24	T420	T39
Wet Soil + Tare Mass (g)	27.61	25.01	22.71	24.49	28.18
Dry Soil + Tare Mass (g)	25.85	23.09	20.60	22.97	26.73
Tare Mass (g)	19.26	17.32	13.82	17.78	20.84
Moisture Content (%)	26.7	33.3	31.1	29.3	24.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	113.84	89.05	110.23	116.56	106.24
Dry Soil Mass after Washing (g)	4.60	2.81	9.20	3.93	5.02
Test Status					
Liquid Limit	**68**	**83**	**79**	**79**	**59**
Plastic Limit	**27**	**33**	**31**	**30**	**24**
Plasticity Index	**41**	**50**	**48**	**49**	**35**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	3.2	8.3	3.4	4.7
Fines (%)	96.0	96.8	91.7	96.6	95.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3485
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/3/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	309	310	311	312	313
Retest of Test ID	3448-305	3448-301	3439-295	3439-296	3439-297
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	73+08	94+59	82+90	79+00	76+53
Offset	P.S. - 141	P.S. -152	C/L	F.S. +9	C/L
Lift No	1	1	3	3	3
Latitude (°N)	29.884061	29.878384	29.881579	29.882617	29.883269
Longitude (°W)	90.134571	90.136475	90.135852	90.135564	90.135335
Elevation (ft)	-0.1	-1.4	7.2	8.4	7.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	21	25	29	28
Tare No	T103	T420	T83	T12	T62
Wet Soil + Tare Mass (g)	32.29	29.98	27.10	29.06	28.20
Dry Soil + Tare Mass (g)	25.89	25.07	22.72	25.28	23.61
Tare Mass (g)	17.48	17.82	16.63	19.64	17.84
Moisture Content (%)	75.3	66.3	71.9	68.2	80.6
Trial No 2 / Blow Count	22	22	26	28	29
Tare No	T32	T85	T43	T91	T63
Wet Soil + Tare Mass (g)	32.14	33.93	32.46	32.20	36.41
Dry Soil + Tare Mass (g)	25.88	27.28	26.66	27.22	28.88
Tare Mass (g)	17.68	17.54	18.55	19.76	19.39
Moisture Content (%)	75.2	67.2	71.9	67.7	80.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T16	T76	T99	T66	T46
Wet Soil + Tare Mass (g)	31.16	28.11	28.64	24.33	28.50
Dry Soil + Tare Mass (g)	28.87	25.94	26.30	22.64	26.63
Tare Mass (g)	20.02	16.18	16.60	15.30	19.92
Moisture Content (%)	25.9	22.2	24.1	23.0	27.9
Trial No 2 / Tare No	T101	T39	T68	T8	T17
Wet Soil + Tare Mass (g)	29.62	32.93	32.68	30.19	26.03
Dry Soil + Tare Mass (g)	27.06	30.67	30.34	28.37	23.57
Tare Mass (g)	17.20	20.83	20.78	20.26	14.75
Moisture Content (%)	26.0	23.0	24.5	22.4	27.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.50	117.32	107.22	105.46	105.92
Dry Soil Mass after Washing (g)	1.88	5.46	3.57	4.16	3.19
Test Status					
Liquid Limit	**75**	**67**	**72**	**68**	**81**
Plastic Limit	**26**	**23**	**24**	**23**	**28**
Plasticity Index	**49**	**44**	**48**	**45**	**53**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.5	4.7	3.3	3.9	3.0
Fines (%)	97.5	95.3	96.7	96.1	97.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3485
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/3/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	314				
Retest of Test ID	3439-298				
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G-BR CL				
Station	69+06				
Offset	F.S. +39				
Lift No	4				
Latitude (°N)	29.885114				
Longitude (°W)	90.134926				
Elevation (ft)	6.3				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	T38				
Wet Soil + Tare Mass (g)	34.51				
Dry Soil + Tare Mass (g)	27.28				
Tare Mass (g)	16.91				
Moisture Content (%)	70.4				
Trial No 2 / Blow Count	28				
Tare No	T70				
Wet Soil + Tare Mass (g)	32.24				
Dry Soil + Tare Mass (g)	26.72				
Tare Mass (g)	18.73				
Moisture Content (%)	70.0				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T10				
Wet Soil + Tare Mass (g)	26.98				
Dry Soil + Tare Mass (g)	24.63				
Tare Mass (g)	15.51				
Moisture Content (%)	25.8				
Trial No 2 / Tare No	T67				
Wet Soil + Tare Mass (g)	29.62				
Dry Soil + Tare Mass (g)	27.43				
Tare Mass (g)	18.94				
Moisture Content (%)	25.8				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.68				
Dry Soil Mass after Washing (g)	4.36				
Test Status					
Liquid Limit	**70**				
Plastic Limit	**26**				
Plasticity Index	**44**				
Gravel Content (%)	0.0				
Sand Content (%)	3.9				
Fines (%)	96.1				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3492
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/4/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	315	316			
Retest of Test ID	3448-300	3391-271			
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-BR CLAY	G-BR CLAY			
Station	135+03	126+51			
Offset	P.S. -6	C/L			
Lift No	3	3			
Latitude (°N)	29.872037	29.872238			
Longitude (°W)	90.132367	90.135069			
Elevation (ft)	8.3	8.4			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	25			
Tare No	T60	T24			
Wet Soil + Tare Mass (g)	29.08	23.51			
Dry Soil + Tare Mass (g)	24.69	19.57			
Tare Mass (g)	18.47	13.85			
Moisture Content (%)	69.1	68.9			
Trial No 2 / Blow Count	20	24			
Tare No	T30	T51			
Wet Soil + Tare Mass (g)	39.20	33.21			
Dry Soil + Tare Mass (g)	31.37	26.85			
Tare Mass (g)	20.28	17.55			
Moisture Content (%)	68.7	68.1			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T18			
Wet Soil + Tare Mass (g)	25.07	24.53			
Dry Soil + Tare Mass (g)	23.45	23.17			
Tare Mass (g)	16.24	17.36			
Moisture Content (%)	22.5	23.4			
Trial No 2 / Tare No	T23	T29			
Wet Soil + Tare Mass (g)	20.46	25.95			
Dry Soil + Tare Mass (g)	19.33	24.48			
Tare Mass (g)	14.29	18.21			
Moisture Content (%)	22.4	23.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	95.31	97.77			
Dry Soil Mass after Washing (g)	2.82	7.87			
Test Status					
Liquid Limit	**69**	**68**			
Plastic Limit	**22**	**23**			
Plasticity Index	**47**	**45**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.0	8.0			
Fines (%)	97.0	92.0			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3499
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/6/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	317	318	319		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CL	G-BR CL	G-BR CL		
Station	126+01	133+02	96+06		
Offset	C/L	C/L	C/L		
Lift No	4	4	4		
Latitude (°N)	29.872223	29.872076	29.878110		
Longitude (°W)	90.135227	90.133027	90.137048		
Elevation (ft)	9.0	9.6	8.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	23	27		
Tare No	T14	T76	T81		
Wet Soil + Tare Mass (g)	25.34	32.09	32.66		
Dry Soil + Tare Mass (g)	20.94	24.90	27.20		
Tare Mass (g)	15.25	16.13	20.77		
Moisture Content (%)	77.7	81.2	85.7		
Trial No 2 / Blow Count	27	24	28		
Tare No	T43	T96	T24		
Wet Soil + Tare Mass (g)	34.87	28.48	31.26		
Dry Soil + Tare Mass (g)	27.78	23.57	23.25		
Tare Mass (g)	18.52	17.56	13.80		
Moisture Content (%)	77.3	81.3	85.9		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T39	T51	T18		
Wet Soil + Tare Mass (g)	30.91	22.93	23.50		
Dry Soil + Tare Mass (g)	28.91	21.78	22.21		
Tare Mass (g)	20.81	17.50	17.30		
Moisture Content (%)	24.7	26.9	26.3		
Trial No 2 / Tare No	T22	T29	T79		
Wet Soil + Tare Mass (g)	26.79	23.81	22.98		
Dry Soil + Tare Mass (g)	25.26	22.59	21.55		
Tare Mass (g)	18.98	18.17	16.20		
Moisture Content (%)	24.4	27.6	26.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	84.57	112.52	114.24		
Dry Soil Mass after Washing (g)	5.59	2.93	4.75		
Test Status					
Liquid Limit	**77**	**81**	**86**		
Plastic Limit	**25**	**27**	**27**		
Plasticity Index	**52**	**54**	**59**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	6.6	2.6	4.2		
Fines (%)	93.4	97.4	95.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3506
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	320	321	322	323	324
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	92+72	87+00	82+03	77+00	72+03
Offset	P.S. -148	P.S. -143	P.S. -140	P.S. -138	P.S. -141
Lift No	2	2	2	2	2
Latitude (°N)	29.878880	29.880392	29.881702	29.883032	29.884338
Longitude (°W)	90.136320	90.135817	90.135381	90.134933	90.134479
Elevation (ft)	-0.8	0.2	0.5	0.6	0.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	25	25	22
Tare No	T81	T76	T14	T1021	T60
Wet Soil + Tare Mass (g)	49.54	38.97	44.59	40.48	47.53
Dry Soil + Tare Mass (g)	37.38	30.06	33.74	30.43	36.64
Tare Mass (g)	20.77	16.14	15.24	15.19	18.47
Moisture Content (%)	72.8	64.0	58.6	65.9	59.0
Trial No 2 / Blow Count	26	26	24	24	22
Tare No	T24	T96	T43	T30	T83
Wet Soil + Tare Mass (g)	35.94	48.07	43.46	51.78	39.52
Dry Soil + Tare Mass (g)	26.64	36.18	34.25	39.25	30.94
Tare Mass (g)	13.81	17.55	18.52	20.25	16.61
Moisture Content (%)	72.8	64.1	58.3	65.6	59.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T18	T29	T22	T44	T40
Wet Soil + Tare Mass (g)	30.18	33.60	31.24	29.69	31.69
Dry Soil + Tare Mass (g)	27.58	30.77	29.12	26.79	29.48
Tare Mass (g)	17.31	18.16	18.98	14.96	19.31
Moisture Content (%)	25.3	22.4	20.9	24.5	21.7
Trial No 2 / Tare No	T79	T51	T39	T26	T23
Wet Soil + Tare Mass (g)	29.67	33.10	35.06	35.16	28.24
Dry Soil + Tare Mass (g)	26.94	30.27	32.62	31.94	25.78
Tare Mass (g)	16.19	17.56	20.80	18.94	14.28
Moisture Content (%)	25.4	22.3	20.6	24.8	21.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	90.88	111.61	130.41	91.86	85.54
Dry Soil Mass after Washing (g)	4.32	4.85	5.78	4.62	3.47
Test Status					
Liquid Limit	**73**	**64**	**58**	**66**	**59**
Plastic Limit	**25**	**22**	**21**	**25**	**22**
Plasticity Index	**48**	**42**	**37**	**41**	**37**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.8	4.3	4.4	5.0	4.1
Fines (%)	95.2	95.7	95.6	95.0	95.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3506
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/7/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	325	326	327	328	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	83+07	78+03	67+00	64+55	
Offset	C/L	C/L	F.S. -15	F.S. -11	
Lift No	4	4	5	5	
Latitude (°N)	29.881480	29.882864	29.885375	29.885621	
Longitude (°W)	90.135892	90.135437	90.135484	90.136206	
Elevation (ft)	9.2	9.0	9.1	9.0	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	22	24	27	
Tare No	T28	T64	T105	T67	
Wet Soil + Tare Mass (g)	34.57	36.34	35.05	44.19	
Dry Soil + Tare Mass (g)	28.30	28.86	28.08	34.73	
Tare Mass (g)	17.85	17.04	15.65	18.95	
Moisture Content (%)	59.7	62.3	55.8	60.5	
Trial No 2 / Blow Count	24	22	24	27	
Tare No	T37	T21	T420	T38	
Wet Soil + Tare Mass (g)	39.19	29.91	45.51	41.25	
Dry Soil + Tare Mass (g)	31.05	24.34	35.55	32.11	
Tare Mass (g)	17.58	15.48	17.85	16.86	
Moisture Content (%)	60.1	61.9	56.0	60.5	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T47	T77	T85	T70	
Wet Soil + Tare Mass (g)	30.67	33.57	33.14	30.16	
Dry Soil + Tare Mass (g)	28.23	31.40	30.32	28.08	
Tare Mass (g)	16.84	21.76	17.58	18.73	
Moisture Content (%)	21.4	22.5	22.1	22.2	
Trial No 2 / Tare No	T7	T9	T10	T101	
Wet Soil + Tare Mass (g)	33.05	31.59	30.28	27.17	
Dry Soil + Tare Mass (g)	30.66	29.38	27.64	25.38	
Tare Mass (g)	19.75	19.73	15.54	17.24	
Moisture Content (%)	21.9	22.9	21.8	22.0	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	96.14	104.20	114.20	108.58	
Dry Soil Mass after Washing (g)	3.02	3.69	8.59	5.87	
Test Status					
Liquid Limit	**60**	**62**	**56**	**61**	
Plastic Limit	**22**	**23**	**22**	**22**	
Plasticity Index	**38**	**39**	**34**	**39**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.1	3.5	7.5	5.4	
Fines (%)	96.9	96.5	92.5	94.6	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3510
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/8/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	329	330	331	332	333
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	73+02	54+50	53+00	56+00	51+50
Offset	C/L				
Lift No	5				
Latitude (°N)	29.884188				
Longitude (°W)	90.134993				
Elevation (ft)	9.8				
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	27	27	27
Tare No	T1022	T100	T99	T105	T21
Wet Soil + Tare Mass (g)	40.41	27.32	27.32	31.20	36.17
Dry Soil + Tare Mass (g)	31.37	22.41	22.39	25.03	28.11
Tare Mass (g)	19.73	14.85	14.65	15.68	15.53
Moisture Content (%)	78.0	65.6	64.3	66.6	64.7
Trial No 2 / Blow Count	25	28	28	28	26
Tare No	T17	T74	T12	T77	T7
Wet Soil + Tare Mass (g)	30.35	38.87	38.87	38.87	44.23
Dry Soil + Tare Mass (g)	23.54	31.35	31.43	32.07	34.63
Tare Mass (g)	14.71	19.78	19.78	21.79	19.77
Moisture Content (%)	77.1	65.9	64.7	67.1	64.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T46	T97	T97	T9	T47
Wet Soil + Tare Mass (g)	26.02	23.30	23.28	29.19	26.64
Dry Soil + Tare Mass (g)	24.74	21.74	22.20	27.49	24.75
Tare Mass (g)	19.89	15.41	15.41	19.74	16.86
Moisture Content (%)	26.4	24.6	15.9	21.9	24.0
Trial No 2 / Tare No	T19	T39	T64	T64	T37
Wet Soil + Tare Mass (g)	23.59	27.99	27.65	27.66	27.98
Dry Soil + Tare Mass (g)	22.40	26.58	26.20	25.74	25.97
Tare Mass (g)	17.83	20.80	17.07	17.07	17.60
Moisture Content (%)	26.0	24.4	15.9	22.1	24.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.27	128.28	113.58	91.67	110.27
Dry Soil Mass after Washing (g)	2.49	1.60	0.52	1.33	2.27
Test Status					
Liquid Limit	**78**	**66**	**65**	**67**	**65**
Plastic Limit	**26**	**25**	**16**	**22**	**24**
Plasticity Index	**52**	**41**	**49**	**45**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.5	1.2	0.5	1.5	2.1
Fines (%)	97.5	98.8	99.5	98.5	97.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks	ID 330 - 333 UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3520
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/9/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	334	335	336	337	338
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	52+58	47+63	42+55	37+48	31+76
Offset	P.S. -141	P.S. -156	P.S. -145	P.S. -152	P.S. -126
Lift No	1	1	1	1	1
Latitude (°N)	29.886811	29.887087	29.887339	29.887642	29.887947
Longitude (°W)	90.139634	90.140982	90.142561	90.144122	90.146213
Elevation (ft)	1.2	0.4	0.5	0.7	1.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	29	23	27	26
Tare No	T28	T60	T30	T96	T18
Wet Soil + Tare Mass (g)	34.79	30.52	36.63	32.66	32.56
Dry Soil + Tare Mass (g)	28.51	25.90	30.46	26.80	26.70
Tare Mass (g)	17.87	18.46	20.27	17.60	17.30
Moisture Content (%)	59.8	63.2	59.9	64.3	62.6
Trial No 2 / Blow Count	29	28	24	28	25
Tare No	T40	T26	T22	T76	T79
Wet Soil + Tare Mass (g)	40.48	37.52	38.22	35.63	34.94
Dry Soil + Tare Mass (g)	32.58	30.42	30.94	28.13	27.69
Tare Mass (g)	19.31	18.94	18.98	16.16	16.20
Moisture Content (%)	60.6	62.7	60.6	63.5	63.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T23	T44	T43	T29	T81
Wet Soil + Tare Mass (g)	27.27	25.62	28.00	27.39	32.45
Dry Soil + Tare Mass (g)	24.93	23.79	26.25	25.73	30.30
Tare Mass (g)	14.27	14.95	18.54	18.16	20.97
Moisture Content (%)	22.0	20.7	22.7	21.9	23.0
Trial No 2 / Tare No	T83	T1021	T14	T51	T24
Wet Soil + Tare Mass (g)	28.25	24.06	24.48	27.40	27.27
Dry Soil + Tare Mass (g)	26.10	22.54	22.78	25.59	24.79
Tare Mass (g)	16.63	15.22	15.28	17.49	13.86
Moisture Content (%)	22.7	20.8	22.7	22.3	22.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.02	80.03	116.56	107.36	111.63
Dry Soil Mass after Washing (g)	5.65	6.14	6.75	5.82	9.54
Test Status					
Liquid Limit	**60**	**63**	**60**	**64**	**63**
Plastic Limit	**22**	**21**	**23**	**22**	**23**
Plasticity Index	**38**	**42**	**37**	**42**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.1	7.7	5.8	5.4	8.5
Fines (%)	94.9	92.3	94.2	94.6	91.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3533
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/10/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	339	340	341	342	343
Retest of Test ID	3433-291	3506-321	3506-322	3506-323	3506-324
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	108+13	87+00	82+03	77+00	72+03
Offset	F.S. +12	P.S. -143	P.S. -140	P.S. -138	P.S. -141
Lift No	4	2	2	2	2
Latitude (°N)	29.874916	29.880392	29.881702	29.883032	29.884338
Longitude (°W)	90.138078	90.135817	90.135381	90.134933	90.134479
Elevation (ft)	8.4	0.2	0.5	0.6	0.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	22	26	28	26
Tare No	T85	T67	T62	T27	T46
Wet Soil + Tare Mass (g)	30.20	34.25	34.14	38.85	39.84
Dry Soil + Tare Mass (g)	24.81	28.20	27.97	31.31	32.04
Tare Mass (g)	17.52	18.93	17.82	19.98	19.90
Moisture Content (%)	73.9	64.3	61.1	67.5	64.6
Trial No 2 / Blow Count	24	23	27	29	27
Tare No	T420	T70	T63	T66	T19
Wet Soil + Tare Mass (g)	36.76	37.28	41.60	32.12	37.82
Dry Soil + Tare Mass (g)	28.67	29.92	33.25	25.40	30.02
Tare Mass (g)	17.79	18.68	19.37	15.27	17.80
Moisture Content (%)	74.0	64.8	60.7	67.5	64.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T38	T101	T8	T17	T33
Wet Soil + Tare Mass (g)	24.28	26.60	29.80	21.07	23.43
Dry Soil + Tare Mass (g)	22.72	24.64	28.16	19.73	21.82
Tare Mass (g)	16.81	17.14	20.23	14.72	14.95
Moisture Content (%)	26.4	26.1	20.7	26.7	23.4
Trial No 2 / Tare No	T10	T52	T72	T1022	T93
Wet Soil + Tare Mass (g)	24.09	26.64	32.55	26.72	27.16
Dry Soil + Tare Mass (g)	22.35	25.31	30.93	25.26	25.71
Tare Mass (g)	15.50	20.32	23.30	19.72	19.37
Moisture Content (%)	25.4	26.7	21.2	26.4	22.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	58.21	76.76	110.02	114.51	114.87
Dry Soil Mass after Washing (g)	2.31	2.83	4.92	4.02	4.32
Test Status					
Liquid Limit	**74**	**65**	**61**	**68**	**64**
Plastic Limit	**26**	**26**	**21**	**27**	**23**
Plasticity Index	**48**	**39**	**40**	**41**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	3.7	4.5	3.5	3.8
Fines (%)	96.0	96.3	95.5	96.5	96.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3533
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/10/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	344	345	346		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	27+51	22+50	17+51		
Offset	P.S. -151	P.S. -145	P.S. -152		
Lift No	1	1	1		
Latitude (°N)	29.888193	29.888457	29.888755		
Longitude (°W)	90.147203	90.148756	90.150295		
Elevation (ft)	0.2	0.5	0.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	23		
Tare No	T11	T89	T21		
Wet Soil + Tare Mass (g)	31.09	32.29	35.70		
Dry Soil + Tare Mass (g)	24.95	27.62	27.75		
Tare Mass (g)	15.17	19.60	15.51		
Moisture Content (%)	62.8	57.9	64.3		
Trial No 2 / Blow Count	26	25	22		
Tare No	T45	T34	T7		
Wet Soil + Tare Mass (g)	40.83	38.18	37.16		
Dry Soil + Tare Mass (g)	32.50	30.55	30.39		
Tare Mass (g)	19.22	17.53	19.78		
Moisture Content (%)	63.0	58.6	62.8		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T92	T91	T37		
Wet Soil + Tare Mass (g)	33.12	27.87	25.31		
Dry Soil + Tare Mass (g)	31.64	26.32	23.87		
Tare Mass (g)	25.49	19.77	17.60		
Moisture Content (%)	24.1	23.7	23.0		
Trial No 2 / Tare No	T84	T80	T105		
Wet Soil + Tare Mass (g)	30.85	26.20	24.89		
Dry Soil + Tare Mass (g)	29.13	24.33	23.13		
Tare Mass (g)	22.10	16.59	15.64		
Moisture Content (%)	24.5	24.2	23.5		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.96	92.56	105.55		
Dry Soil Mass after Washing (g)	4.24	3.88	3.74		
Test Status					
Liquid Limit	**63**	**58**	**64**		
Plastic Limit	**24**	**24**	**23**		
Plasticity Index	**39**	**34**	**41**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.7	4.2	3.5		
Fines (%)	95.3	95.8	96.5		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3544
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/13/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	347	348	349	350	351
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	52+44	47+52	12+53	7+51	2+50
Offset	F.S. +63.3	F.S. +69.6	P.S. -150.2	P.S. -136.6	P.S. -139.8
Lift No	1	1	1	1	1
Latitude (°N)					
Longitude (°W)					
Elevation (ft)	4.6	4.5	0.3	0.4	0.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	24	22	28	27
Tare No	T9	T12	T81	T51	T14
Wet Soil + Tare Mass (g)	37.75	33.71	40.89	37.21	32.35
Dry Soil + Tare Mass (g)	30.75	28.21	33.21	29.33	25.66
Tare Mass (g)	19.72	19.63	20.92	17.49	15.26
Moisture Content (%)	61.8	63.8	61.5	67.5	64.9
Trial No 2 / Blow Count	21	23	23	27	26
Tare No	T74	T5	T24	T29	T43
Wet Soil + Tare Mass (g)	37.90	39.77	30.63	39.86	36.94
Dry Soil + Tare Mass (g)	30.91	31.76	24.21	31.24	29.75
Tare Mass (g)	19.80	19.24	13.87	18.16	18.53
Moisture Content (%)	61.6	63.3	61.5	66.5	64.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T64	T25	T79	T76	T22
Wet Soil + Tare Mass (g)	26.42	27.01	29.50	29.20	31.86
Dry Soil + Tare Mass (g)	24.78	25.00	27.09	26.74	29.48
Tare Mass (g)	17.06	16.56	16.21	16.18	19.03
Moisture Content (%)	21.2	23.8	22.2	23.3	22.8
Trial No 2 / Tare No	T99	T47	T18	T96	T30
Wet Soil + Tare Mass (g)	26.52	28.70	29.39	29.88	31.67
Dry Soil + Tare Mass (g)	24.80	26.42	27.21	27.56	29.53
Tare Mass (g)	16.58	16.85	17.30	17.59	20.26
Moisture Content (%)	20.9	23.8	22.0	23.3	23.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.00	83.84	116.19	101.77	114.39
Dry Soil Mass after Washing (g)	5.12	0.45	6.06	4.64	5.85
Test Status					
Liquid Limit	**62**	**64**	**61**	**67**	**65**
Plastic Limit	**21**	**24**	**22**	**23**	**23**
Plasticity Index	**41**	**40**	**39**	**44**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.9	0.5	5.2	4.6	5.1
Fines (%)	95.1	99.5	94.8	95.4	94.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3603
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	12/21/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	360				
Retest of Test ID	3544+347				
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. - BR. CLAY				
Station	52+44				
Offset	F.S. -63.3				
Lift No	1				
Latitude (°N)	29.886249				
Longitude (°W)	90.139558				
Elevation (ft)	4.6				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T44				
Wet Soil + Tare Mass (g)	28.51				
Dry Soil + Tare Mass (g)	23.37				
Tare Mass (g)	14.95				
Moisture Content (%)	61.0				
Trial No 2 / Blow Count	24				
Tare No	T1021				
Wet Soil + Tare Mass (g)	32.91				
Dry Soil + Tare Mass (g)	26.19				
Tare Mass (g)	15.17				
Moisture Content (%)	60.7				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T97				
Wet Soil + Tare Mass (g)	25.14				
Dry Soil + Tare Mass (g)	23.43				
Tare Mass (g)	15.39				
Moisture Content (%)	21.3				
Trial No 2 / Tare No	T77				
Wet Soil + Tare Mass (g)	31.97				
Dry Soil + Tare Mass (g)	30.16				
Tare Mass (g)	21.72				
Moisture Content (%)	21.4				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	96.91				
Dry Soil Mass after Washing (g)	3.47				
Test Status					
Liquid Limit	**61**				
Plastic Limit	**21**				
Plasticity Index	**40**				
Gravel Content (%)	0.0				
Sand Content (%)	3.6				
Fines (%)	96.4				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3712
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/8/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	363	364			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. - BR. CLAY	G. - BR. CLAY			
Station	27+49	17+53			
Offset	F.S. +59	F.S. +56.6			
Lift No	1	1			
Latitude (°N)	29.887629	29.888188			
Longitude (°W)	90.147345	90.150040			
Elevation (ft)	4.4	4.6			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	28			
Tare No	T21	T39			
Wet Soil + Tare Mass (g)	30.59	36.22			
Dry Soil + Tare Mass (g)	24.53	30.67			
Tare Mass (g)	15.47	20.79			
Moisture Content (%)	65.5	56.9			
Trial No 2 / Blow Count	20	29			
Tare No	T7	T8			
Wet Soil + Tare Mass (g)	39.54	32.52			
Dry Soil + Tare Mass (g)	31.60	28.08			
Tare Mass (g)	19.73	20.23			
Moisture Content (%)	65.1	57.6			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T32	T24			
Wet Soil + Tare Mass (g)	25.16	22.41			
Dry Soil + Tare Mass (g)	23.84	20.87			
Tare Mass (g)	17.65	13.85			
Moisture Content (%)	21.3	21.9			
Trial No 2 / Tare No	T81	T103			
Wet Soil + Tare Mass (g)	26.93	26.63			
Dry Soil + Tare Mass (g)	25.83	24.93			
Tare Mass (g)	20.81	17.48			
Moisture Content (%)	21.9	22.8			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.86	81.88			
Dry Soil Mass after Washing (g)	4.00	3.64			
Test Status					
Liquid Limit	**65**	**57**			
Plastic Limit	**22**	**22**			
Plasticity Index	**43**	**35**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.7	4.4			
Fines (%)	96.3	95.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3745
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/13/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	365				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. - BR. CLAY				
Station	27+49				
Offset	F.S. +59				
Lift No	1				
Latitude (°N)	29.887629				
Longitude (°W)	90.147345				
Elevation (ft)	4.4				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24				
Tare No	T39				
Wet Soil + Tare Mass (g)	44.80				
Dry Soil + Tare Mass (g)	35.49				
Tare Mass (g)	20.80				
Moisture Content (%)	63.1				
Trial No 2 / Blow Count	24				
Tare No	T8				
Wet Soil + Tare Mass (g)	51.97				
Dry Soil + Tare Mass (g)	39.57				
Tare Mass (g)	20.23				
Moisture Content (%)	63.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T24				
Wet Soil + Tare Mass (g)	23.33				
Dry Soil + Tare Mass (g)	21.71				
Tare Mass (g)	13.80				
Moisture Content (%)	20.5				
Trial No 2 / Tare No	T103				
Wet Soil + Tare Mass (g)	26.69				
Dry Soil + Tare Mass (g)	25.09				
Tare Mass (g)	17.46				
Moisture Content (%)	21.0				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.75				
Dry Soil Mass after Washing (g)	9.02				
Test Status					
Liquid Limit	**63**				
Plastic Limit	**21**				
Plasticity Index	**42**				
Gravel Content (%)	0.0				
Sand Content (%)	8.1				
Fines (%)	91.9				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3754
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	366	367	368		
Retest of Test ID		3712+364			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	22+49	17+53	12+65		
Offset	F.S. +64.0	F.S. +56.6	F.S. +44.6		
Lift No	1	1	1		
Latitude (°N)	29.887897	29.888188	29.888492		
Longitude (°W)	90.148907	90.150407	90.151914		
Elevation (ft)	4.3	4.6	4.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	20	25		
Tare No	T8	T32	T83		
Wet Soil + Tare Mass (g)	42.87	31.50	36.75		
Dry Soil + Tare Mass (g)	34.40	26.47	29.70		
Tare Mass (g)	20.25	17.65	16.59		
Moisture Content (%)	60.1	55.5	53.8		
Trial No 2 / Blow Count	27	21	24		
Tare No	T39	T81	T23		
Wet Soil + Tare Mass (g)	40.21	38.58	41.29		
Dry Soil + Tare Mass (g)	32.99	32.12	31.81		
Tare Mass (g)	20.83	20.81	14.26		
Moisture Content (%)	59.9	55.9	53.8		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T103	T7	T5		
Wet Soil + Tare Mass (g)	24.75	26.24	27.20		
Dry Soil + Tare Mass (g)	23.39	25.01	25.76		
Tare Mass (g)	17.46	19.74	19.26		
Moisture Content (%)	22.9	23.3	22.2		
Trial No 2 / Tare No	T24	T21	T47		
Wet Soil + Tare Mass (g)	22.62	21.84	22.43		
Dry Soil + Tare Mass (g)	20.97	20.63	21.43		
Tare Mass (g)	13.81	15.50	16.87		
Moisture Content (%)	23.0	23.6	21.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	92.90	94.40	93.40		
Dry Soil Mass after Washing (g)	7.10	5.60	6.60		
Test Status					
Liquid Limit	**60**	**56**	**54**		
Plastic Limit	**23**	**23**	**22**		
Plasticity Index	**37**	**33**	**32**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	7.1	5.6	6.6		
Fines (%)	92.9	94.4	93.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3772A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	369	370	371	372	373
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	7+54	2+49	145+04	150+03	155+06
Offset	F.S. +40	F.S. +48	C/L	F.S. +7	C/L
Lift No	1	1	3	3	3
Latitude (°N)	29.888788	29.889044	29.871627	29.871665	29.871585
Longitude (°W)	90.153500	90.155065	90.129227	90.127659	90.126072
Elevation (ft)	5.1	5.1	8.0	8.0	8.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	26	27	27
Tare No	T37	T19	T67	T101	T66
Wet Soil + Tare Mass (g)	34.94	39.88	38.29	47.06	36.08
Dry Soil + Tare Mass (g)	28.57	31.38	30.37	34.22	26.82
Tare Mass (g)	17.58	17.81	18.92	17.16	15.29
Moisture Content (%)	57.4	62.6	69.5	76.0	81.1
Trial No 2 / Blow Count	25	27	27	26	27
Tare No	T105	T17	T10	T52	T46
Wet Soil + Tare Mass (g)	39.41	35.78	38.10	41.63	44.61
Dry Soil + Tare Mass (g)	30.66	27.77	28.81	32.51	33.67
Tare Mass (g)	15.62	14.71	15.49	20.33	19.91
Moisture Content (%)	58.2	61.9	70.4	75.2	80.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T74	T1022	T85	T62	T93
Wet Soil + Tare Mass (g)	31.58	28.69	26.91	29.39	32.04
Dry Soil + Tare Mass (g)	29.63	27.10	25.01	27.12	29.21
Tare Mass (g)	19.80	19.72	17.50	17.85	19.40
Moisture Content (%)	19.8	21.5	25.3	24.5	28.8
Trial No 2 / Tare No	T9	T70	T38	T27	T33
Wet Soil + Tare Mass (g)	30.17	27.06	25.57	29.20	29.64
Dry Soil + Tare Mass (g)	28.44	25.58	23.79	27.39	26.34
Tare Mass (g)	19.71	18.67	16.80	19.98	14.96
Moisture Content (%)	19.8	21.4	25.5	24.4	29.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	92.56	119.54	111.77	122.54	94.84
Dry Soil Mass after Washing (g)	5.30	6.70	10.46	8.44	5.39
Test Status					
Liquid Limit	**58**	**62**	**70**	**76**	**81**
Plastic Limit	**20**	**21**	**25**	**24**	**29**
Plasticity Index	**38**	**41**	**45**	**52**	**52**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.7	5.6	9.4	6.9	5.7
Fines (%)	94.3	94.4	90.6	93.1	94.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3772B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	374	375	376	377	378
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	160+03	165+03	170+03	175+03	180+02
Offset	F.S. +6.4	P.S. -10.1	P.S. -10.8	P.S. -8	C/L
Lift No	4	5	5	5	5
Latitude (°N)	29.871455	29.871394	29.871291	29.871177	29.870943
Longitude (°W)	90.124512	90.122935	90.121363	90.119787	90.118240
Elevation (ft)	8.0	10.1	10.1	10.1	10.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27	23	23
Tare No	T30	T96	T18	T20	T78
Wet Soil + Tare Mass (g)	51.03	44.88	48.47	48.69	41.22
Dry Soil + Tare Mass (g)	37.62	34.85	37.28	37.75	32.00
Tare Mass (g)	20.27	17.59	17.30	17.84	17.90
Moisture Content (%)	77.3	58.1	56.5	54.4	64.7
Trial No 2 / Blow Count	25	24	27	22	24
Tare No	T22	T76	T79	T73	T35
Wet Soil + Tare Mass (g)	44.57	43.87	43.59	42.60	43.97
Dry Soil + Tare Mass (g)	33.44	33.70	33.81	33.12	32.81
Tare Mass (g)	18.99	16.18	16.21	15.91	15.56
Moisture Content (%)	77.0	57.8	56.1	54.2	64.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T43	T29	T42	T6	T82
Wet Soil + Tare Mass (g)	30.56	34.39	24.14	33.07	30.82
Dry Soil + Tare Mass (g)	28.08	31.34	22.88	30.66	28.43
Tare Mass (g)	18.56	18.17	16.59	19.18	18.28
Moisture Content (%)	26.1	23.2	20.0	21.0	23.5
Trial No 2 / Tare No	T14	T51	T69	T104	T94
Wet Soil + Tare Mass (g)	26.22	33.69	26.36	31.11	27.81
Dry Soil + Tare Mass (g)	23.94	30.65	25.24	28.81	25.49
Tare Mass (g)	15.20	17.50	19.65	17.78	15.65
Moisture Content (%)	26.1	23.1	20.0	20.9	23.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.96	116.60	88.00	96.39	82.17
Dry Soil Mass after Washing (g)	6.66	3.49	9.38	4.84	3.63
Test Status					
Liquid Limit	**77**	**58**	**56**	**54**	**65**
Plastic Limit	**26**	**23**	**20**	**21**	**24**
Plasticity Index	**51**	**35**	**36**	**33**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.7	3.0	10.7	5.0	4.4
Fines (%)	93.3	97.0	89.3	95.0	95.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3772C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	379	380	381		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	53+00	49+50	46+50		
Offset	F.S. +36.7	F.S. +36	F.S. +31		
Lift No	2	2	2		
Latitude (°N)	29.886349	29.886467	29.886645		
Longitude (°W)	90.139402	90.140540	90.141448		
Elevation (ft)	5.7	5.4	5.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	27	23		
Tare No	T106	T50	T61		
Wet Soil + Tare Mass (g)	40.83	46.92	50.12		
Dry Soil + Tare Mass (g)	31.58	36.74	37.24		
Tare Mass (g)	15.86	19.17	15.77		
Moisture Content (%)	57.6	58.5	59.4		
Trial No 2 / Blow Count	21	27	22		
Tare No	T65	T95	T87		
Wet Soil + Tare Mass (g)	45.85	52.20	48.98		
Dry Soil + Tare Mass (g)	35.39	40.58	38.08		
Tare Mass (g)	17.64	20.49	19.90		
Moisture Content (%)	57.7	58.4	59.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T36	T86	T107		
Wet Soil + Tare Mass (g)	26.13	27.50	27.64		
Dry Soil + Tare Mass (g)	24.97	25.53	25.91		
Tare Mass (g)	18.48	16.69	18.29		
Moisture Content (%)	17.9	22.3	22.7		
Trial No 2 / Tare No	T31	T41	T421		
Wet Soil + Tare Mass (g)	25.70	30.79	29.00		
Dry Soil + Tare Mass (g)	24.77	28.71	27.29		
Tare Mass (g)	19.55	19.41	19.80		
Moisture Content (%)	17.8	22.4	22.8		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.74	97.78	97.47		
Dry Soil Mass after Washing (g)	7.74	14.09	4.47		
Test Status					
Liquid Limit	**58**	**58**	**59**		
Plastic Limit	**18**	**22**	**23**		
Plasticity Index	**40**	**36**	**36**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	8.6	14.1	4.6		
Fines (%)	91.4	85.9	95.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3827
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	382	383	384		
Retest of Test ID	3772+371	3772+380	3772+381		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	145+04	49+50	46+50		
Offset	C/L	F.S. +36	F.S. +31		
Lift No	4	2	2		
Latitude (°N)	29.871627	29.886467	29.886645		
Longitude (°W)	90.129227	90.140540	90.141448		
Elevation (ft)	8.0	5.4	5.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	24	27		
Tare No	t14	T18	T69		
Wet Soil + Tare Mass (g)	51.08	50.41	53.32		
Dry Soil + Tare Mass (g)	36.60	38.61	40.38		
Tare Mass (g)	15.26	17.31	19.64		
Moisture Content (%)	68.5	55.1	63.0		
Trial No 2 / Blow Count	26	25	27		
Tare No	t43	T79	T76		
Wet Soil + Tare Mass (g)	47.41	42.58	47.55		
Dry Soil + Tare Mass (g)	35.76	33.17	35.54		
Tare Mass (g)	18.55	16.23	16.19		
Moisture Content (%)	68.0	55.5	62.6		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	t29	T96	T82		
Wet Soil + Tare Mass (g)	28.53	30.06	29.97		
Dry Soil + Tare Mass (g)	26.46	27.93	27.73		
Tare Mass (g)	18.17	17.60	18.28		
Moisture Content (%)	25.0	20.6	23.7		
Trial No 2 / Tare No	T51	T94	T42		
Wet Soil + Tare Mass (g)	27.42	26.99	28.34		
Dry Soil + Tare Mass (g)	25.46	25.04	26.11		
Tare Mass (g)	17.50	15.64	16.59		
Moisture Content (%)	24.6	20.7	23.4		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	84.70	81.39	91.74		
Dry Soil Mass after Washing (g)	4.19	5.65	9.26		
Test Status					
Liquid Limit	**68**	**55**	**63**		
Plastic Limit	**25**	**21**	**24**		
Plasticity Index	**43**	**34**	**39**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.9	6.9	10.1		
Fines (%)	95.1	93.1	89.9		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3830
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	385	386			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	12+95	9+92			
Offset	F.S. +23.5	F.S. +54			
Lift No	2	2			
Latitude (°N)	29.888532	29.888618			
Longitude (°W)	90.151814	90.152773			
Elevation (ft)	6.3	6.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	24			
Tare No	T18	T94			
Wet Soil + Tare Mass (g)	33.08	39.41			
Dry Soil + Tare Mass (g)	26.24	30.72			
Tare Mass (g)	17.30	15.61			
Moisture Content (%)	77.2	57.2			
Trial No 2 / Blow Count	28	23			
Tare No	T79	T96			
Wet Soil + Tare Mass (g)	37.22	41.04			
Dry Soil + Tare Mass (g)	28.10	32.44			
Tare Mass (g)	16.19	17.56			
Moisture Content (%)	77.6	57.2			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T33	T66			
Wet Soil + Tare Mass (g)	22.78	26.39			
Dry Soil + Tare Mass (g)	21.22	24.49			
Tare Mass (g)	14.93	15.34			
Moisture Content (%)	24.8	20.8			
Trial No 2 / Tare No	T93	T46			
Wet Soil + Tare Mass (g)	27.54	30.84			
Dry Soil + Tare Mass (g)	25.88	29.00			
Tare Mass (g)	19.38	19.97			
Moisture Content (%)	25.5	20.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	64.35	73.75			
Dry Soil Mass after Washing (g)	3.33	5.49			
Test Status					
Liquid Limit	**77**	**57**			
Plastic Limit	**25**	**21**			
Plasticity Index	**52**	**36**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	5.2	7.4			
Fines (%)	94.8	92.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3857A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	390	391	392	393	394
Retest of Test ID					
Material Source	Jobsite	Jobsite	Jobsite	Jobsite	Jobsite
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.
Station	180+00	175+00	170+00	165+00	159+99
Offset	P.S. -46	P.S. -34.5	P.S. -32.4	P.S. -33.4	P.S. -34.5
Lift No					
Latitude (°N)	29.871061	29.871249	29.871350	29.871459	29.871568
Longitude (°W)	90.118211	90.119791	90.121363	90.122940	90.124515
Elevation (ft)	5.9	6.3	6.9	6.1	6.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	28	25	26
Tare No	T73	T78	T36	T19	T43
Wet Soil + Tare Mass (g)	39.65	38.35	39.14	43.06	37.78
Dry Soil + Tare Mass (g)	30.97	30.59	31.36	34.62	31.01
Tare Mass (g)	15.84	17.88	18.47	17.80	18.53
Moisture Content (%)	57.9	61.1	61.2	50.2	54.5
Trial No 2 / Blow Count	28	24	27	24	25
Tare No	T20	T35	T31	T70	T37
Wet Soil + Tare Mass (g)	44.82	33.90	41.35	43.81	40.63
Dry Soil + Tare Mass (g)	35.09	26.95	33.07	35.40	32.41
Tare Mass (g)	17.83	15.55	19.53	18.66	17.58
Moisture Content (%)	57.2	60.7	61.7	50.0	55.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104	T106	T95	T1022	T105
Wet Soil + Tare Mass (g)	29.66	25.44	31.53	32.37	27.20
Dry Soil + Tare Mass (g)	27.16	23.54	29.16	30.05	25.01
Tare Mass (g)	17.72	15.84	20.44	19.71	15.62
Moisture Content (%)	26.5	24.7	27.2	22.4	23.3
Trial No 2 / Tare No	T6	T65	T50	T14	T51
Wet Soil + Tare Mass (g)	31.16	26.85	29.76	26.55	27.71
Dry Soil + Tare Mass (g)	28.63	25.00	27.47	24.50	25.78
Tare Mass (g)	19.14	17.60	19.13	15.25	17.48
Moisture Content (%)	26.7	25.0	27.5	22.2	23.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	92.35	105.59	106.49	86.56	110.60
Dry Soil Mass after Washing (g)	13.51	16.90	23.69	14.74	19.19
Test Status					
Liquid Limit	**58**	**61**	**61**	**50**	**55**
Plastic Limit	**27**	**25**	**27**	**22**	**23**
Plasticity Index	**31**	**36**	**34**	**28**	**32**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	14.6	16.0	22.2	17.0	17.4
Fines (%)	85.4	84.0	77.8	83.0	82.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks	Samples collected from existing levee.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3857B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	395	396	397	398	399
Retest of Test ID					
Material Source	Jobsite	Jobsite	Jobsite	Jobsite	Jobsite
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.
Station	154+98	144+98	134+99	125+01	130+00
Offset	P.S. -34.9	P.S. -35.4	P.S. -33.2	P.S. -35.3	P.S. -32.9
Lift No					
Latitude (°N)	29.871676	29.871889	29.872110	29.872349	29.872227
Longitude (°W)	90.126089	90.129234	90.132376	90.135512	90.133945
Elevation (ft)	6.1	6.1	6.4	6.1	6.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	28	28	25	28
Tare No	T29	T18	T96	T61	T23
Wet Soil + Tare Mass (g)	40.54	40.08	33.66	32.61	33.34
Dry Soil + Tare Mass (g)	32.64	31.99	26.74	26.40	24.27
Tare Mass (g)	18.17	17.32	17.57	15.73	14.26
Moisture Content (%)	55.1	55.9	76.5	58.2	91.9
Trial No 2 / Blow Count	26	27	29	24	29
Tare No	T30	T93	T46	T87	T39
Wet Soil + Tare Mass (g)	41.47	42.17	44.23	43.16	41.60
Dry Soil + Tare Mass (g)	34.00	34.12	33.74	34.61	31.69
Tare Mass (g)	20.26	19.36	19.90	19.87	20.81
Moisture Content (%)	54.6	55.0	77.2	57.7	92.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T33	T66	T86	T107
Wet Soil + Tare Mass (g)	32.46	27.53	26.22	33.17	28.02
Dry Soil + Tare Mass (g)	29.69	25.27	23.58	30.20	25.37
Tare Mass (g)	18.99	14.94	15.28	16.65	18.27
Moisture Content (%)	25.9	21.9	31.8	21.9	37.3
Trial No 2 / Tare No	T79	T94	T82	T41	T421
Wet Soil + Tare Mass (g)	27.52	26.65	29.53	33.88	31.44
Dry Soil + Tare Mass (g)	25.24	24.69	26.83	31.29	28.27
Tare Mass (g)	16.21	15.61	18.25	19.37	19.76
Moisture Content (%)	25.2	21.6	31.5	21.7	37.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	88.61	123.74	121.21	116.71	116.81
Dry Soil Mass after Washing (g)	14.38	26.68	8.61	22.52	10.92
Test Status					
Liquid Limit	**55**	**55**	**77**	**58**	**92**
Plastic Limit	**26**	**22**	**32**	**22**	**37**
Plasticity Index	**29**	**33**	**45**	**36**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	16.2	21.6	7.1	19.3	9.3
Fines (%)	83.8	78.4	92.9	80.7	90.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks	Samples collected from existing levee.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3857C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	400	401	402	403	404
Retest of Test ID					
Material Source	Jobsite	Jobsite	Jobsite	Jobsite	Jobsite
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.	Br. Cl.
Station	105+00	100+00	195+00	90+00	85+00
Offset	P.S. -35	P.S. -44	P.S. -47	P.S. -49	P.S. -48
Lift No					
Latitude (°N)	29.875716	29.887041	29.878358	29.879668	29.880993
Longitude (°W)	90.137687	90.137272	90.136829	90.136375	90.135924
Elevation (ft)	6.0	6.1	5.6	5.1	5.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	23	27	28	25
Tare No	T32	T84	T92	T9	T38
Wet Soil + Tare Mass (g)	36.54	45.49	37.76	49.14	38.38
Dry Soil + Tare Mass (g)	28.19	36.13	31.94	37.69	30.21
Tare Mass (g)	17.66	22.08	25.46	19.69	16.81
Moisture Content (%)	80.0	66.0	90.7	64.5	61.0
Trial No 2 / Blow Count	28	22	26	27	26
Tare No	T5	T11	T45	T17	T85
Wet Soil + Tare Mass (g)	40.33	37.28	39.25	34.74	38.05
Dry Soil + Tare Mass (g)	31.02	28.46	29.75	26.98	30.23
Tare Mass (g)	19.25	15.16	19.21	14.71	17.52
Moisture Content (%)	80.2	65.3	90.6	63.8	61.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T72	T34	T16	T67	T62
Wet Soil + Tare Mass (g)	37.26	28.82	32.16	30.93	32.14
Dry Soil + Tare Mass (g)	33.94	26.77	29.03	28.43	29.08
Tare Mass (g)	23.31	17.50	19.99	18.94	17.83
Moisture Content (%)	31.2	22.1	34.6	26.3	27.2
Trial No 2 / Tare No	T63	T89	T74	T10	T27
Wet Soil + Tare Mass (g)	34.65	29.17	31.82	26.74	33.18
Dry Soil + Tare Mass (g)	30.99	27.41	28.73	24.38	30.34
Tare Mass (g)	19.36	19.57	19.78	15.50	19.97
Moisture Content (%)	31.5	22.4	34.5	26.6	27.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	97.50	84.20	72.97	82.51	89.53
Dry Soil Mass after Washing (g)	4.59	6.78	4.50	5.84	12.48
Test Status					
Liquid Limit	**80**	**66**	**91**	**64**	**61**
Plastic Limit	**31**	**22**	**35**	**26**	**27**
Plasticity Index	**49**	**44**	**56**	**38**	**34**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.7	8.1	6.2	7.1	13.9
Fines (%)	95.3	91.9	93.8	92.9	86.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks	Samples collected from existing levee.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3857D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	405				
Retest of Test ID					
Material Source	Jobsite				
Feature	Levee Embankment				
Visual Description	Br. Cl.				
Station	65+00				
Offset	P.S. -55				
Lift No					
Latitude (°N)	29.885737				
Longitude (°W)	90.135984				
Elevation (ft)	5.3				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T101				
Wet Soil + Tare Mass (g)	31.37				
Dry Soil + Tare Mass (g)	26.32				
Tare Mass (g)	17.17				
Moisture Content (%)	55.2				
Trial No 2 / Blow Count	26				
Tare No	T52				
Wet Soil + Tare Mass (g)	38.50				
Dry Soil + Tare Mass (g)	32.04				
Tare Mass (g)	20.34				
Moisture Content (%)	55.5				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T69				
Wet Soil + Tare Mass (g)	31.46				
Dry Soil + Tare Mass (g)	29.53				
Tare Mass (g)	19.59				
Moisture Content (%)	19.4				
Trial No 2 / Tare No	T76				
Wet Soil + Tare Mass (g)	29.63				
Dry Soil + Tare Mass (g)	27.37				
Tare Mass (g)	16.13				
Moisture Content (%)	20.1				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	86.19				
Dry Soil Mass after Washing (g)	22.69				
Test Status					
Liquid Limit	**55**				
Plastic Limit	**20**				
Plasticity Index	**35**				
Gravel Content (%)	0.0				
Sand Content (%)	26.6				
Fines (%)	73.4				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks	Samples collected from existing levee.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3873
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	1/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	406	407	408	409	410
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	6+92	5+04	2+02	40+95	38+06
Offset	F.S. +32	C/L	F.S. +64	F.S. +27	F.S. +56
Lift No	2	2	2	2	2
Latitude (°N)	29.888847	29.889018	29.889028	29.886964	29.887048
Longitude (°W)	90.153686	90.154250	90.155211	90.143167	90.144075
Elevation (ft)	6.7	7.4	5.7	5.6	5.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	26	28
Tare No	T76	T34	T67	T34	T34
Wet Soil + Tare Mass (g)	35.23	58.13	36.05	52.35	41.06
Dry Soil + Tare Mass (g)	28.16	40.52	28.68	37.69	30.93
Tare Mass (g)	16.14	17.52	18.95	17.49	17.51
Moisture Content (%)	58.8	76.6	75.7	72.9	76.5
Trial No 2 / Blow Count	24	25	26	26	27
Tare No	T69	T84	T10	T89	T89
Wet Soil + Tare Mass (g)	42.52	56.91	37.42	51.72	43.29
Dry Soil + Tare Mass (g)	33.97	41.80	27.97	38.23	33.06
Tare Mass (g)	19.60	22.09	15.50	19.57	19.57
Moisture Content (%)	59.2	76.7	76.1	72.6	76.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T101	T11	T17	T11	T84
Wet Soil + Tare Mass (g)	27.39	23.47	23.95	24.13	30.71
Dry Soil + Tare Mass (g)	25.33	21.87	22.08	22.41	28.86
Tare Mass (g)	17.18	15.15	14.75	15.14	22.11
Moisture Content (%)	25.3	23.8	25.5	23.7	27.4
Trial No 2 / Tare No	T52	T89	T9	T84	T11
Wet Soil + Tare Mass (g)	29.78	28.21	29.48	29.90	23.82
Dry Soil + Tare Mass (g)	27.88	26.54	27.51	28.43	22.00
Tare Mass (g)	20.35	19.61	19.73	22.08	15.19
Moisture Content (%)	25.2	24.1	25.3	23.1	26.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	95.93	76.97	98.12	96.73	86.44
Dry Soil Mass after Washing (g)	10.43	2.55	6.48	3.86	4.67
Test Status					
Liquid Limit	**59**	**77**	**76**	**73**	**77**
Plastic Limit	**25**	**24**	**25**	**23**	**27**
Plasticity Index	**34**	**53**	**51**	**50**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	10.9	3.3	6.6	4.0	5.4
Fines (%)	89.1	96.7	93.4	96.0	94.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4012
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/18/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	430	431	432	433	434
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	62+41	68+00	72+01	77+01	83+96
Offset	C/L	C/L	C/L	C/L	P.S. -11
Lift No	6	6	6	6	6
Latitude (°N)	29.885991	29.885314	29.884454	29.883133	29.881294
Longitude (°W)	90.136731	90.135170	90.134904	90.135348	90.135945
Elevation (ft)	10.5	10.7	10.7	10.7	10.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	28	26	21
Tare No	T106	T20	T91	T80	T99
Wet Soil + Tare Mass (g)	33.96	41.42	38.02	30.85	32.99
Dry Soil + Tare Mass (g)	26.38	31.70	30.29	24.43	25.69
Tare Mass (g)	15.86	17.83	19.75	16.59	16.58
Moisture Content (%)	72.7	70.4	74.4	82.3	78.5
Trial No 2 / Blow Count	28	27	29	27	22
Tare No	T104	T65	T60	T13	T64
Wet Soil + Tare Mass (g)	41.62	35.13	37.29	38.19	34.66
Dry Soil + Tare Mass (g)	31.61	27.89	29.29	29.11	26.88
Tare Mass (g)	17.73	17.60	18.45	18.05	17.07
Moisture Content (%)	73.1	71.0	75.1	82.9	78.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T78	T35	T97	T75	T420
Wet Soil + Tare Mass (g)	26.55	26.34	25.60	26.05	27.55
Dry Soil + Tare Mass (g)	24.66	24.12	23.56	23.79	25.34
Tare Mass (g)	17.87	15.55	15.39	16.17	17.80
Moisture Content (%)	27.8	25.9	25.0	29.7	29.3
Trial No 2 / Tare No	T50	T26	T15	T6	T100
Wet Soil + Tare Mass (g)	28.34	30.13	25.98	29.34	23.32
Dry Soil + Tare Mass (g)	26.33	27.82	23.94	27.01	21.42
Tare Mass (g)	19.13	18.94	15.76	19.16	14.85
Moisture Content (%)	27.9	26.0	24.9	29.7	28.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	9.50	8.46	3.94	6.41	3.79
Dry Soil Mass after Washing (g)	106.71	119.67	117.51	108.77	96.06
Test Status					
Liquid Limit	**73**	**71**	**75**	**83**	**78**
Plastic Limit	**28**	**26**	**25**	**30**	**29**
Plasticity Index	**45**	**45**	**50**	**53**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	8.9	7.1	3.4	5.9	3.9
Fines (%)	91.1	92.9	96.6	94.1	96.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4017
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	435	436	437	438	439
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	29+00	31+00	35+00	44+50	62+02
Offset	F.S. +57	F.S. +48	F.S. +55	F.S. +57	C/L
Lift No	2	2	2	2	7
Latitude (°N)	29.887557	29.887462	29.887223	29.886687	29.885712
Longitude (°W)	90.146875	90.146251	90.145023	90.142088	90.136334
Elevation (ft)	4.9	4.6	4.7	5.2	11.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	24	28	27	25
Tare No	T63	T87	T7	T34	T9
Wet Soil + Tare Mass (g)	35.59	32.86	37.47	31.72	39.29
Dry Soil + Tare Mass (g)	28.52	27.48	29.78	24.78	30.66
Tare Mass (g)	19.33	19.88	19.76	17.55	19.71
Moisture Content (%)	75.3	70.4	77.8	96.9	78.8
Trial No 2 / Blow Count	22	25	29	28	26
Tare No	T23	T41	T81	T66	T103
Wet Soil + Tare Mass (g)	33.15	34.52	42.62	35.93	38.51
Dry Soil + Tare Mass (g)	24.94	28.22	33.12	25.74	29.25
Tare Mass (g)	14.24	19.37	20.80	15.34	17.47
Moisture Content (%)	75.6	71.2	78.5	99.3	79.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T44	T82	T107	T84	T8
Wet Soil + Tare Mass (g)	24.51	28.37	28.64	28.20	28.08
Dry Soil + Tare Mass (g)	22.60	26.38	26.45	26.75	26.44
Tare Mass (g)	14.96	18.30	18.26	22.08	20.24
Moisture Content (%)	25.0	24.6	26.7	31.0	26.5
Trial No 2 / Tare No	T18	T105	T39	T11	T68
Wet Soil + Tare Mass (g)	27.70	25.45	29.78	22.65	29.22
Dry Soil + Tare Mass (g)	25.61	23.52	27.87	20.85	27.42
Tare Mass (g)	17.29	15.61	20.82	15.15	20.76
Moisture Content (%)	25.1	24.4	27.1	31.6	27.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	5.96	4.23	3.65	2.28	3.28
Dry Soil Mass after Washing (g)	94.04	106.49	99.92	133.52	91.36
Test Status					
Liquid Limit	**75**	**71**	**78**	**98**	**79**
Plastic Limit	**25**	**25**	**27**	**31**	**27**
Plasticity Index	**50**	**46**	**51**	**67**	**52**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.3	4.0	3.7	1.7	3.6
Fines (%)	93.7	96.0	96.3	98.3	96.4
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4019A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/21/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	440	441	442	443	444
Retest of Test ID	3384+248		3506+323		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	158+50	71+04	77+00	81+00	85+93
Offset	F.S. +71	P.S. -141	P.S. -138	P.S. -139	P.S. -139
Lift No	3	3	2	3	3
Latitude (°N)	29.871311	29.884600	29.883032	29.881977	29.880677
Longitude (°W)	90.125015	90.134390	90.134933	90.135292	90.135741
Elevation (ft)	5.5	1.6	0.6	1.6	1.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	24	25	25	25
Tare No	T87	T99	T33	DT43	DT96
Wet Soil + Tare Mass (g)	44.36	33.65	26.97	51.50	29.84
Dry Soil + Tare Mass (g)	34.79	26.05	22.45	37.31	24.63
Tare Mass (g)	19.92	16.59	14.94	18.52	17.79
Moisture Content (%)	64.0	79.9	60.2	75.5	76.2
Trial No 2 / Blow Count	24	25	24	26	26
Tare No	T44	T64	T94	DT46	DT89
Wet Soil + Tare Mass (g)	41.31	40.17	36.80	29.19	38.31
Dry Soil + Tare Mass (g)	31.01	29.88	28.83	25.21	30.23
Tare Mass (g)	14.97	17.07	15.60	19.89	19.61
Moisture Content (%)	63.9	80.3	59.9	75.2	76.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T41	T18	T63	T47	T83
Wet Soil + Tare Mass (g)	27.76	25.78	29.37	25.47	27.29
Dry Soil + Tare Mass (g)	26.18	23.94	27.53	23.61	25.05
Tare Mass (g)	19.39	17.30	19.36	16.85	16.62
Moisture Content (%)	23.3	27.7	22.5	27.5	26.6
Trial No 2 / Tare No	T82	T23	T84	T31	T14
Wet Soil + Tare Mass (g)	26.40	22.36	33.04	28.22	25.95
Dry Soil + Tare Mass (g)	24.89	20.61	31.06	26.37	23.71
Tare Mass (g)	18.30	14.28	22.06	19.53	15.26
Moisture Content (%)	22.9	27.6	22.0	27.0	26.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	3.30	4.43	3.40	3.62	6.48
Dry Soil Mass after Washing (g)	84.74	114.16	89.45	91.86	100.70
Test Status					
Liquid Limit	**64**	**80**	**60**	**75**	**76**
Plastic Limit	**23**	**28**	**22**	**27**	**27**
Plasticity Index	**41**	**52**	**38**	**48**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.9	3.6	3.8	3.9	6.4
Fines (%)	96.1	96.4	96.2	96.1	93.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4019B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/21/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	445	446	447	448	
Retest of Test ID	3506+320				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	
Station	92+72	97+00	94+05	89+03	
Offset	P.S. -148	P.S. -138	C/L	C/L	
Lift No	2	2	6	6	
Latitude (°N)	29.878880	29.877760	29.878641	29.879973	
Longitude (°W)	90.136320	90.136732	90.136866	90.136448	
Elevation (ft)	-0.8	1.1	10.8	10.8	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	23	27	26	
Tare No	DT45	T1021	T92	T24	
Wet Soil + Tare Mass (g)	36.60	42.22	49.71	28.80	
Dry Soil + Tare Mass (g)	29.39	32.27	39.90	22.94	
Tare Mass (g)	19.21	15.18	25.49	13.81	
Moisture Content (%)	71.2	57.6	68.7	64.5	
Trial No 2 / Blow Count	27	22	28	27	
Tare No	DT28	T52	T74	T21	
Wet Soil + Tare Mass (g)	29.48	48.48	37.69	35.72	
Dry Soil + Tare Mass (g)	24.64	38.10	30.43	27.84	
Tare Mass (g)	17.84	20.31	19.77	15.50	
Moisture Content (%)	71.8	57.5	69.0	64.5	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T100	T420	T80	
Wet Soil + Tare Mass (g)	25.26	24.56	26.20	26.72	
Dry Soil + Tare Mass (g)	23.53	22.68	24.36	24.81	
Tare Mass (g)	16.18	14.85	17.78	16.61	
Moisture Content (%)	23.5	24.0	28.0	23.3	
Trial No 2 / Tare No	T51	T77	T6	T75	
Wet Soil + Tare Mass (g)	27.41	31.96	28.38	27.62	
Dry Soil + Tare Mass (g)	25.48	29.93	26.38	25.48	
Tare Mass (g)	17.49	21.72	19.17	16.16	
Moisture Content (%)	24.2	24.7	27.7	23.0	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	4.40	4.00	6.82	5.09	
Dry Soil Mass after Washing (g)	122.90	115.84	94.60	124.36	
Test Status					
Liquid Limit	**72**	**58**	**69**	**64**	
Plastic Limit	**24**	**24**	**28**	**23**	
Plasticity Index	**48**	**34**	**41**	**41**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.6	3.5	7.2	4.1	
Fines (%)	96.4	96.5	92.8	95.9	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4049
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	449	450	451	452	453
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	26+01	23+06	20+07	91+98	87+01
Offset	F.S. +6	F.S. +24	F.S. +42	C/L	C/L
Lift No	2	2	2	7	7
Latitude (°N)	29.887853	29.887970	29.888089	29.879189	29.880504
Longitude (°W)	90.147767	90.148691	90.149625	90.136692	90.136260
Elevation (ft)	5.9	5.9	5.4	11.7	11.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	28	27	27	23
Tare No	T46	T99	T41	T87	T7
Wet Soil + Tare Mass (g)	34.11	29.80	34.88	31.94	35.33
Dry Soil + Tare Mass (g)	27.96	23.56	27.48	26.82	28.68
Tare Mass (g)	19.90	16.60	19.39	19.91	19.77
Moisture Content (%)	76.7	90.9	92.3	74.8	73.9
Trial No 2 / Blow Count	27	27	29	26	22
Tare No	T63	T82	T44	T105	T81
Wet Soil + Tare Mass (g)	38.69	38.82	31.86	34.35	37.84
Dry Soil + Tare Mass (g)	30.33	29.02	23.79	26.40	30.56
Tare Mass (g)	19.36	18.29	14.98	15.61	20.84
Moisture Content (%)	76.9	92.2	93.3	74.0	73.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T96	T31	T47	T80	T84
Wet Soil + Tare Mass (g)	28.70	28.99	24.50	25.39	30.87
Dry Soil + Tare Mass (g)	26.38	26.85	22.61	23.59	29.20
Tare Mass (g)	17.63	19.52	16.85	16.60	22.06
Moisture Content (%)	26.5	29.2	32.8	25.8	23.4
Trial No 2 / Tare No	T14	T89	T43	T75	T94
Wet Soil + Tare Mass (g)	24.36	28.76	25.86	26.81	24.81
Dry Soil + Tare Mass (g)	22.44	26.68	24.06	24.67	23.07
Tare Mass (g)	15.27	19.61	18.53	16.16	15.60
Moisture Content (%)	26.8	29.4	32.5	25.1	23.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	3.31	5.14	2.86	3.24	5.80
Dry Soil Mass after Washing (g)	91.24	106.99	103.17	81.42	120.62
Test Status					
Liquid Limit	**77**	**92**	**93**	**74**	**74**
Plastic Limit	**27**	**29**	**33**	**25**	**23**
Plasticity Index	**50**	**63**	**60**	**49**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.6	4.8	2.8	4.0	4.8
Fines (%)	96.4	95.2	97.2	96.0	95.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4051
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	454	455	456	457	458
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	77+91	82+96	73+05	65+95	62+50
Offset	C/L	C/L	C/L	C/L	C/L
Lift No	7	7	7	7	7
Latitude (°N)	29.882901	29.881568	29.884180	29.885506	29.885971
Longitude (°W)	90.135442	90.135893	90.135000	90.135779	90.136723
Elevation (ft)	11.7	11.7	11.7	11.7	11.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	27	24	25
Tare No	T60	T15	T52	T6	T92
Wet Soil + Tare Mass (g)	44.32	29.29	37.49	30.39	36.52
Dry Soil + Tare Mass (g)	33.40	23.69	30.04	26.09	32.03
Tare Mass (g)	18.46	15.79	20.34	19.16	25.52
Moisture Content (%)	73.4	70.9	77.5	61.7	69.0
Trial No 2 / Blow Count	25	26	28	24	25
Tare No	T65	T13	T74	T100	T8
Wet Soil + Tare Mass (g)	40.04	34.36	31.96	34.10	35.92
Dry Soil + Tare Mass (g)	30.55	27.63	26.67	26.73	29.49
Tare Mass (g)	17.61	18.07	19.78	14.87	20.26
Moisture Content (%)	73.3	70.7	77.8	61.8	69.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T20	T91	T1021	T84	T80
Wet Soil + Tare Mass (g)	26.89	29.58	25.01	32.95	26.73
Dry Soil + Tare Mass (g)	25.27	27.84	22.94	31.15	24.80
Tare Mass (g)	17.84	19.75	15.19	22.05	16.59
Moisture Content (%)	21.8	21.5	26.7	19.8	23.5
Trial No 2 / Tare No	T26	T35	T97	T94	T75
Wet Soil + Tare Mass (g)	28.91	28.30	24.93	26.67	26.69
Dry Soil + Tare Mass (g)	27.16	25.97	22.89	24.89	24.69
Tare Mass (g)	18.94	15.55	15.39	15.60	16.16
Moisture Content (%)	21.3	22.4	27.2	19.2	23.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	4.82	6.39	2.97	4.33	7.42
Dry Soil Mass after Washing (g)	103.10	99.73	69.21	71.33	113.67
Test Status					
Liquid Limit	**73**	**71**	**78**	**62**	**69**
Plastic Limit	**22**	**22**	**27**	**19**	**23**
Plasticity Index	**51**	**49**	**51**	**43**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.8	6.4	4.3	6.1	6.5
Fines (%)	95.2	93.6	95.7	93.9	93.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4057
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	2/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	459	460			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	103+01	108+02			
Offset	P.S. -131	P.S. -138			
Lift No	1	1			
Latitude (°N)	29.876184	29.874843			
Longitude (°W)	90.137242	90.137609			
Elevation (ft)	1.2	0.8			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	27			
Tare No	T80	T92			
Wet Soil + Tare Mass (g)	28.77	43.08			
Dry Soil + Tare Mass (g)	23.35	35.09			
Tare Mass (g)	16.60	25.53			
Moisture Content (%)	79.1	84.4			
Trial No 2 / Blow Count	23	26			
Tare No	T75	T8			
Wet Soil + Tare Mass (g)	33.84	31.41			
Dry Soil + Tare Mass (g)	25.98	26.32			
Tare Mass (g)	16.16	20.30			
Moisture Content (%)	79.2	85.0			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T94	T6			
Wet Soil + Tare Mass (g)	25.32	29.04			
Dry Soil + Tare Mass (g)	23.37	26.96			
Tare Mass (g)	15.60	19.20			
Moisture Content (%)	25.1	26.8			
Trial No 2 / Tare No	T84	T100			
Wet Soil + Tare Mass (g)	32.04	24.32			
Dry Soil + Tare Mass (g)	30.01	22.17			
Tare Mass (g)	22.06	14.29			
Moisture Content (%)	25.5	27.3			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	93.71	92.90			
Dry Soil Mass after Washing (g)	3.16	3.12			
Test Status					
Liquid Limit	**79**	**85**			
Plastic Limit	**25**	**27**			
Plasticity Index	**54**	**58**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.4	3.4			
Fines (%)	96.6	96.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4094
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	461	462			
Retest of Test ID	4049+451				
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL.			
Station	20+07	112+00			
Offset	F.S. +42				
Lift No	2				
Latitude (°N)	29.888089				
Longitude (°W)	90.149625				
Elevation (ft)	5.4				
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	27			
Tare No	T15	T100			
Wet Soil + Tare Mass (g)	38.60	33.78			
Dry Soil + Tare Mass (g)	28.08	23.68			
Tare Mass (g)	15.76	14.87			
Moisture Content (%)	84.5	115.7			
Trial No 2 / Blow Count	22	28			
Tare No	T20	T6			
Wet Soil + Tare Mass (g)	41.27	38.52			
Dry Soil + Tare Mass (g)	30.48	28.20			
Tare Mass (g)	17.84	19.17			
Moisture Content (%)	84.1	115.9			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T26	T8			
Wet Soil + Tare Mass (g)	31.29	26.31			
Dry Soil + Tare Mass (g)	28.30	24.62			
Tare Mass (g)	18.95	20.27			
Moisture Content (%)	32.0	38.9			
Trial No 2 / Tare No	T65	T92			
Wet Soil + Tare Mass (g)	27.21	30.79			
Dry Soil + Tare Mass (g)	24.90	29.33			
Tare Mass (g)	17.64	25.53			
Moisture Content (%)	31.8	38.4			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	106.62	94.50			
Dry Soil Mass after Washing (g)	2.91	5.50			
Test Status					
Liquid Limit	**84**	**116**			
Plastic Limit	**32**	**39**			
Plasticity Index	**52**	**77**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	2.7	5.5			
Fines (%)	97.3	94.5			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**Pass**			
Remarks	TEST ID 462 UNCOMPACTED FILL				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4103A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	463	464	465	466	467
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	10+13	14+95	143+96	145+99	148+24
Offset	F.S. +31	F.S. +57	F.S. +16	F.S. +16	C/L
Lift No	3	3	3	3	3
Latitude (°N)	29.888668	29.888332	29.871770	29.871726	29.871709
Longitude (°W)	90.152693	90.151219	90.129569	90.128931	90.128220
Elevation (ft)	6.4	6.1	6.8	6.8	7.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	29	23	27	22
Tare No	T76	T62	T69	T83	T87
Wet Soil + Tare Mass (g)	30.57	32.06	31.38	45.68	31.71
Dry Soil + Tare Mass (g)	23.73	26.60	26.72	34.26	26.99
Tare Mass (g)	16.11	17.81	19.59	16.62	19.92
Moisture Content (%)	91.0	63.2	64.7	65.3	65.7
Trial No 2 / Blow Count	29	28	24	28	23
Tare No	T85	T86	T16	T105	T28
Wet Soil + Tare Mass (g)	31.91	32.88	41.12	40.74	32.18
Dry Soil + Tare Mass (g)	25.10	26.64	32.73	30.91	26.47
Tare Mass (g)	17.49	16.66	19.97	15.64	17.85
Moisture Content (%)	91.1	63.4	65.4	65.3	65.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T61	T101	T17	T81	T45
Wet Soil + Tare Mass (g)	26.01	28.95	31.28	32.92	32.25
Dry Soil + Tare Mass (g)	23.63	26.85	28.48	30.78	29.91
Tare Mass (g)	15.72	17.14	14.72	20.86	19.22
Moisture Content (%)	30.1	21.6	20.3	21.6	21.9
Trial No 2 / Tare No	T72	T10	T60	T79	T7
Wet Soil + Tare Mass (g)	35.76	26.47	33.71	28.27	28.82
Dry Soil + Tare Mass (g)	32.89	24.49	31.13	26.12	27.25
Tare Mass (g)	23.30	15.49	18.48	16.19	19.82
Moisture Content (%)	29.9	22.0	20.4	21.7	21.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	94.96	96.33	103.10	116.20	119.16
Dry Soil Mass after Washing (g)	2.99	5.97	3.18	4.53	5.25
Test Status					
Liquid Limit	**91**	**63**	**65**	**65**	**66**
Plastic Limit	**30**	**22**	**20**	**22**	**22**
Plasticity Index	**61**	**41**	**45**	**43**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	6.2	3.1	3.9	4.4
Fines (%)	96.9	93.8	96.9	96.1	95.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4103B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	468	469	470		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	150+72	153+22	155+74		
Offset	F.S. +11	F.S. +19	F.S. +23		
Lift No	3	3	3		
Latitude (°N)	29.871640	29.871565	29.871501		
Longitude (°W)	90.127440	90.126657	90.125865		
Elevation (ft)	6.8	6.7	6.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	28	28		
Tare No	T51	T63	T82		
Wet Soil + Tare Mass (g)	29.97	33.79	30.50		
Dry Soil + Tare Mass (g)	25.04	27.86	25.45		
Tare Mass (g)	17.47	19.36	18.33		
Moisture Content (%)	64.8	70.7	71.9		
Trial No 2 / Blow Count	25	29	28		
Tare No	T39	T23	T9		
Wet Soil + Tare Mass (g)	39.36	29.76	38.74		
Dry Soil + Tare Mass (g)	32.03	23.40	30.85		
Tare Mass (g)	20.82	14.27	19.74		
Moisture Content (%)	65.4	70.9	72.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T11	T33	T66		
Wet Soil + Tare Mass (g)	28.64	26.53	27.27		
Dry Soil + Tare Mass (g)	26.22	24.24	24.96		
Tare Mass (g)	15.16	14.96	15.34		
Moisture Content (%)	21.9	24.7	24.0		
Trial No 2 / Tare No	T14	T96	T31		
Wet Soil + Tare Mass (g)	30.28	28.21	29.78		
Dry Soil + Tare Mass (g)	27.64	26.09	27.78		
Tare Mass (g)	15.25	17.60	19.54		
Moisture Content (%)	21.3	25.0	24.3		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.76	126.37	84.44		
Dry Soil Mass after Washing (g)	4.01	5.82	3.76		
Test Status					
Liquid Limit	**65**	**71**	**72**		
Plastic Limit	**22**	**25**	**24**		
Plasticity Index	**43**	**46**	**48**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.7	4.6	4.4		
Fines (%)	96.3	95.4	95.6		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4113A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	471	472	473	474	475
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	42+03	37+99	32+00	29+93	26+01
Offset	P.S. -153	P.S. -142	P.S. -142	P.S. -142	P.S. -139
Lift No	2	2	2	2	2
Latitude (°N)	29.887390	29.887587	29.887918	29.888034	29.888246
Longitude (°W)	90.142715	90.143972	90.145823	90.146462	90.147676
Elevation (ft)	0.9	1.3	1.1	1.4	1.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	29	27	25
Tare No	T33	T61	T67	T46	T63
Wet Soil + Tare Mass (g)	37.96	36.35	44.90	40.36	38.00
Dry Soil + Tare Mass (g)	28.77	27.81	34.16	32.40	30.35
Tare Mass (g)	14.94	15.73	18.94	19.93	19.36
Moisture Content (%)	66.4	71.0	71.8	64.4	69.6
Trial No 2 / Blow Count	25	25	29	26	25
Tare No	T82	T76	T27	T106	T31
Wet Soil + Tare Mass (g)	44.91	42.03	45.40	37.05	40.16
Dry Soil + Tare Mass (g)	34.27	31.32	34.88	28.80	31.75
Tare Mass (g)	18.31	16.15	19.98	15.89	19.53
Moisture Content (%)	66.7	70.6	71.9	64.2	68.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T96	T85	T42	T50	T23
Wet Soil + Tare Mass (g)	28.73	26.91	27.07	27.91	24.58
Dry Soil + Tare Mass (g)	26.65	25.07	25.11	26.26	22.57
Tare Mass (g)	17.58	17.52	16.60	19.14	14.27
Moisture Content (%)	22.9	24.4	23.0	23.2	24.2
Trial No 2 / Tare No	T9	T38	T104	T66	T14
Wet Soil + Tare Mass (g)	28.24	28.66	25.68	24.23	28.26
Dry Soil + Tare Mass (g)	26.67	26.33	24.21	22.56	25.73
Tare Mass (g)	19.72	16.81	17.75	15.31	15.27
Moisture Content (%)	22.6	24.5	22.8	23.0	24.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	65.90	110.87	112.26	109.67	115.84
Dry Soil Mass after Washing (g)	2.62	5.19	4.36	4.59	5.97
Test Status					
Liquid Limit	**67**	**71**	**72**	**64**	**69**
Plastic Limit	**23**	**24**	**23**	**23**	**24**
Plasticity Index	**44**	**47**	**49**	**41**	**45**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	4.7	3.9	4.2	5.2
Fines (%)	96.0	95.3	96.1	95.8	94.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4113B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	476	477	478		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	21+91	17+96	71+03		
Offset	P.S. -136	P.S. -141	C/L		
Lift No	2	2	8		
Latitude (°N)	29.888465	29.888700	29.884710		
Longitude (°W)	90.148943	90.150160	90.134812		
Elevation (ft)	1.5	1.5	12.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	20	25		
Tare No	T11	T87	T79		
Wet Soil + Tare Mass (g)	36.08	42.34	38.67		
Dry Soil + Tare Mass (g)	27.58	34.07	28.81		
Tare Mass (g)	15.18	19.91	16.19		
Moisture Content (%)	67.1	56.8	78.1		
Trial No 2 / Blow Count	22	20	25		
Tare No	T39	T81	T105		
Wet Soil + Tare Mass (g)	42.89	43.99	39.44		
Dry Soil + Tare Mass (g)	33.91	35.47	29.04		
Tare Mass (g)	20.84	20.83	15.71		
Moisture Content (%)	67.7	56.6	78.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T45	T83		
Wet Soil + Tare Mass (g)	33.44	28.28	25.23		
Dry Soil + Tare Mass (g)	30.34	26.57	23.38		
Tare Mass (g)	17.51	19.22	16.69		
Moisture Content (%)	24.2	23.3	27.7		
Trial No 2 / Tare No	T7	T28	T60		
Wet Soil + Tare Mass (g)	33.30	26.44	27.21		
Dry Soil + Tare Mass (g)	30.70	24.83	25.34		
Tare Mass (g)	19.80	17.85	18.48		
Moisture Content (%)	23.9	23.1	27.3		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	73.10	89.02	102.42		
Dry Soil Mass after Washing (g)	3.44	4.80	7.06		
Test Status					
Liquid Limit	**67**	**57**	**78**		
Plastic Limit	**24**	**23**	**27**		
Plasticity Index	**43**	**34**	**51**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.7	5.4	6.9		
Fines (%)	95.3	94.6	93.1		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4169
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	479	480	481		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	63+58	68+93	75+97		
Offset	C/L	C/L	C/L		
Lift No	8	8	8		
Latitude (°N)	29.885774	29.885213	29.883416		
Longitude (°W)	90.136454	90.134901	90.135277		
Elevation (ft)	12.6	12.7	12.2		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	26		
Tare No	T28	T45	T81		
Wet Soil + Tare Mass (g)	40.78	34.88	35.21		
Dry Soil + Tare Mass (g)	32.36	29.29	28.73		
Tare Mass (g)	17.85	19.21	20.81		
Moisture Content (%)	57.7	55.7	82.2		
Trial No 2 / Blow Count	25	27	27		
Tare No	T83	T79	T11		
Wet Soil + Tare Mass (g)	31.77	37.89	31.71		
Dry Soil + Tare Mass (g)	26.21	30.16	24.25		
Tare Mass (g)	16.63	16.21	15.18		
Moisture Content (%)	58.0	55.9	83.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T60	T87	T39		
Wet Soil + Tare Mass (g)	25.66	32.65	30.83		
Dry Soil + Tare Mass (g)	24.46	30.35	28.62		
Tare Mass (g)	18.47	19.96	20.83		
Moisture Content (%)	20.0	22.1	28.4		
Trial No 2 / Tare No	T17	T105	T7		
Wet Soil + Tare Mass (g)	21.74	28.37	31.16		
Dry Soil + Tare Mass (g)	20.56	26.12	28.62		
Tare Mass (g)	14.83	15.66	19.78		
Moisture Content (%)	20.6	21.5	28.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.91	93.99	101.36		
Dry Soil Mass after Washing (g)	6.27	7.38	5.98		
Test Status					
Liquid Limit	**58**	**56**	**83**		
Plastic Limit	**20**	**22**	**29**		
Plasticity Index	**38**	**34**	**54**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	8.3	7.9	5.9		
Fines (%)	91.7	92.1	94.1		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4213A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	499	500	501	502	503
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	143+00	148+08	153+02	158+03	178+01
Offset	CL	FS 7	FS 7.2	CL	CL
Lift No	4	4	4	4	6
Latitude (°N)	29.871839	29.871705	29.871602	29.871500	29.871073
Longitude (°W)	90.129865	90.128272	90.126717	90.125140	90.118858
Elevation (ft)	8.0	7.8	7.8	7.9	10.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	27	28	28
Tare No	T30	T67	T44	T1021	T80
Wet Soil + Tare Mass (g)	32.04	33.84	32.70	29.54	31.29
Dry Soil + Tare Mass (g)	26.46	26.70	24.42	22.74	24.40
Tare Mass (g)	20.26	18.92	14.96	15.18	16.57
Moisture Content (%)	90.4	91.8	88.3	91.2	89.2
Trial No 2 / Blow Count	26	26	28	27	29
Tare No	T29	T27	T34	T107	T37
Wet Soil + Tare Mass (g)	36.60	37.05	39.06	34.79	31.45
Dry Soil + Tare Mass (g)	27.87	28.87	28.99	26.97	24.95
Tare Mass (g)	18.18	19.95	17.50	18.29	17.58
Moisture Content (%)	90.5	92.1	88.9	90.9	89.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T40	T89	T420	T74	T93
Wet Soil + Tare Mass (g)	27.86	33.09	32.43	30.16	26.37
Dry Soil + Tare Mass (g)	26.02	30.26	29.39	27.88	24.65
Tare Mass (g)	19.30	19.57	17.78	19.76	19.35
Moisture Content (%)	27.4	26.5	26.2	28.1	32.5
Trial No 2 / Tare No	T95	T68	T47	T70	T43
Wet Soil + Tare Mass (g)	29.09	35.03	31.02	29.01	24.95
Dry Soil + Tare Mass (g)	27.26	31.99	28.07	26.80	23.38
Tare Mass (g)	20.43	20.74	16.84	18.67	18.51
Moisture Content (%)	26.8	27.0	26.3	27.2	32.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	62.07	110.37	112.56	104.69	113.80
Dry Soil Mass after Washing (g)	4.10	3.65	2.83	2.69	4.33
Test Status					
Liquid Limit	**90**	**92**	**89**	**91**	**90**
Plastic Limit	**27**	**27**	**26**	**28**	**32**
Plasticity Index	**63**	**65**	**63**	**63**	**58**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.6	3.3	2.5	2.6	3.8
Fines (%)	93.4	96.7	97.5	97.4	96.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4213B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	504	505	506		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL		
Station	173+03	168+04	163+09		
Offset	PS -8	CL	PS -10		
Lift No	6	6	6		
Latitude (°N)	29.871219	29.871311	29.871437		
Longitude (°W)	90.120419	90.121990	90.123545		
Elevation (ft)	10.9	10.8	10.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	27		
Tare No	T1022	T71	T8		
Wet Soil + Tare Mass (g)	35.41	34.78	41.42		
Dry Soil + Tare Mass (g)	27.65	27.59	31.60		
Tare Mass (g)	19.73	19.90	20.27		
Moisture Content (%)	98.9	93.5	87.5		
Trial No 2 / Blow Count	28	26	28		
Tare No	T32	T92	T72		
Wet Soil + Tare Mass (g)	35.72	44.80	40.95		
Dry Soil + Tare Mass (g)	26.79	35.48	32.76		
Tare Mass (g)	17.68	25.51	23.31		
Moisture Content (%)	99.4	93.9	87.9		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T421	T84	T20		
Wet Soil + Tare Mass (g)	27.47	29.73	25.83		
Dry Soil + Tare Mass (g)	25.50	27.95	24.13		
Tare Mass (g)	19.85	22.06	17.85		
Moisture Content (%)	34.9	30.2	27.1		
Trial No 2 / Tare No	T5	T6	T65		
Wet Soil + Tare Mass (g)	26.32	26.10	24.05		
Dry Soil + Tare Mass (g)	24.54	24.49	22.71		
Tare Mass (g)	19.38	19.20	17.63		
Moisture Content (%)	34.5	30.4	26.4		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.52	113.22	90.61		
Dry Soil Mass after Washing (g)	7.68	2.32	3.36		
Test Status					
Liquid Limit	**99**	**94**	**88**		
Plastic Limit	**35**	**30**	**27**		
Plasticity Index	**64**	**64**	**61**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	7.3	2.0	3.7		
Fines (%)	92.7	98.0	96.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4217A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	507	508	509	510	511
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	122+14	127+08	132+00	136+90	141+01
Offset	CL	CL	CL	PS -6	CL
Lift No	6	5	5	5	5
Latitude (°N)	29.872321	29.872208	29.872083	29.871992	29.871894
Longitude (°W)	90.136425	90.134873	90.133326	90.131783	90.130492
Elevation (ft)	10.2	10.2	10.1	10.1	10.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	26	26	24
Tare No	T52	T35	T51	T7	T105
Wet Soil + Tare Mass (g)	34.24	34.77	30.20	32.27	31.45
Dry Soil + Tare Mass (g)	27.69	25.60	24.43	26.38	24.88
Tare Mass (g)	20.32	15.55	17.51	19.77	15.65
Moisture Content (%)	88.4	91.2	83.8	89.5	70.8
Trial No 2 / Blow Count	23	24	25	27	25
Tare No	T21	T91	T23	T39	T87
Wet Soil + Tare Mass (g)	32.30	36.62	27.36	37.08	34.30
Dry Soil + Tare Mass (g)	24.39	28.60	21.40	29.40	28.31
Tare Mass (g)	15.49	19.75	14.26	20.82	19.92
Moisture Content (%)	88.0	90.2	83.5	90.3	71.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T103	T78	T63	T81	T45
Wet Soil + Tare Mass (g)	28.89	31.05	29.83	29.95	32.85
Dry Soil + Tare Mass (g)	26.54	28.05	27.80	27.95	30.53
Tare Mass (g)	17.46	17.88	19.38	20.81	19.25
Moisture Content (%)	25.9	29.5	24.1	28.0	20.6
Trial No 2 / Tare No	T24	T13	T31	T11	T79
Wet Soil + Tare Mass (g)	24.04	35.37	30.91	23.72	29.93
Dry Soil + Tare Mass (g)	21.91	31.34	28.65	21.83	27.50
Tare Mass (g)	13.80	18.07	19.55	15.17	16.23
Moisture Content (%)	26.3	30.4	24.8	28.4	21.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.05	116.07	79.06	96.25	93.80
Dry Soil Mass after Washing (g)	4.31	5.02	3.39	3.61	6.20
Test Status					
Liquid Limit	**88**	**91**	**84**	**90**	**71**
Plastic Limit	**26**	**30**	**24**	**28**	**21**
Plasticity Index	**62**	**61**	**60**	**62**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.4	4.3	4.3	3.8	6.2
Fines (%)	95.6	95.7	95.7	96.2	93.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4217B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	512				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL				
Station	122+12				
Offset	PS -142				
Lift No	1				
Latitude (°N)	29.872712				
Longitude (°W)	90.136393				
Elevation (ft)	2.0				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23				
Tare No	T83				
Wet Soil + Tare Mass (g)	31.48				
Dry Soil + Tare Mass (g)	25.20				
Tare Mass (g)	16.62				
Moisture Content (%)	72.5				
Trial No 2 / Blow Count	24				
Tare No	T28				
Wet Soil + Tare Mass (g)	32.80				
Dry Soil + Tare Mass (g)	26.48				
Tare Mass (g)	17.85				
Moisture Content (%)	72.9				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T60				
Wet Soil + Tare Mass (g)	31.00				
Dry Soil + Tare Mass (g)	28.78				
Tare Mass (g)	18.48				
Moisture Content (%)	21.6				
Trial No 2 / Tare No	T17				
Wet Soil + Tare Mass (g)	30.32				
Dry Soil + Tare Mass (g)	27.52				
Tare Mass (g)	14.79				
Moisture Content (%)	22.0				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.31				
Dry Soil Mass after Washing (g)	4.39				
Test Status					
Liquid Limit	**73**				
Plastic Limit	**22**				
Plasticity Index	**51**				
Gravel Content (%)	0.0				
Sand Content (%)	4.0				
Fines (%)	96.0				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4240
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	520	521			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	44+04	39+00			
Offset	FS 18	FS 28			
Lift No	3	3			
Latitude (°N)	29.886818	29.887070			
Longitude (°W)	90.142201	90.143768			
Elevation (ft)	6.7	6.6			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27			
Tare No	T87	T75			
Wet Soil + Tare Mass (g)	34.71	31.68			
Dry Soil + Tare Mass (g)	27.72	24.54			
Tare Mass (g)	19.93	16.17			
Moisture Content (%)	90.2	86.1			
Trial No 2 / Blow Count	26	28			
Tare No	T45	T94			
Wet Soil + Tare Mass (g)	32.59	33.29			
Dry Soil + Tare Mass (g)	26.28	25.13			
Tare Mass (g)	19.24	15.62			
Moisture Content (%)	90.1	87.0			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T64			
Wet Soil + Tare Mass (g)	30.91	33.12			
Dry Soil + Tare Mass (g)	27.76	29.63			
Tare Mass (g)	16.21	17.07			
Moisture Content (%)	27.3	27.8			
Trial No 2 / Tare No	T28	T105			
Wet Soil + Tare Mass (g)	31.44	31.06			
Dry Soil + Tare Mass (g)	28.50	27.72			
Tare Mass (g)	17.85	15.63			
Moisture Content (%)	27.6	27.6			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	93.41	70.12			
Dry Soil Mass after Washing (g)	3.90	3.90			
Test Status					
Liquid Limit	**90**	**87**			
Plastic Limit	**27**	**28**			
Plasticity Index	**63**	**59**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.2	5.6			
Fines (%)	95.8	94.4			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4240
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	520	521			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	54+00	49+04			
Offset	FS 39	FS 20			
Lift No	3	3			
Latitude (°N)	29.886818	29.887070			
Longitude (°W)	90.142201	90.143768			
Elevation (ft)	6.4	6.7			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27			
Tare No	T87	T75			
Wet Soil + Tare Mass (g)	34.71	31.68			
Dry Soil + Tare Mass (g)	27.72	24.54			
Tare Mass (g)	19.93	16.17			
Moisture Content (%)	90.2	86.1			
Trial No 2 / Blow Count	26	28			
Tare No	T45	T94			
Wet Soil + Tare Mass (g)	32.59	33.29			
Dry Soil + Tare Mass (g)	26.28	25.13			
Tare Mass (g)	19.24	15.62			
Moisture Content (%)	90.1	87.0			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T64			
Wet Soil + Tare Mass (g)	30.91	33.12			
Dry Soil + Tare Mass (g)	27.76	29.63			
Tare Mass (g)	16.21	17.07			
Moisture Content (%)	27.3	27.8			
Trial No 2 / Tare No	T28	T105			
Wet Soil + Tare Mass (g)	31.44	31.06			
Dry Soil + Tare Mass (g)	28.50	27.72			
Tare Mass (g)	17.85	15.63			
Moisture Content (%)	27.6	27.6			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	93.41	70.12			
Dry Soil Mass after Washing (g)	3.90	3.90			
Test Status					
Liquid Limit	**90**	**87**			
Plastic Limit	**27**	**28**			
Plasticity Index	**63**	**59**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.2	5.6			
Fines (%)	95.8	94.4			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4248A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	522	523	524	525	526
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	107+07	101+99	96+99	102+00	107+02
Offset	PS -82	PS -73	CL	CL	CL
Lift No	1	1	7	7	7
Latitude (°N)	29.875133	29.876494	29.877876	29.876542	29.875202
Longitude (°W)	90.137709	90.137340	90.137167	90.137575	90.137957
Elevation (ft)	4.4	4.6	11.5	11.4	11.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	25	28	22
Tare No	G126	G104	T101	G128	G114
Wet Soil + Tare Mass (g)	29.69	33.98	33.09	35.45	31.14
Dry Soil + Tare Mass (g)	24.09	25.99	25.87	28.09	24.51
Tare Mass (g)	16.68	16.08	17.19	17.85	16.13
Moisture Content (%)	74.8	81.0	83.2	72.9	77.9
Trial No 2 / Blow Count	22	26	25	29	22
Tare No	G118	G116	G147	G119	G109
Wet Soil + Tare Mass (g)	30.89	31.28	38.12	31.90	30.11
Dry Soil + Tare Mass (g)	24.25	24.60	31.19	25.43	23.80
Tare Mass (g)	15.55	16.37	22.84	16.42	15.76
Moisture Content (%)	75.2	81.6	83.0	73.1	77.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G112	G106	G127	G115	G107
Wet Soil + Tare Mass (g)	33.70	32.84	32.75	33.94	27.23
Dry Soil + Tare Mass (g)	30.69	29.47	29.92	30.50	24.71
Tare Mass (g)	17.71	17.40	18.96	17.33	13.79
Moisture Content (%)	23.2	27.9	25.8	26.1	23.1
Trial No 2 / Tare No	G110	T26	G129	G111	G113
Wet Soil + Tare Mass (g)	29.76	33.92	32.98	30.13	29.91
Dry Soil + Tare Mass (g)	27.15	30.67	29.84	27.20	27.61
Tare Mass (g)	15.68	18.96	17.82	15.98	17.63
Moisture Content (%)	22.8	27.8	26.1	26.1	23.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.87	78.39	110.91	103.96	107.89
Dry Soil Mass after Washing (g)	5.27	9.23	0.63	4.71	7.01
Test Status					
Liquid Limit	**75**	**81**	**83**	**73**	**78**
Plastic Limit	**23**	**28**	**26**	**26**	**23**
Plasticity Index	**52**	**53**	**57**	**47**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.1	11.8	4.2	4.5	6.5
Fines (%)	94.9	88.2	95.8	95.5	93.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4248B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	527	528			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-BR CLAY	G-BR CLAY			
Station	34+01	28+98			
Offset	CL	CL			
Lift No	3	3			
Latitude (°N)	29.887430	29.887692			
Longitude (°W)	90.145290	90.146849			
Elevation (ft)	6.7	6.4			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26			
Tare No	G125	T85			
Wet Soil + Tare Mass (g)	35.52	33.35			
Dry Soil + Tare Mass (g)	28.09	26.18			
Tare Mass (g)	20.58	17.54			
Moisture Content (%)	98.9	83.4			
Trial No 2 / Blow Count	25	27			
Tare No	G117	T9			
Wet Soil + Tare Mass (g)	34.28	34.01			
Dry Soil + Tare Mass (g)	25.36	27.51			
Tare Mass (g)	16.23	19.75			
Moisture Content (%)	97.7	84.5			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104	T44			
Wet Soil + Tare Mass (g)	31.94	26.20			
Dry Soil + Tare Mass (g)	28.36	23.76			
Tare Mass (g)	17.74	14.97			
Moisture Content (%)	33.7	27.8			
Trial No 2 / Tare No	T10	T28			
Wet Soil + Tare Mass (g)	31.50	32.53			
Dry Soil + Tare Mass (g)	27.43	29.31			
Tare Mass (g)	15.55	17.85			
Moisture Content (%)	34.3	28.1			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	95.94	68.09			
Dry Soil Mass after Washing (g)	4.25	3.00			
Test Status					
Liquid Limit	**98**	**84**			
Plastic Limit	**34**	**28**			
Plasticity Index	**64**	**56**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.4	4.4			
Fines (%)	95.6	95.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4250A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	513	514	515	516	517
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL	G. BR. CL
Station	54+00	49+04	97+03	91+96	87+00
Offset	FS 39	FS 20	PS -83	PS -73.1	PS -72
Lift No	3	3	1	1	1
Latitude (°N)	29.886392	29.886532	29.877793	29.879139	29.880448
Longitude (°W)	90.139090	90.140660	90.136905	90.136478	90.136033
Elevation (ft)	6.4	6.7	4.6	4.8	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25	24	24	24
Tare No	T86	T82	T85	T66	T14
Wet Soil + Tare Mass (g)	34.40	36.50	37.10	34.33	33.94
Dry Soil + Tare Mass (g)	25.78	28.21	29.32	26.23	25.80
Tare Mass (g)	16.69	18.29	17.55	15.31	15.27
Moisture Content (%)	96.1	83.6	65.8	73.8	76.9
Trial No 2 / Blow Count	29	25	25	24	24
Tare No	T10	T9	T16	T61	T42
Wet Soil + Tare Mass (g)	35.88	37.36	37.03	31.21	34.51
Dry Soil + Tare Mass (g)	25.93	29.33	30.23	24.67	26.71
Tare Mass (g)	15.50	19.73	20.00	15.74	16.61
Moisture Content (%)	97.1	83.6	66.5	72.9	76.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T62	T96	T69	T76	T104
Wet Soil + Tare Mass (g)	33.36	32.06	34.04	29.66	31.81
Dry Soil + Tare Mass (g)	29.89	29.05	31.52	27.31	28.97
Tare Mass (g)	17.84	17.58	19.61	16.16	17.75
Moisture Content (%)	28.8	26.2	21.2	21.1	25.3
Trial No 2 / Tare No	T33	T38	T106	T46	T41
Wet Soil + Tare Mass (g)	30.02	31.32	29.75	32.80	35.89
Dry Soil + Tare Mass (g)	26.61	28.29	27.32	30.55	32.54
Tare Mass (g)	14.95	16.83	15.90	19.93	19.37
Moisture Content (%)	29.2	26.4	21.3	21.2	25.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.96	108.78	92.93	119.25	119.04
Dry Soil Mass after Washing (g)	5.82	4.00	4.01	3.91	6.55
Test Status					
Liquid Limit	**97**	**84**	**66**	**73**	**77**
Plastic Limit	**29**	**26**	**21**	**21**	**25**
Plasticity Index	**68**	**58**	**45**	**52**	**52**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.3	3.7	4.3	3.3	5.5
Fines (%)	94.7	96.3	95.7	96.7	94.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4250B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	518	519			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL	G. BR. CL			
Station	82+00	77+00			
Offset	PS -77	PS -77			
Lift No	1	1			
Latitude (°N)	29.881761	29.883079			
Longitude (°W)	90.135570	90.135121			
Elevation (ft)	4.6	4.6			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	22			
Tare No	G111	G107			
Wet Soil + Tare Mass (g)	33.72	32.90			
Dry Soil + Tare Mass (g)	26.24	24.70			
Tare Mass (g)	15.98	13.77			
Moisture Content (%)	73.9	73.9			
Trial No 2 / Blow Count	28	23			
Tare No	G116	G106			
Wet Soil + Tare Mass (g)	34.34	32.37			
Dry Soil + Tare Mass (g)	26.74	25.92			
Tare Mass (g)	16.36	17.40			
Moisture Content (%)	74.2	74.9			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G115	G109			
Wet Soil + Tare Mass (g)	34.67	30.25			
Dry Soil + Tare Mass (g)	31.55	27.47			
Tare Mass (g)	17.32	15.75			
Moisture Content (%)	21.9	23.7			
Trial No 2 / Tare No	G110	G104			
Wet Soil + Tare Mass (g)	33.38	31.43			
Dry Soil + Tare Mass (g)	30.18	28.48			
Tare Mass (g)	15.67	16.08			
Moisture Content (%)	22.1	23.8			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	117.52	116.77			
Dry Soil Mass after Washing (g)	4.18	5.26			
Test Status					
Liquid Limit	**74**	**74**			
Plastic Limit	**22**	**24**			
Plasticity Index	**52**	**50**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.6	4.5			
Fines (%)	96.4	95.5			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4256A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/25/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	529	530	531	532	533
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	139+10	134+00	129+05	124+12	121+58
Offset	CL	CL	CL	CL	CL
Lift No	6	6	6	6	7
Latitude (°N)	29.871937	29.872051	29.872163	29.872279	29.872335
Longitude (°W)	90.131093	90.132696	90.134252	90.135802	90.136600
Elevation (ft)	11.0	11.1	11.1	11.2	11.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	25	22	26	25
Tare No	T74	T420	T63	T22	T35
Wet Soil + Tare Mass (g)	38.76	32.99	31.76	31.06	32.37
Dry Soil + Tare Mass (g)	30.67	26.94	26.35	23.82	25.13
Tare Mass (g)	19.76	17.78	19.36	14.24	15.55
Moisture Content (%)	72.6	66.0	76.2	75.9	75.6
Trial No 2 / Blow Count	20	26	23	27	24
Tare No	T1021	T81	T51	T13	T24
Wet Soil + Tare Mass (g)	32.39	38.69	35.03	35.46	29.44
Dry Soil + Tare Mass (g)	25.05	31.56	27.37	27.97	22.72
Tare Mass (g)	15.17	20.78	17.48	18.05	13.82
Moisture Content (%)	72.3	66.5	76.7	76.2	75.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T107	T11	T39	T78	T52
Wet Soil + Tare Mass (g)	27.34	22.93	28.27	26.97	27.95
Dry Soil + Tare Mass (g)	25.50	21.44	26.80	25.11	26.46
Tare Mass (g)	18.30	15.17	20.80	17.85	20.33
Moisture Content (%)	25.6	23.8	24.5	25.6	24.3
Trial No 2 / Tare No	T47	T31	T7	T91	T21
Wet Soil + Tare Mass (g)	25.79	26.04	27.40	29.44	22.79
Dry Soil + Tare Mass (g)	23.97	24.80	25.87	27.45	21.34
Tare Mass (g)	16.84	19.52	19.74	19.73	15.50
Moisture Content (%)	25.5	23.5	25.0	25.8	24.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	52.24	119.62	106.81	122.56	118.39
Dry Soil Mass after Washing (g)	4.48	4.38	3.63	5.36	4.91
Test Status					
Liquid Limit	**72**	**66**	**76**	**76**	**75**
Plastic Limit	**26**	**24**	**25**	**26**	**25**
Plasticity Index	**46**	**42**	**51**	**50**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	8.6	3.7	3.4	4.4	4.1
Fines (%)	91.4	96.3	96.6	95.6	95.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4256B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/25/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	534	535	536	537	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	
Station	160+98	156+16	151+00	146+03	
Offset	CL	CL	CL	FS 10	
Lift No	5	5	5	5	
Latitude (°N)	29.871487	29.871540	29.871665	29.871740	
Longitude (°W)	90.124397	90.125727	90.127349	90.128917	
Elevation (ft)	9.2	9.1	9.1	9.0	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	28	26	
Tare No	T103	G118	G110	G102	
Wet Soil + Tare Mass (g)	32.32	27.31	32.33	38.02	
Dry Soil + Tare Mass (g)	25.53	22.00	24.95	29.88	
Tare Mass (g)	17.46	15.55	15.67	20.80	
Moisture Content (%)	84.9	83.1	80.6	90.1	
Trial No 2 / Blow Count	28	28	29	27	
Tare No	G104	G106	T70	T79	
Wet Soil + Tare Mass (g)	31.89	33.82	31.70	34.10	
Dry Soil + Tare Mass (g)	24.64	26.46	25.97	25.62	
Tare Mass (g)	16.08	17.40	18.66	16.19	
Moisture Content (%)	85.9	82.4	79.8	90.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G116	T26	T62	G108	
Wet Soil + Tare Mass (g)	22.59	25.50	26.32	27.92	
Dry Soil + Tare Mass (g)	21.16	24.11	24.50	26.05	
Tare Mass (g)	16.36	18.94	17.83	19.32	
Moisture Content (%)	29.8	26.9	27.3	27.8	
Trial No 2 / Tare No	G126	G112	G103	T64	
Wet Soil + Tare Mass (g)	24.53	24.03	27.28	25.56	
Dry Soil + Tare Mass (g)	22.72	22.68	25.66	23.68	
Tare Mass (g)	16.68	17.72	19.59	17.06	
Moisture Content (%)	30.0	27.2	26.7	28.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	117.34	61.30	106.35	117.22	
Dry Soil Mass after Washing (g)	7.30	2.27	5.79	3.85	
Test Status					
Liquid Limit	**85**	**83**	**80**	**90**	
Plastic Limit	**30**	**27**	**27**	**28**	
Plasticity Index	**55**	**56**	**53**	**62**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	6.2	3.7	5.4	3.3	
Fines (%)	93.8	96.3	94.6	96.7	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4264
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	538	539			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-BR CLAY	G-BR CLAY			
Station	19+08	23+97			
Offset	F.S. +7.5	C/L			
Lift No	3	3			
Latitude (°N)	29.888237	29.887971			
Longitude (°W)	90.149909	90.148397			
Elevation (ft)	7.2	7.3			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27			
Tare No	G107	G119			
Wet Soil + Tare Mass (g)	26.56	29.78			
Dry Soil + Tare Mass (g)	20.94	23.52			
Tare Mass (g)	13.79	16.43			
Moisture Content (%)	78.6	89.1			
Trial No 2 / Blow Count	25	28			
Tare No	G113	G128			
Wet Soil + Tare Mass (g)	34.94	33.80			
Dry Soil + Tare Mass (g)	27.32	26.32			
Tare Mass (g)	17.63	17.86			
Moisture Content (%)	78.6	89.6			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G114	G111			
Wet Soil + Tare Mass (g)	22.30	26.02			
Dry Soil + Tare Mass (g)	21.01	23.87			
Tare Mass (g)	16.15	15.99			
Moisture Content (%)	26.5	27.3			
Trial No 2 / Tare No	G109	G115			
Wet Soil + Tare Mass (g)	21.46	27.21			
Dry Soil + Tare Mass (g)	20.27	25.09			
Tare Mass (g)	15.77	17.33			
Moisture Content (%)	26.4	27.3			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	76.50	71.56			
Dry Soil Mass after Washing (g)	3.19	1.82			
Test Status					
Liquid Limit	**79**	**89**			
Plastic Limit	**26**	**27**			
Plasticity Index	**53**	**62**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.2	2.5			
Fines (%)	95.8	97.5			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4268
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	540	541	542	543	544
Retest of Test ID					4256+536
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	79+93	85+00	89+98	94+82	151+00
Offset	C/L	C/L	C/L	C/L	CL
Lift No	9	9	9	9	5
Latitude (°N)	29.882371	29.881028	29.879721	29.878499	29.871665
Longitude (°W)	90.135629	90.136061	90.136528	90.136930	90.127349
Elevation (ft)	12.9	12.9	12.9	13.0	9.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	23	26	28	29
Tare No	G115	G127	T79	T52	T103
Wet Soil + Tare Mass (g)	31.76	33.23	28.11	36.48	35.42
Dry Soil + Tare Mass (g)	25.74	27.32	22.37	29.08	27.22
Tare Mass (g)	17.33	18.96	16.18	20.32	17.48
Moisture Content (%)	71.6	70.0	93.2	85.6	85.7
Trial No 2 / Blow Count	25	24	27	27	28
Tare No	T101	G108	G102	T21	G104
Wet Soil + Tare Mass (g)	34.14	34.12	38.41	28.56	28.60
Dry Soil + Tare Mass (g)	27.08	27.98	29.99	22.56	22.89
Tare Mass (g)	17.16	19.31	20.81	15.49	16.09
Moisture Content (%)	71.2	70.5	92.6	85.7	85.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G147	T64	T26	T70	G116
Wet Soil + Tare Mass (g)	35.47	25.40	26.64	29.12	24.82
Dry Soil + Tare Mass (g)	33.08	23.95	24.76	27.22	22.86
Tare Mass (g)	22.85	17.08	18.96	18.68	16.38
Moisture Content (%)	23.4	21.1	32.4	22.2	30.2
Trial No 2 / Tare No	G129	T24	G112	G110	G126
Wet Soil + Tare Mass (g)	31.22	21.98	25.08	26.89	25.18
Dry Soil + Tare Mass (g)	28.70	20.60	23.30	24.84	23.20
Tare Mass (g)	17.84	13.84	17.74	15.71	16.70
Moisture Content (%)	23.2	20.4	32.0	22.5	30.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.55	86.22	94.56	93.85	95.50
Dry Soil Mass after Washing (g)	3.76	4.43	5.65	4.23	6.37
Test Status					
Liquid Limit	**71**	**70**	**93**	**86**	**85**
Plastic Limit	**23**	**21**	**32**	**22**	**30**
Plasticity Index	**48**	**49**	**61**	**64**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	5.2	6.0	4.5	6.7
Fines (%)	95.0	94.8	94.0	95.5	93.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4268
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	540	541	542	543	544
Retest of Test ID					4256+538
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	79+93	85+00	89+98	94+82	151+00
Offset	C/L	C/L	C/L	C/L	CL
Lift No	9	9	9	9	5
Latitude (°N)	29.882371	29.881028	29.879721	29.878499	29.871665
Longitude (°W)	90.135629	90.136061	90.136528	90.136930	90.127349
Elevation (ft)	12.9	12.9	12.9	13.0	9.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	23	26	28	29
Tare No	G115	G127	T79	T52	T103
Wet Soil + Tare Mass (g)	31.76	33.23	28.11	36.48	35.42
Dry Soil + Tare Mass (g)	25.74	27.32	22.37	29.08	27.22
Tare Mass (g)	17.33	18.96	16.18	20.32	17.48
Moisture Content (%)	71.6	70.0	93.2	85.6	85.7
Trial No 2 / Blow Count	25	24	27	27	28
Tare No	T101	G108	G102	T21	G104
Wet Soil + Tare Mass (g)	34.14	34.12	38.41	28.56	28.60
Dry Soil + Tare Mass (g)	27.08	27.98	29.99	22.56	22.89
Tare Mass (g)	17.16	19.31	20.81	15.49	16.09
Moisture Content (%)	71.2	70.5	92.6	85.7	85.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G147	T64	T26	T70	G116
Wet Soil + Tare Mass (g)	35.47	25.40	26.64	29.12	24.82
Dry Soil + Tare Mass (g)	33.08	23.95	24.76	27.22	22.86
Tare Mass (g)	22.85	17.08	18.96	18.68	16.38
Moisture Content (%)	23.4	21.1	32.4	22.2	30.2
Trial No 2 / Tare No	G129	T24	G112	G110	G126
Wet Soil + Tare Mass (g)	31.22	21.98	25.08	26.89	25.18
Dry Soil + Tare Mass (g)	28.70	20.60	23.30	24.84	23.20
Tare Mass (g)	17.84	13.84	17.74	15.71	16.70
Moisture Content (%)	23.2	20.4	32.0	22.5	30.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.55	86.22	94.56	93.85	95.50
Dry Soil Mass after Washing (g)	3.76	4.43	5.65	4.23	6.37
Test Status					
Liquid Limit	**71**	**70**	**93**	**86**	**85**
Plastic Limit	**23**	**21**	**32**	**22**	**30**
Plasticity Index	**48**	**49**	**61**	**64**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	5.2	6.0	4.5	6.7
Fines (%)	95.0	94.8	94.0	95.5	93.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4281A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	545	546	547	548	549
Retest of Test ID	4103+463				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	10+13	6+03	2+98	122+90	126+45
Offset	F.S. +31	C/L	C/L	C/L	C/L
Lift No	3	3	3	8	7
Latitude (°N)	29.888668	29.888985	29.889142	29.872309	29.872232
Longitude (°W)	90.152693	90.153937	90.154893	90.136188	90.135073
Elevation (ft)	6.4	7.5	7.5	12.2	12.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	27	25	22
Tare No	G128	G114	T78	T63	T81
Wet Soil + Tare Mass (g)	33.71	27.80	32.49	36.86	36.90
Dry Soil + Tare Mass (g)	26.91	22.42	25.62	29.00	29.58
Tare Mass (g)	17.88	16.18	17.87	19.36	20.79
Moisture Content (%)	74.5	86.6	89.5	81.5	82.0
Trial No 2 / Blow Count	22	25	26	25	21
Tare No	G111	G113	T91	T51	T13
Wet Soil + Tare Mass (g)	32.18	32.29	36.89	35.12	34.34
Dry Soil + Tare Mass (g)	25.20	25.58	28.81	27.20	26.95
Tare Mass (g)	16.01	17.66	19.76	17.49	18.06
Moisture Content (%)	74.8	84.7	89.7	81.6	81.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G119	G107	T39	T31	T420
Wet Soil + Tare Mass (g)	25.09	22.58	27.69	27.62	26.21
Dry Soil + Tare Mass (g)	23.39	20.59	26.13	25.91	24.53
Tare Mass (g)	16.46	13.81	20.84	19.56	17.80
Moisture Content (%)	24.5	29.4	29.5	26.9	25.0
Trial No 2 / Tare No	G109	T35	T78	T11	T23
Wet Soil + Tare Mass (g)	25.68	25.59	27.55	24.74	22.74
Dry Soil + Tare Mass (g)	23.70	23.59	25.76	22.67	21.05
Tare Mass (g)	15.79	16.59	19.77	15.17	14.26
Moisture Content (%)	25.0	28.6	29.9	27.6	24.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	101.93	103.59	94.70	110.53	120.82
Dry Soil Mass after Washing (g)	4.10	10.99	4.71	4.76	4.32
Test Status					
Liquid Limit	**75**	**86**	**90**	**82**	**82**
Plastic Limit	**25**	**29**	**30**	**27**	**25**
Plasticity Index	**50**	**57**	**60**	**55**	**57**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	10.6	4.9	4.3	3.6
Fines (%)	96.0	89.4	95.1	95.7	96.4
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4281B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	3/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	550	551	552		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY		
Station	131+32	136+57	141+00		
Offset	C/L	P.S. -8	P.S. -9		
Lift No	7	7	7		
Latitude (°N)	29.872105	29.872005	29.871904		
Longitude (°W)	90.133538	90.131888	90.130497		
Elevation (ft)	12.1	11.9	11.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	25		
Tare No	G116	G110	T26		
Wet Soil + Tare Mass (g)	29.90	30.05	34.72		
Dry Soil + Tare Mass (g)	24.35	24.18	28.21		
Tare Mass (g)	16.38	15.71	18.96		
Moisture Content (%)	69.3	69.3	70.4		
Trial No 2 / Blow Count	25	26	26		
Tare No	G126	T70	G112		
Wet Soil + Tare Mass (g)	34.68	34.14	35.73		
Dry Soil + Tare Mass (g)	27.27	27.79	28.34		
Tare Mass (g)	16.70	18.68	17.73		
Moisture Content (%)	70.1	70.0	70.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T103	T52	T79		
Wet Soil + Tare Mass (g)	27.40	28.26	25.20		
Dry Soil + Tare Mass (g)	25.53	26.77	23.47		
Tare Mass (g)	17.48	20.36	16.23		
Moisture Content (%)	23.2	23.2	23.9		
Trial No 2 / Tare No	G104	T21	G102		
Wet Soil + Tare Mass (g)	24.43	24.56	31.83		
Dry Soil + Tare Mass (g)	22.86	22.82	29.72		
Tare Mass (g)	16.10	15.52	20.83		
Moisture Content (%)	23.2	23.8	23.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.09	92.36	92.41		
Dry Soil Mass after Washing (g)	4.82	6.28	6.86		
Test Status					
Liquid Limit	**70**	**70**	**70**		
Plastic Limit	**23**	**24**	**24**		
Plasticity Index	**47**	**46**	**46**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.2	6.8	7.4		
Fines (%)	95.8	93.2	92.6		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4305
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	553	554	555		
Retest of Test ID	4268-543	4248-525	4248-526		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY		
Station	94+82	102+00	107+02		
Offset	C/L	CL	CL		
Lift No	9	7	7		
Latitude (°N)	29.878499	29.876542	29.875202		
Longitude (°W)	90.136930	90.137575	90.137957		
Elevation (ft)	13.0	11.4	11.4		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	26		
Tare No	G112	T70	G126		
Wet Soil + Tare Mass (g)	36.90	40.88	40.99		
Dry Soil + Tare Mass (g)	28.67	31.70	31.21		
Tare Mass (g)	17.75	18.68	16.74		
Moisture Content (%)	75.0	70.8	67.9		
Trial No 2 / Blow Count	23	25	25		
Tare No	T26	G110	G116		
Wet Soil + Tare Mass (g)	44.00	45.48	41.54		
Dry Soil + Tare Mass (g)	33.22	33.20	31.43		
Tare Mass (g)	18.97	15.72	16.38		
Moisture Content (%)	74.9	70.3	67.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T52	G104		
Wet Soil + Tare Mass (g)	25.34	34.32	26.71		
Dry Soil + Tare Mass (g)	23.28	31.28	24.61		
Tare Mass (g)	16.22	20.31	16.09		
Moisture Content (%)	29.2	27.7	24.6		
Trial No 2 / Tare No	G102	T21	T103		
Wet Soil + Tare Mass (g)	33.11	28.72	29.35		
Dry Soil + Tare Mass (g)	30.40	25.88	27.01		
Tare Mass (g)	20.83	15.49	17.47		
Moisture Content (%)	28.3	27.3	24.5		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	82.59	101.12	63.67		
Dry Soil Mass after Washing (g)	2.89	6.16	4.91		
Test Status					
Liquid Limit	**75**	**71**	**68**		
Plastic Limit	**29**	**28**	**25**		
Plasticity Index	**46**	**43**	**43**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.5	6.1	7.7		
Fines (%)	96.5	93.9	92.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks	Qa lab's test failed at station 107+02 and TWE was requested to retest the area with QA lab even though TWE yeilded passing test on first shot. Request was made by Core on-site inspectors.				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4305
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	553	554	555		
Retest of Test ID	4268-543	4248-525	4248-526		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY		
Station	94+82	102+00	107+02		
Offset	C/L	CL	CL		
Lift No	9	7	7		
Latitude (°N)	29.878499	29.876542	29.875202		
Longitude (°W)	90.136930	90.137575	90.137957		
Elevation (ft)	13.0	11.4	11.4		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	26		
Tare No	G112	T70	G126		
Wet Soil + Tare Mass (g)	36.90	40.88	40.99		
Dry Soil + Tare Mass (g)	28.67	31.70	31.21		
Tare Mass (g)	17.75	18.68	16.74		
Moisture Content (%)	75.0	70.8	67.9		
Trial No 2 / Blow Count	23	25	25		
Tare No	T26	G110	G116		
Wet Soil + Tare Mass (g)	44.00	45.48	41.54		
Dry Soil + Tare Mass (g)	33.22	33.20	31.43		
Tare Mass (g)	18.97	15.72	16.38		
Moisture Content (%)	74.9	70.3	67.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T79	T52	G104		
Wet Soil + Tare Mass (g)	25.34	34.32	26.71		
Dry Soil + Tare Mass (g)	23.28	31.28	24.61		
Tare Mass (g)	16.22	20.31	16.09		
Moisture Content (%)	29.2	27.7	24.6		
Trial No 2 / Tare No	G102	T21	T103		
Wet Soil + Tare Mass (g)	33.11	28.72	29.35		
Dry Soil + Tare Mass (g)	30.40	25.88	27.01		
Tare Mass (g)	20.83	15.49	17.47		
Moisture Content (%)	28.3	27.3	24.5		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	82.59	101.12	63.67		
Dry Soil Mass after Washing (g)	2.89	6.16	4.91		
Test Status					
Liquid Limit	**75**	**71**	**68**		
Plastic Limit	**29**	**28**	**25**		
Plasticity Index	**46**	**43**	**43**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.5	6.1	7.7		
Fines (%)	96.5	93.9	92.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	556	557	558	559	560
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	127+38	132+32	137+19	142+61	147+07
Offset	P.S. -131	P.S. -136	P.S. -134	P.S. -143	P.S. -141
Lift No	1	1	1	1	1
Latitude (°N)	29.872557	29.872455	29.872336	29.872235	29.872135
Longitude (°W)	90.134742	90.133190	90.131658	90.129955	90.128551
Elevation (ft)	2.6	2.4	2.4	2.1	1.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	25	27	27
Tare No	T72	G107	T62	G103	G111
Wet Soil + Tare Mass (g)	39.52	32.63	32.91	41.10	27.82
Dry Soil + Tare Mass (g)	32.44	23.79	26.26	32.10	22.25
Tare Mass (g)	23.32	13.79	17.83	19.65	16.01
Moisture Content (%)	76.9	88.8	78.9	73.0	90.1
Trial No 2 / Blow Count	24	27	26	27	28
Tare No	T8	T35	G147	T64	T24
Wet Soil + Tare Mass (g)	38.81	32.43	39.77	32.51	29.50
Dry Soil + Tare Mass (g)	30.69	24.58	32.28	26.03	22.10
Tare Mass (g)	20.27	15.59	22.82	17.10	13.81
Moisture Content (%)	77.5	88.1	79.6	73.2	90.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T84	T65	G113	G106	G118
Wet Soil + Tare Mass (g)	37.13	32.13	32.62	28.34	25.40
Dry Soil + Tare Mass (g)	33.90	28.48	29.52	26.05	23.15
Tare Mass (g)	22.08	17.67	17.67	17.40	15.60
Moisture Content (%)	27.3	33.8	26.2	26.5	29.8
Trial No 2 / Tare No	T6	T20	G114	G127	G108
Wet Soil + Tare Mass (g)	35.97	32.19	31.50	28.34	30.84
Dry Soil + Tare Mass (g)	32.28	28.63	28.30	26.40	28.14
Tare Mass (g)	19.20	17.86	16.11	18.97	19.35
Moisture Content (%)	28.2	33.1	26.3	26.1	30.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.65	110.95	85.13	113.19	111.83
Dry Soil Mass after Washing (g)	3.32	4.14	3.57	5.15	3.77
Test Status					
Liquid Limit	**77**	**88**	**79**	**73**	**90**
Plastic Limit	**28**	**33**	**26**	**26**	**30**
Plasticity Index	**49**	**55**	**53**	**47**	**60**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.8	3.7	4.2	4.5	3.4
Fines (%)	97.2	96.3	95.8	95.5	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	561	562	563	564	565
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	152+05	157+12	158+94	154+03	149+00
Offset	P.S. -138	P.S. -140	P.S. -20	P.S. -8	C/L
Lift No	1	1	6	6	6
Latitude (°N)	29.872022	29.871920	29.871559	29.871623	29.871727
Longitude (°W)	90.126986	90.125390	90.124847	90.126394	90.127978
Elevation (ft)	1.7	1.8	10.1	10.2	10.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	23	25	25	26
Tare No	T11	T81	G104	T21	G102
Wet Soil + Tare Mass (g)	31.15	37.40	33.46	30.45	33.21
Dry Soil + Tare Mass (g)	24.13	30.31	26.71	24.54	28.19
Tare Mass (g)	15.18	20.77	16.09	15.48	20.84
Moisture Content (%)	78.4	73.6	63.6	65.2	68.6
Trial No 2 / Blow Count	26	22	26	26	26
Tare No	T31	T13	T103	T52	T79
Wet Soil + Tare Mass (g)	33.63	33.77	35.90	35.59	33.23
Dry Soil + Tare Mass (g)	27.46	27.04	28.77	29.55	26.32
Tare Mass (g)	19.55	18.03	17.46	20.30	16.24
Moisture Content (%)	78.4	73.5	63.3	65.6	68.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G119	T101	G128	T63	T23
Wet Soil + Tare Mass (g)	30.35	30.26	31.56	31.92	25.96
Dry Soil + Tare Mass (g)	27.35	27.53	28.88	29.57	23.59
Tare Mass (g)	16.40	17.16	17.90	19.38	14.29
Moisture Content (%)	27.4	26.3	24.4	23.1	25.5
Trial No 2 / Tare No	G129	G115	G109	T51	T420
Wet Soil + Tare Mass (g)	31.69	30.92	31.29	30.09	29.25
Dry Soil + Tare Mass (g)	28.68	28.13	28.31	27.74	26.94
Tare Mass (g)	17.87	17.32	15.81	17.51	17.78
Moisture Content (%)	27.8	25.8	23.8	23.0	25.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.75	100.62	113.25	107.74	114.86
Dry Soil Mass after Washing (g)	2.28	2.40	5.66	3.75	3.09
Test Status					
Liquid Limit	**78**	**74**	**63**	**65**	**69**
Plastic Limit	**28**	**26**	**24**	**23**	**25**
Plasticity Index	**50**	**48**	**39**	**42**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.3	2.4	5.0	3.5	2.7
Fines (%)	97.7	97.6	95.0	96.5	97.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	566	567	568	569	570
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	144+06	138+90	134+08	129+03	124+03
Offset	P.S. -15	F.S. +5	C/L	C/L	C/L
Lift No	6	8	8	8	8
Latitude (°N)	29.871855	29.871914	29.872047	29.872147	29.872275
Longitude (°W)	90.129528	90.131165	90.132670	90.134259	90.135832
Elevation (ft)	10.1	12.8	13.0	13.0	12.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	25	27	27
Tare No	T39	T107	T105	T104	T38
Wet Soil + Tare Mass (g)	33.62	36.59	33.38	31.03	32.89
Dry Soil + Tare Mass (g)	28.59	28.97	25.65	25.90	26.49
Tare Mass (g)	20.83	18.30	15.62	17.74	16.82
Moisture Content (%)	64.8	71.1	77.1	63.5	66.8
Trial No 2 / Blow Count	24	25	26	28	28
Tare No	T7	T47	G125	T28	T69
Wet Soil + Tare Mass (g)	36.91	36.70	37.00	33.48	39.24
Dry Soil + Tare Mass (g)	30.14	28.43	29.83	27.48	31.38
Tare Mass (g)	19.77	16.84	20.58	17.84	19.60
Moisture Content (%)	65.0	71.4	77.9	63.1	67.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G116	G110	T26	T91	T1021
Wet Soil + Tare Mass (g)	28.37	28.86	33.37	31.18	27.29
Dry Soil + Tare Mass (g)	26.05	26.12	30.21	28.92	24.88
Tare Mass (g)	16.40	15.73	18.98	19.76	15.19
Moisture Content (%)	24.0	26.4	28.1	24.7	24.9
Trial No 2 / Tare No	G126	T70	G112	T78	T74
Wet Soil + Tare Mass (g)	27.22	31.24	30.57	27.39	31.19
Dry Soil + Tare Mass (g)	25.21	28.62	27.75	25.52	28.89
Tare Mass (g)	16.71	18.70	17.77	17.88	19.79
Moisture Content (%)	23.6	26.4	28.3	24.5	25.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.31	60.33	84.99	73.56	106.80
Dry Soil Mass after Washing (g)	4.87	2.59	2.78	1.97	3.02
Test Status					
Liquid Limit	**65**	**71**	**77**	**63**	**67**
Plastic Limit	**24**	**26**	**28**	**25**	**25**
Plasticity Index	**41**	**45**	**49**	**38**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.5	4.3	3.3	2.7	2.8
Fines (%)	95.5	95.7	96.7	97.3	97.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	566	567	568	569	570
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	144+06	138+90	134+08	29+03	24+03
Offset	P.S. -15	F.S. +5	C/L	C/L	C/L
Lift No	6	8	8	8	8
Latitude (°N)	29.871855	29.871914	29.872047	29.872147	29.872275
Longitude (°W)	90.129528	90.131165	90.132670	90.134259	90.135832
Elevation (ft)	10.1	12.8	13.0	13.0	12.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	25	27	27
Tare No	T39	T107	T105	T104	T38
Wet Soil + Tare Mass (g)	33.62	36.59	33.38	31.03	32.89
Dry Soil + Tare Mass (g)	28.59	28.97	25.65	25.90	26.49
Tare Mass (g)	20.83	18.30	15.62	17.74	16.82
Moisture Content (%)	64.8	71.1	77.1	63.5	66.8
Trial No 2 / Blow Count	24	25	26	28	28
Tare No	T7	T47	G125	T28	T69
Wet Soil + Tare Mass (g)	36.91	36.70	37.00	33.48	39.24
Dry Soil + Tare Mass (g)	30.14	28.43	29.83	27.48	31.38
Tare Mass (g)	19.77	16.84	20.58	17.84	19.60
Moisture Content (%)	65.0	71.4	77.9	63.1	67.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G116	G110	T26	T91	T1021
Wet Soil + Tare Mass (g)	28.37	28.86	33.37	31.18	27.29
Dry Soil + Tare Mass (g)	26.05	26.12	30.21	28.92	24.88
Tare Mass (g)	16.40	15.73	18.98	19.76	15.19
Moisture Content (%)	24.0	26.4	28.1	24.7	24.9
Trial No 2 / Tare No	G126	T70	G112	T78	T74
Wet Soil + Tare Mass (g)	27.22	31.24	30.57	27.39	31.19
Dry Soil + Tare Mass (g)	25.21	28.62	27.75	25.52	28.89
Tare Mass (g)	16.71	18.70	17.77	17.88	19.79
Moisture Content (%)	23.6	26.4	28.3	24.5	25.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.31	60.33	84.99	73.56	106.80
Dry Soil Mass after Washing (g)	4.87	2.59	2.78	1.97	3.02
Test Status					
Liquid Limit	**65**	**71**	**77**	**63**	**67**
Plastic Limit	**24**	**26**	**28**	**25**	**25**
Plasticity Index	**41**	**45**	**49**	**38**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.5	4.3	3.3	2.7	2.8
Fines (%)	95.5	95.7	96.7	97.3	97.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	571	572	573	574	575
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	122+03	179+02	174+05	169+03	164+09
Offset	C/L	C/L	C/L	C/L	C/L
Lift No	9	7	7	7	7
Latitude (°N)	29.872316	29.870998	29.871166	29.871287	29.871389
Longitude (°W)	90.136460	90.118550	90.120100	90.121677	90.123234
Elevation (ft)	12.8	12.1	12.0	12.0	11.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	21	23	25	24
Tare No	T33	T45	T75	T82	T14
Wet Soil + Tare Mass (g)	26.13	31.65	29.75	29.15	29.63
Dry Soil + Tare Mass (g)	21.38	26.10	23.66	24.29	23.07
Tare Mass (g)	14.96	19.25	16.19	18.28	15.26
Moisture Content (%)	73.6	79.3	80.7	80.9	83.6
Trial No 2 / Blow Count	23	22	24	25	24
Tare No	T96	T71	T16	T86	T42
Wet Soil + Tare Mass (g)	34.24	35.23	38.08	32.75	29.96
Dry Soil + Tare Mass (g)	27.16	28.36	29.97	25.60	23.87
Tare Mass (g)	17.59	19.87	20.00	16.71	16.60
Moisture Content (%)	73.2	79.7	80.9	80.4	83.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G117	T44	T106	G101	T61
Wet Soil + Tare Mass (g)	27.68	25.83	29.84	31.98	31.94
Dry Soil + Tare Mass (g)	25.39	23.52	26.56	29.06	28.18
Tare Mass (g)	16.26	14.97	15.90	19.28	15.77
Moisture Content (%)	25.1	27.0	30.8	29.9	30.3
Trial No 2 / Tare No	T10	T85	T76	T87	T94
Wet Soil + Tare Mass (g)	25.85	27.66	30.19	33.55	31.31
Dry Soil + Tare Mass (g)	23.77	25.54	26.96	30.42	27.64
Tare Mass (g)	15.56	17.54	16.17	19.94	15.63
Moisture Content (%)	25.3	26.5	29.9	29.9	30.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	88.97	102.09	111.53	99.74	105.13
Dry Soil Mass after Washing (g)	2.03	2.72	4.27	2.11	3.28
Test Status					
Liquid Limit	**73**	**80**	**81**	**81**	**83**
Plastic Limit	**25**	**27**	**30**	**30**	**30**
Plasticity Index	**48**	**53**	**51**	**51**	**53**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.3	2.7	3.8	2.1	3.1
Fines (%)	97.7	97.3	96.2	97.9	96.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4316E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	576	577	578	579	580
Retest of Test ID		2690+14			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	162+01	164+83	167+02	172+02	177+00
Offset	P.S. -151	P.S. -83	P.S. -130	P.S. -131	P.S. -130
Lift No	1	1	1	1	1
Latitude (°N)	29.871846	29.871600	29.871683	29.871581	29.871468
Longitude (°W)	90.123864	90.122981	90.122279	90.120734	90.119147
Elevation (ft)	1.7	5.0	2.1	2.2	2.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	22	25	26
Tare No	T46	T41	T1211	T91	T26
Wet Soil + Tare Mass (g)	30.03	32.60	29.40	37.41	36.24
Dry Soil + Tare Mass (g)	25.58	27.44	23.29	29.86	28.08
Tare Mass (g)	19.92	19.38	15.18	19.75	18.97
Moisture Content (%)	78.6	63.7	74.2	74.7	90.0
Trial No 2 / Blow Count	24	25	21	25	27
Tare No	T99	T18	T69	T28	G125
Wet Soil + Tare Mass (g)	34.68	33.26	35.28	34.21	35.81
Dry Soil + Tare Mass (g)	26.74	27.09	28.50	27.25	28.64
Tare Mass (g)	16.58	17.31	19.60	17.88	20.58
Moisture Content (%)	77.8	63.1	74.6	74.3	89.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T15	T66	T38	T104	T105
Wet Soil + Tare Mass (g)	26.02	27.25	25.89	27.17	24.62
Dry Soil + Tare Mass (g)	23.71	25.12	24.04	25.15	22.54
Tare Mass (g)	15.78	15.30	16.83	17.76	15.63
Moisture Content (%)	29.1	21.7	25.7	27.3	30.1
Trial No 2 / Tare No	T50	T9	T78	G112	T70
Wet Soil + Tare Mass (g)	29.74	32.64	27.63	27.31	27.97
Dry Soil + Tare Mass (g)	27.36	30.35	25.63	25.25	25.80
Tare Mass (g)	19.15	19.72	17.88	17.75	18.70
Moisture Content (%)	29.0	21.5	25.8	27.5	30.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	94.30	106.60	112.47	118.28	65.07
Dry Soil Mass after Washing (g)	4.06	4.48	4.49	6.78	2.73
Test Status					
Liquid Limit	**78**	**63**	**74**	**74**	**90**
Plastic Limit	**29**	**22**	**26**	**27**	**30**
Plasticity Index	**49**	**41**	**48**	**47**	**60**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.3	4.2	4.0	5.7	4.2
Fines (%)	95.7	95.8	96.0	94.3	95.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4347
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	581	582	583	584	
Retest of Test ID	4281A+546				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	
Station	6+03	96+10	100+98	106+00	
Offset	C/L	C/L	C/L	C/L	
Lift No	3	8	8	8	
Latitude (°N)	29.888985	29.878109	29.876823	29.875493	
Longitude (°W)	90.153937	90.137087	90.137496	90.137888	
Elevation (ft)	7.5	12.0	12.2	12.0	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	28	26	
Tare No	T16	T44	T96	T34	
Wet Soil + Tare Mass (g)	38.01	27.71	29.96	29.54	
Dry Soil + Tare Mass (g)	29.98	21.72	24.33	24.08	
Tare Mass (g)	19.98	14.97	17.58	17.51	
Moisture Content (%)	81.1	89.6	84.6	83.5	
Trial No 2 / Blow Count	28	28	27	27	
Tare No	T106	T71	G117	T68	
Wet Soil + Tare Mass (g)	30.59	35.24	29.72	38.54	
Dry Soil + Tare Mass (g)	24.04	27.96	23.60	30.44	
Tare Mass (g)	15.85	19.80	16.25	20.74	
Moisture Content (%)	81.1	90.4	84.0	84.3	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T85	T45	T33	T27	
Wet Soil + Tare Mass (g)	25.22	26.57	23.72	31.10	
Dry Soil + Tare Mass (g)	23.64	24.74	21.84	28.75	
Tare Mass (g)	17.50	19.23	14.94	19.96	
Moisture Content (%)	25.7	33.2	27.2	26.7	
Trial No 2 / Tare No	T75	T10	T89	T67	
Wet Soil + Tare Mass (g)	24.14	21.88	29.31	30.22	
Dry Soil + Tare Mass (g)	22.56	20.29	27.25	27.83	
Tare Mass (g)	16.16	15.50	19.59	18.93	
Moisture Content (%)	24.7	33.2	26.9	26.9	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	109.48	112.41	86.38	95.08	
Dry Soil Mass after Washing (g)	4.26	10.76	2.82	3.07	
Test Status					
Liquid Limit	**81**	**90**	**84**	**84**	
Plastic Limit	**25**	**33**	**27**	**27**	
Plasticity Index	**56**	**57**	**57**	**57**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.9	9.6	3.3	3.2	
Fines (%)	96.1	90.4	96.7	96.8	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4369A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	585	586	587	588	589
Retest of Test ID	4316+573	4316+574	4316+575	4316+569	
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	174+05	169+03	164+09	129+03	16+01
Offset	C/L	C/L	C/L	C/L	F.S +10
Lift No	7	7	7	8	4
Latitude (°N)	29.871166	29.871287	29.871389	29.872147	29.888401
Longitude (°W)	90.120100	90.121677	90.123234	90.134259	90.150860
Elevation (ft)	12.0	12.0	11.9	13.0	8.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	26	26	25
Tare No	G110	T420	T39	T52	G128
Wet Soil + Tare Mass (g)	33.18	30.79	33.30	31.01	31.07
Dry Soil + Tare Mass (g)	25.46	25.02	27.63	26.24	25.08
Tare Mass (g)	15.71	17.79	20.80	20.30	17.88
Moisture Content (%)	79.2	80.2	83.4	80.7	83.2
Trial No 2 / Blow Count	26	25	27	26	26
Tare No	T47	T107	G126	T51	T103
Wet Soil + Tare Mass (g)	33.66	33.68	33.77	34.27	34.03
Dry Soil + Tare Mass (g)	26.25	26.85	26.01	26.76	26.49
Tare Mass (g)	16.85	18.32	16.69	17.48	17.47
Moisture Content (%)	79.2	80.1	84.0	81.3	84.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G114	G116	T23	T63	T21
Wet Soil + Tare Mass (g)	26.80	29.61	25.49	31.27	25.68
Dry Soil + Tare Mass (g)	24.51	26.72	22.84	28.61	23.42
Tare Mass (g)	16.15	16.39	14.27	19.35	15.48
Moisture Content (%)	27.4	28.0	30.9	28.7	28.5
Trial No 2 / Tare No	G113	T7	T79	G102	G109
Wet Soil + Tare Mass (g)	28.08	30.37	27.82	34.26	25.69
Dry Soil + Tare Mass (g)	25.83	28.07	25.04	31.22	23.49
Tare Mass (g)	17.65	19.75	16.19	20.82	15.77
Moisture Content (%)	27.5	27.6	31.4	29.2	28.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.95	116.06	52.51	106.28	72.32
Dry Soil Mass after Washing (g)	4.13	6.09	2.92	8.19	5.65
Test Status					
Liquid Limit	**79**	**80**	**84**	**81**	**84**
Plastic Limit	**27**	**28**	**31**	**29**	**28**
Plasticity Index	**52**	**52**	**53**	**52**	**56**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	5.2	5.5	7.7	7.8
Fines (%)	96.0	94.8	94.5	92.3	92.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4369B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	590	591	592	593	594
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	20+53	28+35	30+47	35+05	43+02
Offset	F.S. +21	C/L	C/L	P.S. -10	C/L
Lift No	4	4	4	4	4
Latitude (°N)	29.888118	29.887741	29.887637	29.887395	29.886992
Longitude (°W)	90.149472	90.147038	90.146383	90.144965	90.142858
Elevation (ft)	8.5	8.3	8.2	8.2	8.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	26	25	26
Tare No	T17	T97	T12	T30	G107
Wet Soil + Tare Mass (g)	24.53	30.09	31.52	30.44	25.64
Dry Soil + Tare Mass (g)	19.80	23.00	25.74	25.57	20.08
Tare Mass (g)	14.74	15.38	19.62	20.25	13.79
Moisture Content (%)	93.5	93.5	94.9	91.5	88.8
Trial No 2 / Blow Count	26	25	27	25	26
Tare No	T60	T22	T36	T43	T6
Wet Soil + Tare Mass (g)	33.09	30.58	37.77	32.70	33.04
Dry Soil + Tare Mass (g)	26.03	24.98	28.38	25.95	26.54
Tare Mass (g)	18.47	18.97	18.46	18.51	19.16
Moisture Content (%)	93.8	93.2	95.5	90.7	88.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G104	T81	T73	T1022	T84
Wet Soil + Tare Mass (g)	27.98	31.03	26.72	31.46	32.97
Dry Soil + Tare Mass (g)	25.41	28.76	24.11	28.91	30.43
Tare Mass (g)	16.09	20.75	15.83	19.74	22.07
Moisture Content (%)	27.6	28.3	31.5	27.8	30.4
Trial No 2 / Tare No	G115	T101	T25	T74	T72
Wet Soil + Tare Mass (g)	28.64	26.26	28.17	33.06	32.60
Dry Soil + Tare Mass (g)	26.13	24.24	25.40	30.21	30.44
Tare Mass (g)	17.33	17.15	16.55	19.78	23.32
Moisture Content (%)	28.5	28.5	31.3	27.3	30.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.76	98.91	110.58	117.25	82.55
Dry Soil Mass after Washing (g)	6.03	6.37	6.72	7.30	5.59
Test Status					
Liquid Limit	**94**	**93**	**95**	**91**	**89**
Plastic Limit	**28**	**28**	**31**	**28**	**30**
Plasticity Index	**66**	**65**	**64**	**63**	**59**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.2	6.4	6.1	6.2	6.8
Fines (%)	94.8	93.6	93.9	93.8	93.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4400A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	595	596	597	598	599
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	81+98	86+97	92+01	97+00	102+00
Offset	P.S. -130	P.S. -131	P.S. -130	P.S. -143	P.S. -136
Lift No	4	4	4	3	2
Latitude (°N)	29.881725	29.880410	29.879081	29.877754	29.876450
Longitude (°W)	90.135407	90.135852	90.136308	90.136721	90.137546
Elevation (ft)	2.6	2.2	2.1	1.9	1.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	27	25	27
Tare No	T72	T74	T25	T81	G104
Wet Soil + Tare Mass (g)	36.54	35.01	29.72	36.29	25.54
Dry Soil + Tare Mass (g)	30.74	28.54	23.68	29.53	21.28
Tare Mass (g)	23.39	19.77	16.55	20.76	16.08
Moisture Content (%)	78.9	74.1	85.5	77.1	82.7
Trial No 2 / Blow Count	26	26	26	25	28
Tare No	T84	T1022	T73	T101	G115
Wet Soil + Tare Mass (g)	37.42	35.21	33.30	32.10	28.77
Dry Soil + Tare Mass (g)	30.66	28.63	25.26	25.60	23.63
Tare Mass (g)	22.10	19.76	15.83	17.14	17.33
Moisture Content (%)	79.3	74.5	85.7	76.8	82.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T6	T43	T36	T22	T60
Wet Soil + Tare Mass (g)	28.64	28.28	29.69	27.77	28.25
Dry Soil + Tare Mass (g)	26.57	26.22	26.97	25.90	26.08
Tare Mass (g)	19.20	18.54	18.48	19.00	18.49
Moisture Content (%)	28.1	26.8	32.0	27.1	28.6
Trial No 2 / Tare No	G107	T30	T12	T97	T17
Wet Soil + Tare Mass (g)	22.95	30.62	30.38	24.49	25.12
Dry Soil + Tare Mass (g)	21.01	28.46	27.79	22.52	22.79
Tare Mass (g)	13.85	20.27	19.64	15.40	14.73
Moisture Content (%)	27.1	26.4	31.8	27.7	28.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	86.95	113.45	108.61	86.42	105.50
Dry Soil Mass after Washing (g)	4.01	4.71	7.92	3.65	13.55
Test Status					
Liquid Limit	**79**	**74**	**86**	**77**	**83**
Plastic Limit	**28**	**27**	**32**	**27**	**29**
Plasticity Index	**51**	**47**	**54**	**50**	**54**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.6	4.6	7.3	4.2	12.8
Fines (%)	95.4	95.4	92.7	95.8	87.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4400B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	600	601	602	603	604
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	107+02	144+94	150+00	155+00	159+95
Offset	P.S. -133	C/L	C/L	C/L	C/L
Lift No	2	7	7	7	7
Latitude (°N)	29.875113	29.871793	29.871687	28.495910	29.871462
Longitude (°W)	90.137546	90.129257	90.127664	90.142501	90.124536
Elevation (ft)	1.2	11.3	11.0	10.9	11.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	26	25	23
Tare No	G109	T51	G126	G116	G113
Wet Soil + Tare Mass (g)	30.07	29.26	30.72	31.24	32.74
Dry Soil + Tare Mass (g)	23.36	24.57	25.10	25.14	26.77
Tare Mass (g)	15.77	17.49	16.70	16.38	17.64
Moisture Content (%)	88.8	66.6	67.2	69.6	64.7
Trial No 2 / Blow Count	27	27	25	25	24
Tare No	T21	T52	T39	T7	G114
Wet Soil + Tare Mass (g)	29.58	34.92	38.26	34.68	30.71
Dry Soil + Tare Mass (g)	22.94	29.06	31.29	28.54	24.95
Tare Mass (g)	15.48	20.31	20.81	19.73	16.15
Moisture Content (%)	89.8	67.6	66.5	69.7	65.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T103	G102	T79	T107	T47
Wet Soil + Tare Mass (g)	27.18	30.46	26.05	28.67	26.15
Dry Soil + Tare Mass (g)	24.86	28.76	24.11	26.88	24.37
Tare Mass (g)	17.47	20.81	16.19	18.31	16.86
Moisture Content (%)	31.4	21.4	24.5	20.9	23.7
Trial No 2 / Tare No	G128	T63	T23	T420	G110
Wet Soil + Tare Mass (g)	27.48	30.30	22.62	28.03	26.80
Dry Soil + Tare Mass (g)	25.21	28.32	20.98	26.27	24.68
Tare Mass (g)	17.87	19.34	14.28	17.81	15.71
Moisture Content (%)	30.9	22.0	24.5	20.8	23.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.59	115.91	72.37	122.04	119.67
Dry Soil Mass after Washing (g)	3.45	1.76	2.49	4.22	4.42
Test Status					
Liquid Limit	**89**	**67**	**67**	**70**	**65**
Plastic Limit	**31**	**22**	**24**	**21**	**24**
Plasticity Index	**58**	**45**	**43**	**49**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.6	1.5	3.4	3.5	3.7
Fines (%)	95.4	98.5	96.6	96.5	96.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4408
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/15/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	605	606	607	608	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	
Station	28+00	32+96	38+02	43+04	
Offset	F.S. +21	F.S. +14	F.S. +19	F.S. +18	
Lift No	4	4	4	4	
Latitude (°N)	29.887703	29.887444	29.887151	29.886874	
Longitude (°W)	90.147161	90.145624	90.144064	90.142513	
Elevation (ft)	7.4	7.3	7.5	7.5	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	24	25	26	
Tare No	G110	T107	T23	G102	
Wet Soil + Tare Mass (g)	29.31	32.71	26.27	34.58	
Dry Soil + Tare Mass (g)	22.86	25.95	20.75	28.23	
Tare Mass (g)	15.71	18.31	14.27	20.81	
Moisture Content (%)	89.3	88.0	85.2	86.0	
Trial No 2 / Blow Count	24	25	26	27	
Tare No	T47	T420	T79	T63	
Wet Soil + Tare Mass (g)	31.29	33.91	32.12	35.20	
Dry Soil + Tare Mass (g)	24.47	26.40	24.83	27.92	
Tare Mass (g)	16.85	17.80	16.18	19.34	
Moisture Content (%)	89.1	87.3	84.7	85.6	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G114	T7	T39	T51	
Wet Soil + Tare Mass (g)	25.99	30.26	30.60	27.14	
Dry Soil + Tare Mass (g)	23.61	27.77	28.17	24.89	
Tare Mass (g)	16.17	19.75	20.83	17.51	
Moisture Content (%)	32.0	31.0	33.1	30.5	
Trial No 2 / Tare No	G113	G116	G126	T52	
Wet Soil + Tare Mass (g)	28.49	27.49	28.47	29.20	
Dry Soil + Tare Mass (g)	25.83	24.89	25.61	27.13	
Tare Mass (g)	17.67	16.40	16.72	20.33	
Moisture Content (%)	32.6	30.6	32.2	30.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.55	86.43	103.45	101.88	
Dry Soil Mass after Washing (g)	5.21	2.83	5.29	3.04	
Test Status					
Liquid Limit	**89**	**88**	**85**	**86**	
Plastic Limit	**32**	**31**	**33**	**30**	
Plasticity Index	**57**	**57**	**52**	**56**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	5.2	3.3	5.1	3.0	
Fines (%)	94.8	96.7	94.9	97.0	
Group Symbol	CH	CH	CH	CH	
Group Name	FAY CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4413
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	609	610	611		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY		
Station	58+90	58+65	59+61		
Offset	CL	CL	CL		
Lift No	1	2	3		
Latitude (°N)	29.886443	29.886457	29.886406		
Longitude (°W)	90.137644	90.137717	90.137419		
Elevation (ft)	1.3	2.3	3.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	27		
Tare No	T106	T37	T86		
Wet Soil + Tare Mass (g)	33.56	32.91	32.01		
Dry Soil + Tare Mass (g)	26.56	26.75	25.99		
Tare Mass (g)	15.86	17.57	16.70		
Moisture Content (%)	65.4	67.4	65.4		
Trial No 2 / Blow Count	26	25	28		
Tare No	T16	T93	G101		
Wet Soil + Tare Mass (g)	34.99	32.80	38.29		
Dry Soil + Tare Mass (g)	29.06	27.38	30.79		
Tare Mass (g)	19.99	19.35	19.28		
Moisture Content (%)	65.7	67.5	66.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T76	T105	T83		
Wet Soil + Tare Mass (g)	30.20	25.90	27.42		
Dry Soil + Tare Mass (g)	27.58	23.98	25.39		
Tare Mass (g)	16.12	15.61	16.61		
Moisture Content (%)	22.9	22.9	23.1		
Trial No 2 / Tare No	T82	T92	T80		
Wet Soil + Tare Mass (g)	31.84	35.14	27.93		
Dry Soil + Tare Mass (g)	29.30	33.33	25.82		
Tare Mass (g)	18.26	25.49	16.59		
Moisture Content (%)	23.0	23.1	22.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.68	95.71	92.89		
Dry Soil Mass after Washing (g)	9.49	9.73	7.78		
Test Status					
Liquid Limit	**66**	**67**	**66**		
Plastic Limit	**23**	**23**	**23**		
Plasticity Index	**43**	**44**	**43**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	9.2	10.2	8.4		
Fines (%)	90.8	89.8	91.6		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4445A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	612	613	614	615	616
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	59+59	59+85	120+22	122+60	125+13
Offset	C/L	C/L	P.S. -13.0	P.S. -109.8	P.S. -115.8
Lift No	1	2	2	2	2
Latitude (°N)	29.886408	29.886395	29.872722	29.872610	29.872568
Longitude (°W)	90.137425	90.137345	90.136994	90.136250	90.135453
Elevation (ft)	4.2	5.3	4.3	5.0	4.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	25	25	25
Tare No	T68	T71	T16	T106	G113
Wet Soil + Tare Mass (g)	36.78	32.68	31.53	30.70	34.39
Dry Soil + Tare Mass (g)	30.46	27.41	26.79	24.83	27.97
Tare Mass (g)	20.75	19.80	19.99	15.88	17.65
Moisture Content (%)	64.4	69.6	69.7	65.6	62.2
Trial No 2 / Blow Count	24	27	24	24	25
Tare No	T34	T44	G110	G114	T103
Wet Soil + Tare Mass (g)	33.03	32.86	34.02	33.49	33.10
Dry Soil + Tare Mass (g)	26.87	25.51	26.46	26.60	27.11
Tare Mass (g)	17.50	14.97	15.69	16.15	17.47
Moisture Content (%)	65.4	70.4	69.8	65.6	62.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T80	T86	T105	T47	G128
Wet Soil + Tare Mass (g)	33.09	27.88	26.70	29.01	30.18
Dry Soil + Tare Mass (g)	29.94	25.68	24.53	26.74	27.83
Tare Mass (g)	16.59	16.68	15.61	16.83	17.89
Moisture Content (%)	23.6	24.4	24.3	22.9	23.6
Trial No 2 / Tare No	T83	G101	T92	T37	T23
Wet Soil + Tare Mass (g)	32.08	29.17	37.61	30.12	25.62
Dry Soil + Tare Mass (g)	29.17	27.22	35.23	27.79	23.47
Tare Mass (g)	16.62	19.28	25.48	17.58	14.27
Moisture Content (%)	23.2	24.6	24.4	22.8	23.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.12	92.05	85.85	106.14	79.09
Dry Soil Mass after Washing (g)	7.53	5.43	2.21	4.02	4.87
Test Status					
Liquid Limit	**65**	**70**	**70**	**66**	**62**
Plastic Limit	**23**	**25**	**24**	**23**	**24**
Plasticity Index	**42**	**45**	**46**	**43**	**38**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.8	5.9	2.6	3.8	6.2
Fines (%)	93.2	94.1	97.4	96.2	93.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4445B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	617	618	619		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY		
Station	105+52	100+52	95+55		
Offset	C/L	C/L	C/L		
Lift No	9	9	9		
Latitude (°N)	29.875605	29.876937	29.878252		
Longitude (°W)	90.137847	90.137456	90.137036		
Elevation (ft)	13.0	13.0	12.9		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	25		
Tare No	T79	G116	T63		
Wet Soil + Tare Mass (g)	31.13	28.90	33.37		
Dry Soil + Tare Mass (g)	24.96	23.77	27.58		
Tare Mass (g)	16.17	16.39	19.34		
Moisture Content (%)	69.5	69.5	70.3		
Trial No 2 / Blow Count	24	24	25		
Tare No	T21	T17	G115		
Wet Soil + Tare Mass (g)	28.13	30.89	34.40		
Dry Soil + Tare Mass (g)	22.93	24.26	27.37		
Tare Mass (g)	15.49	14.73	17.33		
Moisture Content (%)	69.5	69.2	70.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G109	T60	G104		
Wet Soil + Tare Mass (g)	26.79	28.66	26.67		
Dry Soil + Tare Mass (g)	24.64	26.59	24.65		
Tare Mass (g)	15.78	18.48	16.09		
Moisture Content (%)	24.3	25.5	23.6		
Trial No 2 / Tare No	T79	G102	T39		
Wet Soil + Tare Mass (g)	33.09	33.19	32.23		
Dry Soil + Tare Mass (g)	30.46	30.63	30.04		
Tare Mass (g)	19.73	20.82	20.80		
Moisture Content (%)	24.5	26.1	23.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	106.70	106.23	103.88		
Dry Soil Mass after Washing (g)	2.88	5.71	5.11		
Test Status					
Liquid Limit	**70**	**69**	**70**		
Plastic Limit	**24**	**26**	**24**		
Plasticity Index	**46**	**43**	**46**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	2.7	5.4	4.9		
Fines (%)	97.3	94.6	95.1		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4461A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	620	621	622	623	624
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	47+21	52+00	127+60	130+02	132+67
Offset	C/L	F.S. +7.0	P.S. -94.2	P.S. -100.0	P.S. -107.0
Lift No	4	4	2	2	2
Latitude (°N)	29.886675	29.886404	29.872451	29.872410	29.872368
Longitude (°W)	90.141216	90.139736	90.134684	90.133923	90.133086
Elevation (ft)	7.9	7.9	5.3	4.8	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	26	27	25
Tare No	G101	T92	T47	G128	G109
Wet Soil + Tare Mass (g)	37.87	43.45	37.13	38.64	31.53
Dry Soil + Tare Mass (g)	29.49	35.25	28.79	30.22	24.87
Tare Mass (g)	19.28	25.47	16.84	17.86	15.77
Moisture Content (%)	82.5	83.8	70.1	68.8	73.2
Trial No 2 / Blow Count	27	26	27	27	26
Tare No	T16	G126	T37	T23	T7
Wet Soil + Tare Mass (g)	35.12	31.18	34.64	31.51	39.19
Dry Soil + Tare Mass (g)	28.34	24.59	27.63	24.53	30.95
Tare Mass (g)	19.99	16.68	17.58	14.25	19.73
Moisture Content (%)	82.0	83.7	70.4	68.5	73.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G110	T106	T103	T79	T17
Wet Soil + Tare Mass (g)	24.92	27.60	27.59	24.43	26.74
Dry Soil + Tare Mass (g)	22.72	24.97	25.58	22.82	24.37
Tare Mass (g)	15.69	15.86	17.46	16.20	14.71
Moisture Content (%)	31.3	28.9	24.8	24.3	24.5
Trial No 2 / Tare No	T105	G114	G113	T21	G116
Wet Soil + Tare Mass (g)	26.48	25.78	26.38	23.96	30.24
Dry Soil + Tare Mass (g)	23.90	23.62	24.66	22.30	27.46
Tare Mass (g)	15.61	16.15	17.65	15.49	16.38
Moisture Content (%)	31.1	28.9	24.5	24.4	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.51	109.75	114.61	109.62	100.64
Dry Soil Mass after Washing (g)	4.13	4.97	3.45	3.55	6.35
Test Status					
Liquid Limit	**82**	**84**	**70**	**69**	**73**
Plastic Limit	**31**	**29**	**25**	**24**	**25**
Plasticity Index	**51**	**55**	**45**	**45**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	4.5	3.0	3.2	6.3
Fines (%)	96.0	95.5	97.0	96.8	93.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4461B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	625	626	627	628	629
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	135+18	137+84	140+02	142+62	58+42
Offset	P.S. -98.0	P.S. -84.0	P.S. -84.0	P.S. -90	C/L
Lift No	2	2	2	2	3
Latitude (°N)	29.872285	29.872185	29.872132	29.872090	29.886476
Longitude (°W)	90.132298	90.131465	90.130782	90.129965	90.137786
Elevation (ft)	5.0	5.5	5.6	5.0	6.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	26	26	27
Tare No	T60	T97	T18	T101	T93
Wet Soil + Tare Mass (g)	30.93	32.79	33.04	29.45	30.76
Dry Soil + Tare Mass (g)	25.57	25.61	26.79	24.49	26.10
Tare Mass (g)	18.48	15.39	17.29	17.15	19.38
Moisture Content (%)	76.3	70.3	66.1	67.9	70.0
Trial No 2 / Blow Count	28	25	26	27	27
Tare No	G102	G104	T22	T81	T96
Wet Soil + Tare Mass (g)	37.69	33.11	35.85	39.17	33.50
Dry Soil + Tare Mass (g)	30.44	26.10	29.14	31.70	26.96
Tare Mass (g)	20.81	16.09	18.97	20.76	17.56
Moisture Content (%)	76.3	70.0	66.3	68.9	70.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T63	T39	T51	T421	G117
Wet Soil + Tare Mass (g)	29.42	28.86	26.09	29.13	27.13
Dry Soil + Tare Mass (g)	27.29	27.14	24.28	27.29	24.95
Tare Mass (g)	19.34	20.79	17.46	19.73	16.25
Moisture Content (%)	26.8	27.1	26.5	24.3	25.1
Trial No 2 / Tare No	G115	T15	T52	T32	T420
Wet Soil + Tare Mass (g)	26.34	24.76	30.33	27.77	29.27
Dry Soil + Tare Mass (g)	24.43	22.89	28.25	25.77	26.99
Tare Mass (g)	17.32	15.75	20.29	17.65	17.79
Moisture Content (%)	26.9	26.2	26.1	24.6	24.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	101.06	102.93	98.33	119.11	112.69
Dry Soil Mass after Washing (g)	2.63	3.87	3.61	3.71	7.66
Test Status					
Liquid Limit	**76**	**70**	**66**	**68**	**70**
Plastic Limit	**27**	**27**	**26**	**24**	**25**
Plasticity Index	**49**	**43**	**40**	**44**	**45**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.6	3.8	3.7	3.1	6.8
Fines (%)	97.4	96.2	96.3	96.9	93.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4479A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/25/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	630	631	632	633	634
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	145+10	147+67	150+08	152+62	155+14
Offset	P.S. -80	P.S. -111	P.S. -106	P.S. -106	P.S. -121
Lift No	2	2	2	2	2
Latitude (°N)	29.872010	29.872041	29.871975	29.871920	29.871908
Longitude (°W)	90.129189	90.128371	90.127616	90.126813	90.126019
Elevation (ft)	5.8	4.5	4.7	4.4	4.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27	25	24
Tare No	G114	G128	T7	T17	T63
Wet Soil + Tare Mass (g)	30.94	33.23	30.06	25.78	35.02
Dry Soil + Tare Mass (g)	25.03	27.12	26.17	21.61	29.02
Tare Mass (g)	16.14	17.88	19.75	14.71	19.30
Moisture Content (%)	66.5	66.1	61.2	60.4	61.4
Trial No 2 / Blow Count	26	25	28	25	24
Tare No	T106	T23	G109	G1116	T97
Wet Soil + Tare Mass (g)	30.89	29.44	31.51	29.12	34.46
Dry Soil + Tare Mass (g)	24.92	23.35	25.53	24.29	27.17
Tare Mass (g)	15.85	14.26	15.79	16.38	15.39
Moisture Content (%)	66.1	67.0	62.2	61.1	61.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T47	T103	T79	G102	G115
Wet Soil + Tare Mass (g)	26.02	27.50	26.57	30.99	29.39
Dry Soil + Tare Mass (g)	24.51	25.55	24.58	29.24	27.24
Tare Mass (g)	16.88	17.46	16.18	20.83	17.34
Moisture Content (%)	19.8	24.1	23.7	20.8	21.7
Trial No 2 / Tare No	T37	G113	T21	T104	T60
Wet Soil + Tare Mass (g)	26.21	29.36	27.59	29.45	33.54
Dry Soil + Tare Mass (g)	24.79	27.09	25.23	27.14	30.80
Tare Mass (g)	17.61	17.66	15.48	16.10	18.48
Moisture Content (%)	19.8	24.1	24.2	20.9	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	104.10	68.36	111.54	105.38	117.72
Dry Soil Mass after Washing (g)	3.20	4.73	4.23	2.97	4.35
Test Status					
Liquid Limit	**66**	**67**	**62**	**61**	**62**
Plastic Limit	**20**	**24**	**24**	**21**	**22**
Plasticity Index	**46**	**43**	**38**	**40**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	6.9	3.8	2.8	3.7
Fines (%)	96.9	93.1	96.2	97.2	96.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4479B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/25/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	635	636			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G-BR CLAY	G-BR CLAY			
Station	157+57	160+09			
Offset	P.S. -122	P.S. -134			
Lift No	2	2			
Latitude (°N)	29.871861	29.871840			
Longitude (°W)	90.125253	90.124458			
Elevation (ft)	4.0	3.8			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25			
Tare No	T39	T44			
Wet Soil + Tare Mass (g)	28.74	24.60			
Dry Soil + Tare Mass (g)	25.66	20.83			
Tare Mass (g)	20.80	14.97			
Moisture Content (%)	63.1	64.3			
Trial No 2 / Blow Count	24	25			
Tare No	T15	T71			
Wet Soil + Tare Mass (g)	32.60	32.14			
Dry Soil + Tare Mass (g)	26.04	27.28			
Tare Mass (g)	15.76	19.79			
Moisture Content (%)	63.5	64.9			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T22	T86			
Wet Soil + Tare Mass (g)	28.13	28.85			
Dry Soil + Tare Mass (g)	26.55	26.71			
Tare Mass (g)	18.98	16.67			
Moisture Content (%)	20.9	21.3			
Trial No 2 / Tare No	T18	G11			
Wet Soil + Tare Mass (g)	27.03	27.44			
Dry Soil + Tare Mass (g)	25.34	25.39			
Tare Mass (g)	17.30	15.99			
Moisture Content (%)	21.0	21.8			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.14	115.31			
Dry Soil Mass after Washing (g)	3.57	4.15			
Test Status					
Liquid Limit	**63**	**65**			
Plastic Limit	**21**	**22**			
Plasticity Index	**42**	**43**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.5	3.6			
Fines (%)	96.5	96.4			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4486
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	637	638	639	640	641
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	143+09	148+00	153+08	158+13	60+28
Offset	C/L	C/L	C/L	C/L	P.S. -11
Lift No	8	8	8	8	4
Latitude (°N)	29.871826	29.871726	29.871618	29.871519	29.886394
Longitude (°W)	90.129839	90.128293	90.126696	90.125108	90.137206
Elevation (ft)	12.2	12.3	12.2	12.2	7.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	25	28	26
Tare No	T38	T81	T105	G114	G128
Wet Soil + Tare Mass (g)	37.35	35.13	28.68	29.30	29.71
Dry Soil + Tare Mass (g)	29.26	29.23	23.60	23.98	24.91
Tare Mass (g)	16.82	20.76	15.60	16.15	17.88
Moisture Content (%)	64.7	70.0	63.5	68.9	68.6
Trial No 2 / Blow Count	24	27	25	28	27
Tare No	G112	G117	G110	T106	T23
Wet Soil + Tare Mass (g)	32.37	33.83	33.04	32.19	30.86
Dry Soil + Tare Mass (g)	26.64	26.67	26.26	25.59	24.11
Tare Mass (g)	17.75	16.24	15.69	15.86	14.24
Moisture Content (%)	64.1	69.3	64.1	68.8	69.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T5	T32	G126	T47	T103
Wet Soil + Tare Mass (g)	29.48	27.11	24.81	29.05	25.60
Dry Soil + Tare Mass (g)	27.59	25.35	23.44	26.81	24.00
Tare Mass (g)	19.25	17.64	16.68	16.86	17.40
Moisture Content (%)	22.7	22.8	20.3	22.5	24.2
Trial No 2 / Tare No	T89	T51	T92	T37	G113
Wet Soil + Tare Mass (g)	29.05	26.47	34.14	28.63	25.78
Dry Soil + Tare Mass (g)	27.32	24.81	32.68	26.61	24.16
Tare Mass (g)	19.58	17.46	25.48	17.59	17.62
Moisture Content (%)	22.4	22.6	20.3	22.4	24.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.13	110.68	90.78	105.77	107.32
Dry Soil Mass after Washing (g)	5.13	4.43	3.89	4.28	6.92
Test Status					
Liquid Limit	**64**	**70**	**64**	**69**	**69**
Plastic Limit	**23**	**23**	**20**	**22**	**25**
Plasticity Index	**41**	**47**	**44**	**47**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	4.0	4.3	4.0	6.4
Fines (%)	95.0	96.0	95.7	96.0	93.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4502
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	642	643	644	645	646
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY	G-BR CLAY
Station	142+62	163+11	168+05	173+13	178+29
Offset	P.S. -90	C/L	C/L	C/L	C/L
Lift No	2	8	8	8	8
Latitude (°N)	29.872090	29.871415	29.871296	29.871189	29.871041
Longitude (°W)	90.129965	90.123542	90.121988	90.120391	90.118776
Elevation (ft)	5.0	12.8	12.9	12.9	12.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	25	24
Tare No	G112	T83	T38	T105	G128
Wet Soil + Tare Mass (g)	27.83	31.10	29.73	30.13	28.38
Dry Soil + Tare Mass (g)	23.74	25.65	24.38	24.38	24.37
Tare Mass (g)	17.74	16.61	16.82	15.61	17.87
Moisture Content (%)	68.2	60.3	71.1	65.6	61.4
Trial No 2 / Blow Count	25	25	25	25	25
Tare No	T38	T80	G112	G110	T23
Wet Soil + Tare Mass (g)	31.75	29.36	33.60	34.02	29.24
Dry Soil + Tare Mass (g)	25.68	24.54	26.98	26.72	23.46
Tare Mass (g)	16.81	16.59	17.74	15.70	14.25
Moisture Content (%)	68.4	60.6	71.6	66.2	62.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T89	T68	G117	G114	T5
Wet Soil + Tare Mass (g)	36.06	28.87	25.61	24.63	28.89
Dry Soil + Tare Mass (g)	32.98	27.52	23.86	23.16	27.15
Tare Mass (g)	19.59	20.74	16.26	16.15	19.24
Moisture Content (%)	23.0	19.9	23.0	21.0	22.0
Trial No 2 / Tare No	T5	T34	T81	T106	T89
Wet Soil + Tare Mass (g)	36.94	26.45	28.80	23.60	27.94
Dry Soil + Tare Mass (g)	33.62	24.99	27.29	22.29	26.43
Tare Mass (g)	19.26	17.51	20.75	15.86	19.56
Moisture Content (%)	23.1	19.5	23.1	20.4	22.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	119.87	97.64	113.95	117.30	120.19
Dry Soil Mass after Washing (g)	5.98	5.04	4.17	5.12	4.08
Test Status					
Liquid Limit	**68**	**60**	**71**	**66**	**62**
Plastic Limit	**23**	**20**	**23**	**21**	**22**
Plasticity Index	**45**	**40**	**48**	**45**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	5.2	3.7	4.4	3.4
Fines (%)	95.0	94.8	96.5	95.6	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks	ID 642 PROCTOR				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4507
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	647	648			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. - BR. CLAY	G. - BR. CLAY			
Station	46+00	51+06			
Offset	C/L	C/L			
Lift No	5	5			
Latitude (°N)	29.886762	29.886488			
Longitude (°W)	90.141583	90.140019			
Elevation (ft)	8.8	8.9			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25			
Tare No	T12	T30			
Wet Soil + Tare Mass (g)	33.31	34.58			
Dry Soil + Tare Mass (g)	27.63	28.47			
Tare Mass (g)	19.62	20.25			
Moisture Content (%)	71.6	74.3			
Trial No 2 / Blow Count	27	25			
Tare No	T36	T43			
Wet Soil + Tare Mass (g)	30.75	34.30			
Dry Soil + Tare Mass (g)	25.67	27.56			
Tare Mass (g)	18.47	18.52			
Moisture Content (%)	71.2	74.6			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G106	T73			
Wet Soil + Tare Mass (g)	25.78	21.95			
Dry Soil + Tare Mass (g)	24.18	20.86			
Tare Mass (g)	17.41	15.84			
Moisture Content (%)	23.6	21.7			
Trial No 2 / Tare No	T1021	T25			
Wet Soil + Tare Mass (g)	23.09	23.66			
Dry Soil + Tare Mass (g)	21.58	22.40			
Tare Mass (g)	15.17	16.57			
Moisture Content (%)	23.6	21.6			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.00	82.21			
Dry Soil Mass after Washing (g)	5.03	4.61			
Test Status					
Liquid Limit	**71**	**74**			
Plastic Limit	**24**	**22**			
Plasticity Index	**47**	**52**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.5	5.6			
Fines (%)	95.5	94.4			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4518
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	649	650	651	652	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	41+05	36+90	26+19	31+00	
Offset	C/L	C/L	F.S. +8	P.S. -7	
Lift No	5	5	5	5	
Latitude (°N)	29.887028	29.887270	29.887838	29.887612	
Longitude (°W)	90.143117	90.144395	90.147715	90.146217	
Elevation (ft)	8.9	8.8	8.5	8.6	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	27	26	
Tare No	T70	T94	T41	T37	
Wet Soil + Tare Mass (g)	30.09	25.76	31.31	29.82	
Dry Soil + Tare Mass (g)	25.08	21.25	26.10	24.81	
Tare Mass (g)	18.68	15.60	19.39	17.59	
Moisture Content (%)	79.0	80.2	78.4	69.7	
Trial No 2 / Blow Count	28	27	28	26	
Tare No	T99	T46	T50	T47	
Wet Soil + Tare Mass (g)	32.04	32.13	34.17	31.01	
Dry Soil + Tare Mass (g)	25.27	26.71	27.59	25.21	
Tare Mass (g)	16.58	19.90	19.12	16.85	
Moisture Content (%)	79.0	80.3	78.8	69.7	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T61	T28	T91	G113	
Wet Soil + Tare Mass (g)	22.72	23.86	25.95	25.40	
Dry Soil + Tare Mass (g)	21.22	22.75	24.62	23.93	
Tare Mass (g)	15.73	17.85	19.74	17.64	
Moisture Content (%)	27.3	22.7	27.3	23.4	
Trial No 2 / Tare No	T87	T104	T14	T103	
Wet Soil + Tare Mass (g)	26.84	23.91	21.93	25.22	
Dry Soil + Tare Mass (g)	25.36	22.80	20.50	23.79	
Tare Mass (g)	19.90	17.74	15.26	17.44	
Moisture Content (%)	27.1	21.9	27.3	22.5	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	85.18	81.43	115.60	85.15	
Dry Soil Mass after Washing (g)	5.74	5.61	5.98	5.47	
Test Status					
Liquid Limit	**79**	**80**	**79**	**70**	
Plastic Limit	**27**	**22**	**27**	**23**	
Plasticity Index	**52**	**58**	**52**	**47**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	6.7	6.9	5.2	6.4	
Fines (%)	93.3	93.1	94.8	93.6	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4524A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	653	654	655	656	657
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	1+40	6+54	10+95	16+63	22+05
Offset	P.S. -7	P.S. -6	F.S. +8	C/L	C/L
Lift No	4	4	4	5	5
Latitude (°N)	29.889192	29.888968	29.888684	29.888387	29.888078
Longitude (°W)	90.155381	90.153777	90.152423	90.150665	90.148991
Elevation (ft)	8.2	8.4	8.2	9.0	9.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	27	24	25	26
Tare No	T70	T94	T41	T37	T1021
Wet Soil + Tare Mass (g)	30.68	27.64	35.32	30.49	30.60
Dry Soil + Tare Mass (g)	25.47	22.60	28.81	25.05	24.03
Tare Mass (g)	18.47	15.61	19.38	17.60	15.17
Moisture Content (%)	73.7	72.8	68.7	73.0	74.5
Trial No 2 / Blow Count	23	26	24	26	26
Tare No	T99	T96	T50	T47	G106
Wet Soil + Tare Mass (g)	31.04	30.60	34.72	33.64	33.35
Dry Soil + Tare Mass (g)	24.76	26.11	28.33	26.55	26.55
Tare Mass (g)	16.37	19.90	19.12	16.85	17.41
Moisture Content (%)	74.1	72.6	69.0	73.4	74.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T61	T104	T41	G113	T36
Wet Soil + Tare Mass (g)	24.97	26.48	23.17	24.43	27.09
Dry Soil + Tare Mass (g)	23.31	24.97	21.74	23.17	25.39
Tare Mass (g)	15.74	17.74	15.25	17.65	18.47
Moisture Content (%)	21.9	20.9	22.0	22.8	24.6
Trial No 2 / Tare No	T87	T28	T91	T103	T12
Wet Soil + Tare Mass (g)	27.76	25.88	27.78	25.24	29.25
Dry Soil + Tare Mass (g)	26.34	24.47	26.35	23.79	27.32
Tare Mass (g)	19.90	17.84	19.73	17.45	19.62
Moisture Content (%)	22.0	21.3	21.6	22.9	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	122.50	115.93	116.16	93.16	108.99
Dry Soil Mass after Washing (g)	4.11	3.82	6.27	5.24	7.41
Test Status					
Liquid Limit	**74**	**73**	**69**	**73**	**75**
Plastic Limit	**22**	**21**	**22**	**23**	**25**
Plasticity Index	**52**	**52**	**47**	**50**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	3.3	5.4	5.6	6.8
Fines (%)	96.6	96.7	94.6	94.4	93.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4524B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	4/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	658				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. - BR. CLAY				
Station	55+75				
Offset	P.S. -8				
Lift No	1				
Latitude (°N)	29.886634				
Longitude (°W)	90.138608				
Elevation (ft)	4.4				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24				
Tare No	T27				
Wet Soil + Tare Mass (g)	33.33				
Dry Soil + Tare Mass (g)	28.48				
Tare Mass (g)	19.96				
Moisture Content (%)	56.6				
Trial No 2 / Blow Count	24				
Tare No	G101				
Wet Soil + Tare Mass (g)	34.09				
Dry Soil + Tare Mass (g)	28.80				
Tare Mass (g)	19.27				
Moisture Content (%)	55.2				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T16				
Wet Soil + Tare Mass (g)	30.67				
Dry Soil + Tare Mass (g)	28.83				
Tare Mass (g)	19.98				
Moisture Content (%)	20.8				
Trial No 2 / Tare No	T42				
Wet Soil + Tare Mass (g)	29.80				
Dry Soil + Tare Mass (g)	27.53				
Tare Mass (g)	16.57				
Moisture Content (%)	20.7				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.03				
Dry Soil Mass after Washing (g)	17.31				
Test Status					
Liquid Limit	**56**				
Plastic Limit	**21**				
Plasticity Index	**35**				
Gravel Content (%)	0.0				
Sand Content (%)	17.0				
Fines (%)	83.0				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4527A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	659	660	661	662	663
Retest of Test ID		4486+637	4486+639	4479B+636	
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	56+39	143+09	153+08	160+09	179+92
Offset	C/L	C/L	C/L	P.S. -134	P.S. -66
Lift No	2	8	8	2	2
Latitude (°N)	29.886562	29.871826	29.871618	29.871840	29.871118
Longitude (°W)	90.138421	90.129839	90.126696	90.124458	90.118224
Elevation (ft)	5.2	11.7	12.0	3.8	6.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	27	25	27
Tare No	T94	T50	T37	T1021	T27
Wet Soil + Tare Mass (g)	29.18	30.70	28.93	24.04	29.95
Dry Soil + Tare Mass (g)	24.14	26.19	24.45	20.54	25.75
Tare Mass (g)	15.60	19.13	17.59	15.18	19.97
Moisture Content (%)	59.3	64.5	65.9	65.3	73.3
Trial No 2 / Blow Count	26	28	27	24	27
Tare No	T46	T41	T47	G106	G101
Wet Soil + Tare Mass (g)	35.73	33.43	32.41	33.02	37.36
Dry Soil + Tare Mass (g)	29.87	27.93	26.25	26.86	29.73
Tare Mass (g)	19.90	19.37	16.85	17.42	19.28
Moisture Content (%)	59.1	65.1	66.1	64.9	73.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T14	G113	T36	T16
Wet Soil + Tare Mass (g)	26.54	22.08	26.25	27.34	26.83
Dry Soil + Tare Mass (g)	25.02	20.93	24.88	25.91	25.63
Tare Mass (g)	17.94	15.25	17.64	18.47	19.97
Moisture Content (%)	21.5	20.2	18.9	19.2	21.2
Trial No 2 / Tare No	T104	T91	T103	T12	T42
Wet Soil + Tare Mass (g)	25.47	27.87	26.29	30.33	25.40
Dry Soil + Tare Mass (g)	24.11	26.50	24.86	28.62	23.83
Tare Mass (g)	17.74	19.73	17.44	19.62	16.56
Moisture Content (%)	21.4	20.2	19.3	19.0	21.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	106.85	95.71	108.07	103.32	104.47
Dry Soil Mass after Washing (g)	15.82	5.18	4.00	6.80	4.45
Test Status					
Liquid Limit	**59**	**65**	**66**	**65**	**74**
Plastic Limit	**21**	**20**	**19**	**19**	**21**
Plasticity Index	**38**	**45**	**47**	**46**	**53**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	14.8	5.4	3.7	6.6	4.3
Fines (%)	85.2	94.6	96.3	93.4	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4527B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	664	665	666	667	668
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	177+55	175+12	172+64	170+00	167+50
Offset	P.S. -67	P.S. -56	P.S. -68	P.S. -61	P.S. -84
Lift No	2	2	2	2	2
Latitude (°N)	29.871279	29.871307	29.871390	29.871428	29.871544
Longitude (°W)	90.118950	90.119749	90.120528	90.121359	90.122139
Elevation (ft)	6.6	6.4	6.3	6.6	5.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	25	23
Tare No	G103	T67	T10	T72	T74
Wet Soil + Tare Mass (g)	28.45	33.94	29.72	34.24	32.67
Dry Soil + Tare Mass (g)	24.93	27.89	23.81	29.74	27.02
Tare Mass (g)	19.63	18.94	15.49	23.31	19.78
Moisture Content (%)	66.4	67.6	71.0	70.0	77.3
Trial No 2 / Blow Count	26	24	25	25	23
Tare No	T20	G118	T66	T84	T1022
Wet Soil + Tare Mass (g)	29.39	31.33	29.19	37.07	37.66
Dry Soil + Tare Mass (g)	24.78	25.00	23.38	30.88	29.80
Tare Mass (g)	17.83	15.56	15.28	22.08	19.72
Moisture Content (%)	66.6	66.7	71.7	70.3	77.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T45	T24	T33	T6	T32
Wet Soil + Tare Mass (g)	26.90	21.09	22.29	30.48	26.50
Dry Soil + Tare Mass (g)	25.35	19.72	20.77	27.93	24.74
Tare Mass (g)	19.20	13.79	14.92	19.16	17.64
Moisture Content (%)	25.2	23.1	26.0	29.1	24.8
Trial No 2 / Tare No	T75	T19	T9	G107	T92
Wet Soil + Tare Mass (g)	24.06	24.17	27.75	25.75	37.21
Dry Soil + Tare Mass (g)	22.49	22.99	26.10	23.04	34.85
Tare Mass (g)	16.16	17.79	19.69	13.78	25.47
Moisture Content (%)	24.8	22.7	25.7	29.3	25.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	112.56	111.65	110.26	110.50	86.84
Dry Soil Mass after Washing (g)	7.62	6.21	10.28	5.47	3.37
Test Status					
Liquid Limit	**67**	**67**	**71**	**70**	**77**
Plastic Limit	**25**	**23**	**26**	**29**	**25**
Plasticity Index	**42**	**44**	**45**	**41**	**52**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.8	5.6	9.3	5.0	3.9
Fines (%)	93.2	94.4	90.7	95.0	96.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4527C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	669	670			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. - BR. CLAY	G. - BR. CLAY			
Station	165+02	162+53			
Offset	P.S. -73	P.S. -80			
Lift No	2	2			
Latitude (°N)	29.871567	29.871638			
Longitude (°W)	90.122925	90.123703			
Elevation (ft)	6.0	6.2			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25			
Tare No	G126	G109			
Wet Soil + Tare Mass (g)	30.51	27.85			
Dry Soil + Tare Mass (g)	24.57	22.78			
Tare Mass (g)	16.68	15.79			
Moisture Content (%)	75.6	72.5			
Trial No 2 / Blow Count	25	26			
Tare No	T51	T7			
Wet Soil + Tare Mass (g)	34.22	35.83			
Dry Soil + Tare Mass (g)	27.01	29.04			
Tare Mass (g)	17.47	19.74			
Moisture Content (%)	75.6	73.4			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T30	T73			
Wet Soil + Tare Mass (g)	32.12	28.06			
Dry Soil + Tare Mass (g)	29.76	25.89			
Tare Mass (g)	20.25	15.84			
Moisture Content (%)	24.8	21.6			
Trial No 2 / Tare No	T43	T25			
Wet Soil + Tare Mass (g)	29.45	28.92			
Dry Soil + Tare Mass (g)	27.27	26.73			
Tare Mass (g)	18.51	16.56			
Moisture Content (%)	24.9	21.5			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.79	86.50			
Dry Soil Mass after Washing (g)	4.60	5.96			
Test Status					
Liquid Limit	**76**	**73**			
Plastic Limit	**25**	**22**			
Plasticity Index	**51**	**51**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	4.0	6.9			
Fines (%)	96.0	93.1			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4533A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	671	672	673	674	675
Retest of Test ID			4524A+653	4524A+654	
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	101+01	106+00	1+40	6+54	98+05
Offset	P.S. -135	P.S. -128	P.S. -16	P.S. -6	P.S. -138
Lift No	3	3	4	4	4
Latitude (°N)	29.876713	29.875388	29.889192	29.888968	29.877484
Longitude (°W)	90.137089	90.137483	90.155381	90.153777	90.136829
Elevation (ft)	2.6	2.1	8.2	8.4	3.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25	24	27	27
Tare No	T1022	T51	G109	T99	T94
Wet Soil + Tare Mass (g)	32.33	28.65	29.03	29.19	28.35
Dry Soil + Tare Mass (g)	27.35	24.22	23.47	23.94	23.12
Tare Mass (g)	19.73	17.50	15.79	16.57	15.60
Moisture Content (%)	66.3	65.9	72.0	71.9	70.2
Trial No 2 / Blow Count	28	25	23	27	28
Tare No	T74	G126	T7	T70	T46
Wet Soil + Tare Mass (g)	32.06	32.28	34.69	36.84	37.69
Dry Soil + Tare Mass (g)	27.22	26.06	28.33	29.29	30.40
Tare Mass (g)	19.78	16.72	19.76	18.67	19.90
Moisture Content (%)	66.0	66.6	73.5	71.8	70.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T32	T43	T25	T61	T104
Wet Soil + Tare Mass (g)	24.75	26.35	23.51	22.32	24.37
Dry Soil + Tare Mass (g)	23.39	25.06	22.09	21.08	23.07
Tare Mass (g)	17.66	18.51	16.57	15.72	17.74
Moisture Content (%)	23.7	19.7	25.7	23.1	24.4
Trial No 2 / Tare No	T92	T30	T73	T87	T28
Wet Soil + Tare Mass (g)	32.05	27.57	22.27	26.58	24.22
Dry Soil + Tare Mass (g)	30.80	26.38	20.93	25.33	22.94
Tare Mass (g)	25.48	20.24	15.85	19.88	17.79
Moisture Content (%)	23.5	19.4	26.4	22.9	24.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.78	94.36	101.61	99.01	96.79
Dry Soil Mass after Washing (g)	5.60	4.19	7.88	3.90	4.18
Test Status					
Liquid Limit	**66**	**66**	**73**	**72**	**70**
Plastic Limit	**24**	**20**	**26**	**23**	**25**
Plasticity Index	**42**	**46**	**47**	**49**	**45**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	4.4	7.8	3.9	4.3
Fines (%)	95.0	95.6	92.2	96.1	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4533B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	676				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. - BR. CLAY				
Station	92+96				
Offset	P.S. -138				
Lift No	5				
Latitude (°N)	29.878827				
Longitude (°W)	90.136373				
Elevation (ft)	2.6				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	T50				
Wet Soil + Tare Mass (g)	28.53				
Dry Soil + Tare Mass (g)	24.64				
Tare Mass (g)	19.14				
Moisture Content (%)	71.4				
Trial No 2 / Blow Count	27				
Tare No	T41				
Wet Soil + Tare Mass (g)	35.97				
Dry Soil + Tare Mass (g)	29.11				
Tare Mass (g)	19.39				
Moisture Content (%)	71.2				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T14				
Wet Soil + Tare Mass (g)	22.99				
Dry Soil + Tare Mass (g)	21.39				
Tare Mass (g)	15.26				
Moisture Content (%)	26.1				
Trial No 2 / Tare No	T91				
Wet Soil + Tare Mass (g)	27.61				
Dry Soil + Tare Mass (g)	25.98				
Tare Mass (g)	19.75				
Moisture Content (%)	26.2				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	116.25				
Dry Soil Mass after Washing (g)	4.88				
Test Status					
Liquid Limit	**71**				
Plastic Limit	**26**				
Plasticity Index	**45**				
Gravel Content (%)	0.0				
Sand Content (%)	4.2				
Fines (%)	95.8				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4546
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	677	678	679	680	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	89+01	84+02	78+97	56+60	
Offset	P.S. -127	P.S. -136	P.S. -152	C/L	
Lift No	5	5	4	3	
Latitude (°N)	29.879873	29.881182	29.882501	29.886559	
Longitude (°W)	90.136049	90.135572	90.135070	90.138355	
Elevation (ft)	2.9	2.8	1.6	6.0	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27	26	
Tare No	T61	T91	T50	T25	
Wet Soil + Tare Mass (g)	26.12	33.25	36.30	29.07	
Dry Soil + Tare Mass (g)	22.04	27.96	29.17	23.87	
Tare Mass (g)	15.72	19.73	19.13	16.56	
Moisture Content (%)	64.6	64.3	71.7	71.5	
Trial No 2 / Blow Count	25	24	28	26	
Tare No	T87	T14	T41	T73	
Wet Soil + Tare Mass (g)	34.36	33.37	35.88	31.95	
Dry Soil + Tare Mass (g)	28.70	26.31	29.01	25.25	
Tare Mass (g)	19.88	15.25	19.36	15.83	
Moisture Content (%)	64.2	63.5	72.2	71.5	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T94	T99	T73	
Wet Soil + Tare Mass (g)	24.97	27.99	25.62	26.40	
Dry Soil + Tare Mass (g)	23.67	25.84	23.74	25.16	
Tare Mass (g)	17.83	15.65	16.59	19.77	
Moisture Content (%)	22.3	21.1	26.3	23.0	
Trial No 2 / Tare No	T104	T46	T70	G109	
Wet Soil + Tare Mass (g)	23.21	31.03	28.01	22.57	
Dry Soil + Tare Mass (g)	22.22	29.07	26.05	21.29	
Tare Mass (g)	17.74	19.90	18.68	15.79	
Moisture Content (%)	22.1	21.4	26.6	23.3	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.12	87.01	84.18	102.75	
Dry Soil Mass after Washing (g)	6.34	3.50	3.58	10.34	
Test Status					
Liquid Limit	**64**	**64**	**72**	**71**	
Plastic Limit	**22**	**21**	**26**	**23**	
Plasticity Index	**42**	**43**	**46**	**48**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	5.9	4.0	4.3	10.1	
Fines (%)	94.1	96.0	95.7	89.9	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4558A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	681	682	683	684	685
Retest of Test ID	4533A+673				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	1+40	58+90	54+04	49+03	44+01
Offset	P.S. -16	F.S. +14	C/L	P.S. -5	C/L
Lift No	4	5	6	6	6
Latitude (°N)	29.889192	29.886400	29.886496	29.886602	29.886880
Longitude (°W)	90.155381	90.137648	90.139100	90.140645	90.142199
Elevation (ft)	8.2	8.1	9.8	9.7	9.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	27	25	27
Tare No	T84	T66	G118	G116	T1022
Wet Soil + Tare Mass (g)	51.67	46.18	43.16	50.34	44.29
Dry Soil + Tare Mass (g)	38.97	32.88	31.54	37.43	34.85
Tare Mass (g)	22.08	15.30	15.56	16.37	19.76
Moisture Content (%)	75.6	75.7	73.4	61.3	63.1
Trial No 2 / Blow Count	26	26	27	26	28
Tare No	T33	T24	T21	G104	T72
Wet Soil + Tare Mass (g)	40.11	39.72	33.91	45.55	50.97
Dry Soil + Tare Mass (g)	29.29	28.63	26.15	34.33	40.37
Tare Mass (g)	14.91	13.79	15.49	16.11	23.32
Moisture Content (%)	75.6	75.1	73.5	61.9	63.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T9	T19	T79	G102	G107
Wet Soil + Tare Mass (g)	31.97	29.22	26.93	32.09	25.04
Dry Soil + Tare Mass (g)	29.76	27.02	24.90	30.13	23.07
Tare Mass (g)	19.69	17.81	16.18	20.83	13.85
Moisture Content (%)	21.9	23.9	23.3	21.1	21.4
Trial No 2 / Tare No	T10	T67	T17	T63	T6
Wet Soil + Tare Mass (g)	27.65	31.64	25.36	30.89	30.35
Dry Soil + Tare Mass (g)	25.46	29.19	23.36	28.91	28.41
Tare Mass (g)	15.49	18.93	14.71	19.34	19.17
Moisture Content (%)	22.0	23.9	23.1	20.7	21.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	88.43	69.08	104.69	91.93	60.24
Dry Soil Mass after Washing (g)	3.34	3.36	2.95	2.70	1.79
Test Status					
Liquid Limit	**76**	**75**	**73**	**62**	**63**
Plastic Limit	**22**	**24**	**23**	**21**	**21**
Plasticity Index	**54**	**51**	**50**	**41**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.8	4.9	2.8	2.9	3.0
Fines (%)	96.2	95.1	97.2	97.1	97.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4558B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	686	687	688	689	690
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	39+00	34+00	29+02	24+02	19+02
Offset	P.S. -11	P.S. -11	P.S. -8	C/L	C/L
Lift No	6	6	6	6	6
Latitude (°N)	29.887177	29.887455	29.887725	29.887993	29.888247
Longitude (°W)	90.143741	90.145287	90.146827	90.148375	90.149926
Elevation (ft)	9.7	9.9	9.8	9.8	9.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	25	26	25
Tare No	T32	T97	T50	T14	T38
Wet Soil + Tare Mass (g)	46.01	45.09	31.53	31.69	32.84
Dry Soil + Tare Mass (g)	34.69	33.59	26.61	26.07	25.44
Tare Mass (g)	17.67	15.40	19.14	15.26	16.84
Moisture Content (%)	66.8	63.8	65.9	52.2	86.0
Trial No 2 / Blow Count	25	28	25	26	26
Tare No	G126	T70	T41	T104	G112
Wet Soil + Tare Mass (g)	52.68	41.52	37.72	31.90	31.04
Dry Soil + Tare Mass (g)	38.30	32.70	30.44	26.19	24.91
Tare Mass (g)	16.72	18.67	19.39	17.74	17.73
Moisture Content (%)	66.6	63.7	65.9	67.9	85.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T91	T51	T30	T7	T99
Wet Soil + Tare Mass (g)	33.45	30.15	28.66	32.59	28.69
Dry Soil + Tare Mass (g)	32.04	27.99	27.21	30.42	26.26
Tare Mass (g)	25.48	17.49	20.26	19.76	16.59
Moisture Content (%)	21.5	20.6	20.9	20.4	25.1
Trial No 2 / Tare No	T74	T43	G109	T73	T25
Wet Soil + Tare Mass (g)	27.80	29.76	22.66	26.86	30.24
Dry Soil + Tare Mass (g)	26.39	27.82	21.46	25.01	27.49
Tare Mass (g)	19.77	18.52	15.79	15.88	16.58
Moisture Content (%)	21.3	20.9	21.2	20.3	25.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	97.62	76.20	113.40	105.05	110.15
Dry Soil Mass after Washing (g)	5.03	2.75	4.97	3.59	4.54
Test Status					
Liquid Limit	**67**	**64**	**66**	**60**	**86**
Plastic Limit	**21**	**21**	**21**	**20**	**25**
Plasticity Index	**46**	**43**	**45**	**40**	**61**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.2	3.6	4.4	3.4	4.1
Fines (%)	94.8	96.4	95.6	96.6	95.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4558C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	691	692	693		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	55+61	14+06	9+02		
Offset	F.S. +6	C/L	C/L		
Lift No	4	5	5		
Latitude (°N)	29.886602	29.888534	29.888813		
Longitude (°W)	90.138661	90.151457	90.153015		
Elevation (ft)	7.1	8.9	9.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	25		
Tare No	T69	G127	T85		
Wet Soil + Tare Mass (g)	40.06	37.56	51.98		
Dry Soil + Tare Mass (g)	31.85	30.37	39.45		
Tare Mass (g)	19.60	19.00	17.50		
Moisture Content (%)	66.3	63.5	57.1		
Trial No 2 / Blow Count	23	26	25		
Tare No	T78	T82	T107		
Wet Soil + Tare Mass (g)	33.88	34.96	50.18		
Dry Soil + Tare Mass (g)	27.48	28.48	38.61		
Tare Mass (g)	17.88	18.25	18.29		
Moisture Content (%)	66.0	63.6	56.9		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T94	T91	T87		
Wet Soil + Tare Mass (g)	22.70	28.41	29.17		
Dry Soil + Tare Mass (g)	21.33	26.82	27.47		
Tare Mass (g)	15.61	19.77	19.88		
Moisture Content (%)	24.0	22.6	22.4		
Trial No 2 / Tare No	T46	T28	T61		
Wet Soil + Tare Mass (g)	27.82	25.70	25.08		
Dry Soil + Tare Mass (g)	26.30	24.27	23.38		
Tare Mass (g)	19.89	17.83	15.72		
Moisture Content (%)	23.7	22.2	22.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.39	88.96	66.68		
Dry Soil Mass after Washing (g)	13.26	3.23	2.63		
Test Status					
Liquid Limit	**66**	**64**	**57**		
Plastic Limit	**24**	**22**	**22**		
Plasticity Index	**42**	**42**	**35**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	12.0	3.6	3.9		
Fines (%)	88.0	96.4	96.1		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4566
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/52011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	694	695	696		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	109+54	106+00	70+95		
Offset	P.S. -164	F.S. +128	P.S. -144		
Lift No	1	3	4		
Latitude (°N)	29.874418	29.875388	29.884620		
Longitude (°W)	90.137648	90.137483	90.134371		
Elevation (ft)	-0.6	2.1	2.2		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	26		
Tare No	T-84	T-66	G-112		
Wet Soil + Tare Mass (g)	40.94	29.77	34.84		
Dry Soil + Tare Mass (g)	33.34	23.87	27.61		
Tare Mass (g)	22.10	15.29	17.74		
Moisture Content (%)	66.9	68.8	73.6		
Trial No 2 / Blow Count	24	25	25		
Tare No	T-33	T-24	G-118		
Wet Soil + Tare Mass (g)	32.15	30.48	28.68		
Dry Soil + Tare Mass (g)	25.19	23.67	23.10		
Tare Mass (g)	14.93	13.80	15.56		
Moisture Content (%)	67.5	69.0	74.0		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-10	T-67	T-21		
Wet Soil + Tare Mass (g)	23.11	27.14	23.17		
Dry Soil + Tare Mass (g)	21.68	25.75	21.61		
Tare Mass (g)	15.50	19.92	15.49		
Moisture Content (%)	23.1	23.8	25.5		
Trial No 2 / Tare No	T-9	T-19	T-17		
Wet Soil + Tare Mass (g)	27.10	25.22	22.82		
Dry Soil + Tare Mass (g)	25.70	23.80	21.16		
Tare Mass (g)	19.71	17.81	14.71		
Moisture Content (%)	23.4	23.7	25.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	101.82	104.74	107.99		
Dry Soil Mass after Washing (g)	3.49	5.27	4.55		
Test Status					
Liquid Limit	**67**	**69**	**74**		
Plastic Limit	**23**	**24**	**26**		
Plasticity Index	**44**	**45**	**48**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.4	5.0	4.2		
Fines (%)	96.6	95.0	95.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4572
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	697	698	699	700	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	2+08	4+50	6+83	9+50	
Offset	P.S. -107	P.S. -103	P.S. -116	P.S. -123	
Lift No	2	2	2	2	
Latitude (°N)	29.889487	29.889342	29.889249	29.889119	
Longitude (°W)	90.155091	90.154348	90.153617	90.152789	
Elevation (ft)	2.2	2.2	1.7	1.6	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	26	25	
Tare No	T46	T85	G115	G125	
Wet Soil + Tare Mass (g)	31.66	31.56	39.43	41.70	
Dry Soil + Tare Mass (g)	27.19	26.41	30.78	33.61	
Tare Mass (g)	19.89	17.51	17.35	20.59	
Moisture Content (%)	61.2	58.1	64.7	62.1	
Trial No 2 / Blow Count	26	25	26	25	
Tare No	T94	T107	T76	T35	
Wet Soil + Tare Mass (g)	25.73	34.01	37.59	39.16	
Dry Soil + Tare Mass (g)	21.92	28.24	29.21	30.19	
Tare Mass (g)	15.59	18.29	16.13	15.54	
Moisture Content (%)	60.5	58.0	64.4	61.2	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T78	T82	T91	T87	
Wet Soil + Tare Mass (g)	29.49	29.99	31.75	32.74	
Dry Soil + Tare Mass (g)	27.28	27.69	29.35	30.42	
Tare Mass (g)	17.89	18.26	19.73	19.88	
Moisture Content (%)	23.5	24.4	24.9	22.0	
Trial No 2 / Tare No	T69	G127	T28	T61	
Wet Soil + Tare Mass (g)	33.64	28.49	28.30	31.83	
Dry Soil + Tare Mass (g)	30.95	26.67	26.22	29.02	
Tare Mass (g)	19.62	18.99	17.84	15.72	
Moisture Content (%)	23.7	23.7	24.8	21.1	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	92.81	93.39	70.92	87.94	
Dry Soil Mass after Washing (g)	3.28	2.99	2.45	3.01	
Test Status					
Liquid Limit	**61**	**58**	**65**	**62**	
Plastic Limit	**24**	**24**	**25**	**22**	
Plasticity Index	**37**	**34**	**40**	**40**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.5	3.2	3.5	3.4	
Fines (%)	96.5	96.8	96.5	96.6	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4583
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	701	702	703	704	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	
Station	3+04	120+89	122+97	124+99	
Offset	P.S. -7	P.S. -111	P.S. -82	P.S. -110	
Lift No	5	3	3	3	
Latitude (°N)	29.889163	29.872655	29.872528	29.872558	
Longitude (°W)	90.154879	90.136789	90.136143	90.135500	
Elevation (ft)	9.0	5.3	6.3	5.3	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	24	25	25	
Tare No	G116	T19	T82	T71	
Wet Soil + Tare Mass (g)	30.07	31.83	31.73	36.37	
Dry Soil + Tare Mass (g)	24.72	26.47	26.68	30.43	
Tare Mass (g)	16.39	17.80	18.26	19.79	
Moisture Content (%)	64.8	61.5	60.0	55.8	
Trial No 2 / Blow Count	27	24	25	26	
Tare No	G109	T67	T10	T60	
Wet Soil + Tare Mass (g)	30.85	36.61	32.89	31.43	
Dry Soil + Tare Mass (g)	24.98	29.83	26.34	26.75	
Tare Mass (g)	15.81	18.92	15.49	18.48	
Moisture Content (%)	64.6	61.8	60.4	56.9	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T17	G112	T34	T50	
Wet Soil + Tare Mass (g)	21.32	26.29	26.00	26.50	
Dry Soil + Tare Mass (g)	20.09	24.76	24.56	25.20	
Tare Mass (g)	14.70	17.72	17.50	19.12	
Moisture Content (%)	22.8	21.7	20.4	21.4	
Trial No 2 / Tare No	T21	G118	T8	T84	
Wet Soil + Tare Mass (g)	21.96	24.14	28.61	29.73	
Dry Soil + Tare Mass (g)	20.79	22.60	27.22	28.38	
Tare Mass (g)	15.48	15.54	20.24	22.08	
Moisture Content (%)	22.0	21.8	19.9	21.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.93	125.22	104.62	100.12	
Dry Soil Mass after Washing (g)	3.85	4.25	3.69	3.60	
Test Status					
Liquid Limit	**65**	**62**	**60**	**56**	
Plastic Limit	**22**	**22**	**20**	**21**	
Plasticity Index	**43**	**40**	**40**	**35**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.7	3.4	3.5	3.6	
Fines (%)	96.3	96.6	96.5	96.4	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4596
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/10/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	705	706	707		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY		
Station	3+00	8+00	12+93		
Offset	C/L	C/L	C/L		
Lift No	6	6	6		
Latitude (°N)	29.889140	29.888864	29.888589		
Longitude (°W)	90.154875	90.153332	90.151806		
Elevation (ft)	9.8	9.8	9.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	24		
Tare No	T65	T70	T74		
Wet Soil + Tare Mass (g)	33.76	30.83	31.15		
Dry Soil + Tare Mass (g)	27.45	26.51	26.74		
Tare Mass (g)	17.60	18.68	19.77		
Moisture Content (%)	64.4	55.4	63.0		
Trial No 2 / Blow Count	26	26	23		
Tare No	T33	G126	T6		
Wet Soil + Tare Mass (g)	29.83	32.86	35.67		
Dry Soil + Tare Mass (g)	24.00	27.15	29.25		
Tare Mass (g)	14.91	16.69	19.18		
Moisture Content (%)	64.4	54.8	63.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T51	T92	G107		
Wet Soil + Tare Mass (g)	24.25	32.84	21.72		
Dry Soil + Tare Mass (g)	22.88	31.47	20.09		
Tare Mass (g)	17.48	25.46	13.79		
Moisture Content (%)	25.4	22.8	25.9		
Trial No 2 / Tare No	T9	T97	T32		
Wet Soil + Tare Mass (g)	26.17	22.50	24.65		
Dry Soil + Tare Mass (g)	24.87	21.13	23.24		
Tare Mass (g)	19.68	15.38	17.65		
Moisture Content (%)	25.0	23.8	25.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	109.61	117.85	110.86		
Dry Soil Mass after Washing (g)	7.94	4.44	3.53		
Test Status					
Liquid Limit	**64**	**55**	**63**		
Plastic Limit	**25**	**23**	**26**		
Plasticity Index	**39**	**32**	**37**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	7.2	3.8	3.2		
Fines (%)	92.8	96.2	96.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4605A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	708	709	710	711	712
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY	G. - BR. CLAY
Station	127+00	128+97	130+91	133+14	135+19
Offset	P.S. -64	P.S. -92	P.S. -104	P.S. -63	P.S. -73
Lift No	3	3	3	3	3
Latitude (°N)	29.872382	29.872414	29.872403	29.872237	29.872217
Longitude (°W)	90.134882	90.134253	90.133640	90.132950	90.132301
Elevation (ft)	6.8	5.9	5.6	6.8	6.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	26	26	27
Tare No	T33	G126	T74	T72	T63
Wet Soil + Tare Mass (g)	27.53	36.00	33.13	35.95	34.00
Dry Soil + Tare Mass (g)	22.94	28.71	27.91	31.18	28.53
Tare Mass (g)	14.91	16.69	19.76	23.30	19.34
Moisture Content (%)	57.7	60.9	64.4	60.8	60.1
Trial No 2 / Blow Count	28	27	27	26	28
Tare No	T65	T70	T6	T1022	T7
Wet Soil + Tare Mass (g)	36.69	34.66	34.70	32.25	32.11
Dry Soil + Tare Mass (g)	29.72	28.57	28.61	27.52	27.48
Tare Mass (g)	17.60	18.67	19.16	19.73	19.75
Moisture Content (%)	58.3	62.1	65.0	61.0	60.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T9	T92	G107	G102	T73
Wet Soil + Tare Mass (g)	27.48	32.53	21.02	28.86	27.41
Dry Soil + Tare Mass (g)	26.02	31.14	19.58	27.44	25.48
Tare Mass (g)	19.69	25.46	13.79	20.82	16.84
Moisture Content (%)	23.1	24.5	24.9	21.5	22.3
Trial No 2 / Tare No	T51	T97	T32	T104	T79
Wet Soil + Tare Mass (g)	25.77	23.16	25.39	25.60	28.30
Dry Soil + Tare Mass (g)	24.21	21.66	23.85	24.23	26.10
Tare Mass (g)	17.48	15.38	17.65	17.73	16.19
Moisture Content (%)	23.2	23.9	24.8	21.1	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.92	94.21	7.36	89.37	107.44
Dry Soil Mass after Washing (g)	3.35	2.58	2.04	2.94	3.85
Test Status					
Liquid Limit	**58**	**62**	**65**	**61**	**60**
Plastic Limit	**23**	**24**	**25**	**21**	**22**
Plasticity Index	**35**	**38**	**40**	**40**	**38**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	96.8	97.3	97.2	96.7	96.4
Fines (%)	3.2	2.7	2.8	3.3	3.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4605B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	713				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. - BR. CLAY				
Station	137+09				
Offset	P.S. -88				
Lift No	3				
Latitude (°N)	29.872212				
Longitude (°W)	90.131701				
Elevation (ft)	6.0				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	G109				
Wet Soil + Tare Mass (g)	27.02				
Dry Soil + Tare Mass (g)	22.58				
Tare Mass (g)	15.77				
Moisture Content (%)	65.5				
Trial No 2 / Blow Count	27				
Tare No	G116				
Wet Soil + Tare Mass (g)	32.17				
Dry Soil + Tare Mass (g)	25.91				
Tare Mass (g)	16.39				
Moisture Content (%)	66.4				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T21				
Wet Soil + Tare Mass (g)	25.22				
Dry Soil + Tare Mass (g)	23.37				
Tare Mass (g)	15.48				
Moisture Content (%)	23.4				
Trial No 2 / Tare No	T17				
Wet Soil + Tare Mass (g)	25.07				
Dry Soil + Tare Mass (g)	23.11				
Tare Mass (g)	14.70				
Moisture Content (%)	23.3				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	117.38				
Dry Soil Mass after Washing (g)	3.67				
Test Status					
Liquid Limit	**66**				
Plastic Limit	**23**				
Plasticity Index	**43**				
Gravel Content (%)	0.0				
Sand Content (%)	3.1				
Fines (%)	96.9				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4613A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	714	715	716	717	718
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	109+56	68+45	63+22	109+57	138+65
Offset	P.S. -139	P.S. -137	P.S. -135	P.S. -156	P.S. -77
Lift No	2	1	1	3	3
Latitude (°N)	29.874433	29.885624	29.886142	29.874417	29.872145
Longitude (°W)	90.137726	90.134885	90.136289	90.137673	90.131213
Elevation (ft)	1.2	1.0	2.0	1.3	6.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	25	27	23
Tare No	T33	G126	T74	T72	T63
Wet Soil + Tare Mass (g)	29.16	30.73	31.25	36.49	31.80
Dry Soil + Tare Mass (g)	23.71	25.20	26.78	31.38	27.07
Tare Mass (g)	14.91	16.70	19.78	23.32	19.33
Moisture Content (%)	61.6	65.1	63.9	64.0	60.5
Trial No 2 / Blow Count	25	25	24	27	23
Tare No	T65	T70	T6	T1022	T7
Wet Soil + Tare Mass (g)	31.25	33.16	33.73	32.44	32.62
Dry Soil + Tare Mass (g)	26.02	27.40	27.99	27.49	27.71
Tare Mass (g)	17.61	18.67	19.16	19.73	19.73
Moisture Content (%)	62.2	66.0	64.7	64.4	60.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T9	T92	G107	T104	T79
Wet Soil + Tare Mass (g)	29.23	35.01	21.52	24.85	24.66
Dry Soil + Tare Mass (g)	27.28	33.18	20.01	23.48	23.11
Tare Mass (g)	19.68	25.45	13.79	17.73	16.18
Moisture Content (%)	25.7	23.7	24.3	23.8	22.4
Trial No 2 / Tare No	T51	T97	T32	G102	T73
Wet Soil + Tare Mass (g)	27.50	23.34	24.74	28.50	23.93
Dry Soil + Tare Mass (g)	25.50	21.83	23.34	27.03	22.46
Tare Mass (g)	17.47	15.37	17.64	20.82	15.83
Moisture Content (%)	24.9	23.4	24.6	23.7	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	104.86	106.16	101.13	94.30	115.42
Dry Soil Mass after Washing (g)	3.32	5.33	6.08	6.88	5.52
Test Status					
Liquid Limit	**62**	**66**	**64**	**64**	**61**
Plastic Limit	**25**	**24**	**24**	**24**	**22**
Plasticity Index	**37**	**42**	**40**	**40**	**39**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.2	5.0	6.0	7.3	4.8
Fines (%)	96.8	95.0	94.0	92.7	95.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4613B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	719	720	721		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	141+00	143+07	145+23		
Offset	P.S. -72	P.S. -73	P.S. -81		
Lift No	3	3	3		
Latitude (°N)	29.872077	29.872035	29.872011		
Longitude (°W)	90.130478	90.129827	90.129144		
Elevation (ft)	6.6	6.6	6.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	27	27		
Tare No	G109	T67	T8		
Wet Soil + Tare Mass (g)	27.94	33.55	36.25		
Dry Soil + Tare Mass (g)	23.35	28.20	30.23		
Tare Mass (g)	15.78	18.93	20.24		
Moisture Content (%)	61.5	58.3	60.8		
Trial No 2 / Blow Count	27	28	26		
Tare No	G116	T19	T34		
Wet Soil + Tare Mass (g)	28.69	31.77	32.09		
Dry Soil + Tare Mass (g)	24.04	26.64	26.61		
Tare Mass (g)	16.39	17.80	17.50		
Moisture Content (%)	61.4	58.8	60.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T17	G112	T10		
Wet Soil + Tare Mass (g)	22.01	24.82	23.81		
Dry Soil + Tare Mass (g)	20.57	23.53	22.24		
Tare Mass (g)	14.70	17.72	15.48		
Moisture Content (%)	24.5	22.2	23.2		
Trial No 2 / Tare No	T21	G118	T82		
Wet Soil + Tare Mass (g)	22.66	24.13	25.79		
Dry Soil + Tare Mass (g)	21.25	22.56	24.38		
Tare Mass (g)	15.48	15.55	18.26		
Moisture Content (%)	24.4	22.4	23.0		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	101.64	78.88	108.55		
Dry Soil Mass after Washing (g)	2.14	4.51	3.33		
Test Status					
Liquid Limit	**61**	**59**	**61**		
Plastic Limit	**24**	**22**	**23**		
Plasticity Index	**37**	**37**	**38**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	2.1	5.7	3.1		
Fines (%)	97.9	94.3	96.9		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4641
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/16/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	722	723	724	725	726
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	88+03	92+97	98+04	103+02	107+00
Offset	P.S. -130	P.S. -158	P.S. -147	P.S. -145	P.S. -148
Lift No	6	6	5	4	4
Latitude (°N)	29.880129	29.878804	29.877478	29.876170	29.875107
Longitude (°W)	90.135950	90.136312	90.136801	90.137197	90.137501
Elevation (ft)	2.9	2.1	2.6	2.1	2.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	25	24	25
Tare No	G112	G115	T91	T35	T61
Wet Soil + Tare Mass (g)	30.83	28.54	30.90	27.97	28.16
Dry Soil + Tare Mass (g)	25.73	24.28	26.58	23.08	23.25
Tare Mass (g)	17.73	17.34	19.71	15.54	15.70
Moisture Content (%)	63.8	61.7	62.9	64.5	65.0
Trial No 2 / Blow Count	25	25	24	23	26
Tare No	G118	T28	G125	T14	T87
Wet Soil + Tare Mass (g)	32.05	33.33	35.77	28.65	30.96
Dry Soil + Tare Mass (g)	25.66	27.44	29.89	23.36	26.60
Tare Mass (g)	15.54	17.84	20.58	15.24	19.88
Moisture Content (%)	63.1	61.4	62.8	64.5	65.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T34	T10	T71	T84	G104
Wet Soil + Tare Mass (g)	26.62	22.26	28.48	30.04	25.72
Dry Soil + Tare Mass (g)	24.99	21.04	26.85	28.55	24.02
Tare Mass (g)	17.49	15.48	19.78	22.08	16.09
Moisture Content (%)	21.7	21.9	23.1	23.0	21.4
Trial No 2 / Tare No	T8	T82	T60	T50	T76
Wet Soil + Tare Mass (g)	28.90	26.44	27.63	27.19	24.59
Dry Soil + Tare Mass (g)	27.41	24.98	25.97	25.70	23.10
Tare Mass (g)	20.24	18.24	18.46	19.11	16.14
Moisture Content (%)	20.8	21.7	22.1	22.6	21.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	120.03	119.20	110.83	114.66	119.04
Dry Soil Mass after Washing (g)	5.89	4.69	4.12	5.63	7.38
Test Status					
Liquid Limit	**63**	**62**	**63**	**65**	**65**
Plastic Limit	**21**	**22**	**23**	**23**	**21**
Plasticity Index	**42**	**40**	**40**	**42**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.9	3.9	3.7	4.9	6.2
Fines (%)	95.1	96.1	96.3	95.1	93.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4655A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	727	728	729	730	731
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+94	77+92	73+06	68+08	52+93
Offset	P.S. -151	P.S. -131	P.S. -152	P.S. -132	F.S. +5
Lift No	6	5	5	2	7
Latitude (°N)	29.881456	29.882792	29.884057	29.885645	29.886431
Longitude (°W)	90.135430	90.135039	90.134539	90.135000	90.139440
Elevation (ft)	2.4	2.6	2.2	2.3	10.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	24	25
Tare No	T32	T15	T9	T92	T87
Wet Soil + Tare Mass (g)	30.74	29.24	31.38	39.13	34.15
Dry Soil + Tare Mass (g)	25.93	24.03	26.79	33.87	28.70
Tare Mass (g)	17.64	15.75	19.67	25.46	19.88
Moisture Content (%)	58.0	62.9	64.5	62.2	61.8
Trial No 2 / Blow Count	26	25	26	24	26
Tare No	G107	T33	T65	G126	T61
Wet Soil + Tare Mass (g)	27.32	29.13	32.29	34.94	37.33
Dry Soil + Tare Mass (g)	22.40	23.67	26.53	27.96	29.05
Tare Mass (g)	13.79	14.90	17.60	16.70	15.71
Moisture Content (%)	57.4	62.3	64.8	61.7	62.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104	T51	T97	G104	T50
Wet Soil + Tare Mass (g)	25.04	25.85	22.69	24.07	27.68
Dry Soil + Tare Mass (g)	23.71	24.34	21.31	22.52	25.94
Tare Mass (g)	17.73	17.47	15.37	16.08	19.10
Moisture Content (%)	22.2	22.0	23.2	24.1	25.4
Trial No 2 / Tare No	T1022	T70	T6	T76	T84
Wet Soil + Tare Mass (g)	26.30	28.12	26.18	25.99	30.32
Dry Soil + Tare Mass (g)	25.11	26.40	24.80	24.09	28.66
Tare Mass (g)	19.73	18.66	19.14	16.12	22.06
Moisture Content (%)	22.1	22.2	24.4	23.8	25.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.91	102.28	88.26	88.42	96.36
Dry Soil Mass after Washing (g)	6.86	3.07	5.36	3.22	9.81
Test Status					
Liquid Limit	**58**	**63**	**65**	**62**	**62**
Plastic Limit	**22**	**22**	**24**	**24**	**25**
Plasticity Index	**36**	**41**	**41**	**38**	**37**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.1	3.0	6.1	3.6	10.2
Fines (%)	93.9	97.0	93.9	96.4	89.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4655B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	732	733	734	735	736
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	48+01	43+00	37+99	33+00	77+49
Offset	C/L	C/L	C/L	C/L	C/L
Lift No	7	7	7	7	10
Latitude (°N)	29.886658	29.886933	29.887218	29.887495	29.883008
Longitude (°W)	90.140961	90.142511	90.144058	90.145600	90.135388
Elevation (ft)	10.8	10.9	11.0	11.0	13.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	27	27	27
Tare No	T14	G125	T28	G118	T73
Wet Soil + Tare Mass (g)	28.66	32.93	30.46	28.20	28.73
Dry Soil + Tare Mass (g)	23.25	27.63	25.15	22.50	23.79
Tare Mass (g)	15.24	20.60	17.83	15.55	15.84
Moisture Content (%)	67.5	75.7	73.2	82.8	62.7
Trial No 2 / Blow Count	26	26	26	27	27
Tare No	T35	T91	G115	G112	G109
Wet Soil + Tare Mass (g)	35.70	37.97	32.58	32.35	27.42
Dry Soil + Tare Mass (g)	27.50	30.04	26.18	25.73	22.94
Tare Mass (g)	15.53	19.73	17.34	17.73	15.77
Moisture Content (%)	68.8	77.3	72.7	83.5	63.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T60	T82	T34	G116	T79
Wet Soil + Tare Mass (g)	27.79	28.22	24.01	24.62	24.41
Dry Soil + Tare Mass (g)	26.05	26.14	22.55	22.67	22.82
Tare Mass (g)	18.44	18.24	17.49	16.37	16.17
Moisture Content (%)	22.9	26.3	28.9	31.0	23.9
Trial No 2 / Tare No	T71	T10	T8	T21	T7
Wet Soil + Tare Mass (g)	29.14	24.89	27.80	24.07	27.61
Dry Soil + Tare Mass (g)	27.39	22.96	26.10	22.07	26.12
Tare Mass (g)	19.77	15.47	20.23	15.47	19.72
Moisture Content (%)	23.0	25.8	29.0	30.3	23.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	79.57	92.68	81.65	92.23	112.57
Dry Soil Mass after Washing (g)	5.56	12.90	7.05	11.34	7.24
Test Status					
Liquid Limit	**68**	**77**	**73**	**83**	**63**
Plastic Limit	**23**	**26**	**29**	**31**	**24**
Plasticity Index	**45**	**51**	**44**	**52**	**39**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	7.0	13.9	8.6	12.3	6.4
Fines (%)	93.0	86.1	91.4	87.7	93.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4655C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	737	738	739		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	97+49	102+55	107+43		
Offset	P.S. -6	C/L	C/L		
Lift No	10	10	10		
Latitude (°N)	29.877733	29.876392	29.875093		
Longitude (°W)	90.137178	90.137596	90.137982		
Elevation (ft)	13.1	13.2	13.2		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	23	24		
Tare No	G102	T80	T44		
Wet Soil + Tare Mass (g)	37.54	36.05	29.64		
Dry Soil + Tare Mass (g)	30.76	27.73	23.71		
Tare Mass (g)	20.81	16.58	14.97		
Moisture Content (%)	67.8	73.9	67.5		
Trial No 2 / Blow Count	24	23	24		
Tare No	T63	T86	T83		
Wet Soil + Tare Mass (g)	33.35	26.79	33.60		
Dry Soil + Tare Mass (g)	27.67	22.48	26.74		
Tare Mass (g)	19.33	16.68	16.62		
Moisture Content (%)	67.8	73.6	67.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T72	T25	T68		
Wet Soil + Tare Mass (g)	33.25	25.48	31.33		
Dry Soil + Tare Mass (g)	31.32	23.78	29.39		
Tare Mass (g)	23.30	16.56	20.76		
Moisture Content (%)	24.1	23.5	22.5		
Trial No 2 / Tare No	T74	T38	T39		
Wet Soil + Tare Mass (g)	29.82	26.12	30.25		
Dry Soil + Tare Mass (g)	27.90	24.40	28.53		
Tare Mass (g)	19.75	16.83	20.79		
Moisture Content (%)	23.6	22.7	22.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.27	69.88	106.90		
Dry Soil Mass after Washing (g)	4.06	1.82	3.80		
Test Status					
Liquid Limit	**68**	**74**	**67**		
Plastic Limit	**24**	**23**	**22**		
Plasticity Index	**44**	**51**	**45**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.7	2.6	3.6		
Fines (%)	96.3	97.4	96.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4675A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	740	741	742	743	744
Retest of Test ID	4655-736				4655-727
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	77+49	82+44	87+48	92+49	82+94
Offset	CL	CL	CL	CL	P.S. -151
Lift No	10	10	10	10	6
Latitude (°N)	29.883008	29.881707	29.880374	29.879059	29.881456
Longitude (°W)	90.135388	90.135846	90.136280	90.136755	90.135430
Elevation (ft)	13.2	13.1	13.2	13.2	2.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	27	24	26
Tare No	T30	T26	T14	T28	T8
Wet Soil + Tare Mass (g)	34.23	32.18	27.85	29.12	35.97
Dry Soil + Tare Mass (g)	28.77	26.99	22.82	24.48	29.95
Tare Mass (g)	20.24	18.96	15.26	17.82	20.23
Moisture Content (%)	64.6	65.2	67.2	69.3	62.2
Trial No 2 / Blow Count	27	28	27	24	26
Tare No	T19	T35	T60	T34	G112
Wet Soil + Tare Mass (g)	31.53	31.22	33.89	32.55	30.03
Dry Soil + Tare Mass (g)	26.13	25.08	27.68	26.32	25.29
Tare Mass (g)	17.80	15.56	18.45	17.48	17.73
Moisture Content (%)	65.4	65.4	67.9	70.1	63.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T31	T67	T71	T82	T10
Wet Soil + Tare Mass (g)	28.63	28.53	29.08	26.82	23.48
Dry Soil + Tare Mass (g)	26.91	26.62	27.34	25.30	22.08
Tare Mass (g)	19.52	18.93	19.78	18.24	15.45
Moisture Content (%)	23.3	24.8	23.0	21.5	21.1
Trial No 2 / Tare No	T40	T17	G125	T91	G115
Wet Soil + Tare Mass (g)	27.18	24.06	28.99	28.22	26.80
Dry Soil + Tare Mass (g)	25.70	22.23	27.47	26.69	25.17
Tare Mass (g)	19.29	14.70	20.60	19.74	17.34
Moisture Content (%)	23.1	24.3	22.1	22.0	20.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	75.72	111.61	117.03	86.42	119.99
Dry Soil Mass after Washing (g)	5.52	4.32	1.11	3.44	5.33
Test Status					
Liquid Limit	**65**	**65**	**68**	**70**	**63**
Plastic Limit	**23**	**25**	**23**	**22**	**21**
Plasticity Index	**42**	**40**	**45**	**48**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	7.3	3.9	0.9	4.0	4.4
Fines (%)	92.7	96.1	99.1	96.0	95.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4675B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	745	746	747	748	749
Retest of Test ID	4655-728				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	77+92	59+40	55+90	27+48	23+07
Offset	P.S. -131	CL	P.S. -9	P.S. -6	CL
Lift No	5	6	5	7	7
Latitude (°N)	29.886424	29.886402	29.886628	29.887807	29.888039
Longitude (°W)	90.137484	90.134996	90.138562	90.147305	90.148671
Elevation (ft)	2.6	9.1	8.0	10.9	10.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	26	25	27
Tare No	T79	G102	T74	G107	T104
Wet Soil + Tare Mass (g)	28.48	28.48	28.54	26.67	28.50
Dry Soil + Tare Mass (g)	23.77	25.54	25.20	20.59	23.40
Tare Mass (g)	16.18	20.82	19.76	13.80	17.73
Moisture Content (%)	62.4	62.3	61.7	89.5	90.8
Trial No 2 / Blow Count	26	26	27	25	27
Tare No	T63	T72	T86	T32	T1022
Wet Soil + Tare Mass (g)	40.84	30.46	24.18	29.52	31.77
Dry Soil + Tare Mass (g)	32.61	27.72	21.31	23.88	26.07
Tare Mass (g)	19.33	23.31	16.68	17.63	19.74
Moisture Content (%)	62.3	62.4	62.6	90.2	90.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G118	T21	T73	T33	T68
Wet Soil + Tare Mass (g)	24.34	23.95	26.81	24.57	28.69
Dry Soil + Tare Mass (g)	22.82	22.38	24.76	22.51	27.05
Tare Mass (g)	15.55	15.46	15.83	14.90	20.73
Moisture Content (%)	20.9	22.7	23.0	27.1	25.9
Trial No 2 / Tare No	G116	G109	T7	T39	T41
Wet Soil + Tare Mass (g)	24.03	24.78	30.31	30.23	28.33
Dry Soil + Tare Mass (g)	22.72	23.12	28.35	28.19	26.45
Tare Mass (g)	16.32	15.76	19.71	20.82	19.37
Moisture Content (%)	20.5	22.6	22.7	27.7	26.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	5.46	4.85	2.52	9.97	12.10
Dry Soil Mass after Washing (g)	121.63	124.85	118.40	98.41	125.27
Test Status					
Liquid Limit	**62**	**62**	**62**	**90**	**91**
Plastic Limit	**21**	**23**	**23**	**27**	**26**
Plasticity Index	**41**	**39**	**39**	**63**	**65**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.5	3.9	2.1	10.1	9.7
Fines (%)	95.5	96.1	97.9	89.9	90.3
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4675C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	750	751	752	753	754
Retest of Test ID					4641-725
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	18+07	12+99	8+96	3+97	103+02
Offset	CL	CL	P.S. -9	CL	P.S. -145
Lift No	7	7	7	7	4
Latitude (°N)	29.888311	29.888605	29.888842	29.889099	29.876170
Longitude (°W)	90.150219	90.151785	90.153027	90.154567	90.137197
Elevation (ft)	11.0	11.0	10.9	10.9	2.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	26	25	27
Tare No	T80	T25	T44	T51	T40
Wet Soil + Tare Mass (g)	27.08	26.06	25.27	28.51	29.87
Dry Soil + Tare Mass (g)	22.22	21.59	20.36	23.26	25.78
Tare Mass (g)	16.59	16.52	14.98	17.45	19.29
Moisture Content (%)	86.7	89.0	91.7	90.4	63.6
Trial No 2 / Blow Count	26	28	26	26	28
Tare No	T15	T38	T83	T65	T31
Wet Soil + Tare Mass (g)	27.68	27.76	26.44	27.93	32.48
Dry Soil + Tare Mass (g)	22.18	22.61	21.73	23.02	27.47
Tare Mass (g)	15.76	16.79	16.61	17.61	19.52
Moisture Content (%)	86.1	89.7	92.4	91.2	63.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T66	G127	T107	T69	T19
Wet Soil + Tare Mass (g)	22.38	29.59	27.38	28.69	25.61
Dry Soil + Tare Mass (g)	20.91	27.31	25.51	26.78	24.12
Tare Mass (g)	15.26	18.93	18.25	19.56	17.81
Moisture Content (%)	26.0	27.2	25.8	26.5	23.6
Trial No 2 / Tare No	T24	T85	T78	T52	T30
Wet Soil + Tare Mass (g)	22.90	26.64	26.44	30.50	28.34
Dry Soil + Tare Mass (g)	20.96	24.71	24.68	28.30	26.80
Tare Mass (g)	13.75	17.46	17.83	20.28	20.26
Moisture Content (%)	26.9	26.6	25.7	27.4	23.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	14.83	15.27	17.63	10.82	3.60
Dry Soil Mass after Washing (g)	120.21	93.37	81.84	69.77	88.91
Test Status					
Liquid Limit	**86**	**89**	**92**	**91**	**64**
Plastic Limit	**26**	**27**	**26**	**27**	**24**
Plasticity Index	**60**	**62**	**66**	**64**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	12.3	16.4	21.5	15.5	4.1
Fines (%)	87.7	83.6	78.5	84.5	95.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4675D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	755				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	108+86				
Offset	CL				
Lift No	6				
Latitude (°N)	29.874710				
Longitude (°W)	90.138090				
Elevation (ft)	10.7				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23				
Tare No	T97				
Wet Soil + Tare Mass (g)	27.15				
Dry Soil + Tare Mass (g)	22.38				
Tare Mass (g)	15.37				
Moisture Content (%)	67.4				
Trial No 2 / Blow Count	24				
Tare No	T92				
Wet Soil + Tare Mass (g)	40.11				
Dry Soil + Tare Mass (g)	34.16				
Tare Mass (g)	25.48				
Moisture Content (%)	68.2				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G126				
Wet Soil + Tare Mass (g)	24.92				
Dry Soil + Tare Mass (g)	23.44				
Tare Mass (g)	16.71				
Moisture Content (%)	22.0				
Trial No 2 / Tare No	T76				
Wet Soil + Tare Mass (g)	24.36				
Dry Soil + Tare Mass (g)	22.86				
Tare Mass (g)	16.11				
Moisture Content (%)	22.2				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	5.02				
Dry Soil Mass after Washing (g)	94.46				
Test Status					
Liquid Limit	**68**				
Plastic Limit	**22**				
Plasticity Index	**46**				
Gravel Content (%)	0.0				
Sand Content (%)	5.3				
Fines (%)	94.7				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**PASS**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4699
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	756	757	758	759	760
Retest of Test ID	4675A+744	4675A+743		4675C+752	4675C+753
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+94	92+49	109+27	8+96	3+97
Offset	P.S. -151	CL	C/L	P.S. -9	CL
Lift No	6	10	7	7	7
Latitude (°N)	29.881456	29.879059	29.874604	29.888842	29.889099
Longitude (°W)	90.135430	90.136755	90.138129	90.153027	90.154576
Elevation (ft)	2.4	13.2	12.1	10.9	10.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	27	26	27	26
Tare No	T68	T39	T7	G109	G116
Wet Soil + Tare Mass (g)	35.64	35.92	31.18	28.13	27.00
Dry Soil + Tare Mass (g)	30.00	30.22	26.54	22.50	22.00
Tare Mass (g)	20.75	20.80	19.73	15.77	16.37
Moisture Content (%)	60.4	61.1	68.5	84.4	89.2
Trial No 2 / Blow Count	23	27	26	28	27
Tare No	T41	T33	T73	T21	G118
Wet Soil + Tare Mass (g)	31.79	32.70	32.32	27.30	30.68
Dry Soil + Tare Mass (g)	27.08	25.93	25.60	21.89	23.57
Tare Mass (g)	19.38	14.91	15.85	15.46	15.55
Moisture Content (%)	60.6	62.0	69.3	85.3	89.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T1022	T32	T74	T72	T79
Wet Soil + Tare Mass (g)	27.44	26.50	27.46	32.79	25.52
Dry Soil + Tare Mass (g)	26.09	24.88	26.03	30.51	23.18
Tare Mass (g)	19.74	17.66	19.79	23.32	16.19
Moisture Content (%)	21.3	22.4	22.9	31.7	33.5
Trial No 2 / Tare No	T104	G107	T86	G102	T63
Wet Soil + Tare Mass (g)	25.53	22.71	24.11	27.50	28.97
Dry Soil + Tare Mass (g)	24.13	21.09	22.71	25.90	26.58
Tare Mass (g)	17.75	13.80	16.70	20.85	19.35
Moisture Content (%)	21.9	22.2	23.3	31.7	33.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.26	96.90	114.04	94.77	109.17
Dry Soil Mass after Washing (g)	4.53	5.05	7.98	7.28	13.95
Test Status					
Liquid Limit	**60**	**62**	**69**	**85**	**89**
Plastic Limit	**22**	**22**	**23**	**32**	**33**
Plasticity Index	**38**	**40**	**46**	**53**	**56**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.4	5.2	7.0	7.7	12.8
Fines (%)	95.6	94.8	93.0	92.3	87.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4716
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	761	762	763		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	108+55	103+46	8+75		
Offset	F.S. +79	F.S. +83	P.S. -26		
Lift No	4	4	7		
Latitude (°N)	29.874849	29.876209	29.888899		
Longitude (°W)	90.138318	90.137932	90.153081		
Elevation (ft)	5.6	5.1	10.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	25		
Tare No	G125	T67	T6		
Wet Soil + Tare Mass (g)	34.77	32.18	28.88		
Dry Soil + Tare Mass (g)	28.96	26.62	24.26		
Tare Mass (g)	20.59	18.93	19.16		
Moisture Content (%)	69.7	72.6	90.6		
Trial No 2 / Blow Count	25	26	24		
Tare No	T71	T17	T9		
Wet Soil + Tare Mass (g)	30.07	26.59	32.03		
Dry Soil + Tare Mass (g)	25.86	21.60	26.17		
Tare Mass (g)	19.77	14.71	19.70		
Moisture Content (%)	69.1	72.8	90.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T60	T26	T70		
Wet Soil + Tare Mass (g)	28.65	27.73	28.01		
Dry Soil + Tare Mass (g)	26.68	25.91	25.89		
Tare Mass (g)	18.48	18.98	18.67		
Moisture Content (%)	24.0	26.3	29.4		
Trial No 2 / Tare No	T14	T35	T421		
Wet Soil + Tare Mass (g)	26.40	24.91	28.07		
Dry Soil + Tare Mass (g)	24.26	22.91	26.20		
Tare Mass (g)	15.28	15.56	19.74		
Moisture Content (%)	23.8	27.2	28.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.87	88.47			
Dry Soil Mass after Washing (g)	4.90	6.02			
Test Status					
Liquid Limit	**69**	**73**	**90**		
Plastic Limit	**24**	**27**	**29**		
Plasticity Index	**45**	**46**	**61**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.1	6.8	17.4		
Fines (%)	95.9	93.2	82.6		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks	ID 763 PROCTOR				
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4726
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	765	766	767		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	68+99	108+75	101+00		
Offset	P.S. -136	C/L	C/L		
Lift No	3	8	11		
Latitude (°N)	29.885547	29.874752	29.876808		
Longitude (°W)	90.134678	90.138932	90.137489		
Elevation (ft)	2.8	12.6	13.7		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27	27		
Tare No	T67	T10	T1022		
Wet Soil + Tare Mass (g)	39.40	39.90	38.91		
Dry Soil + Tare Mass (g)	31.00	29.60	31.03		
Tare Mass (g)	18.94	15.49	19.72		
Moisture Content (%)	69.7	73.7	70.3		
Trial No 2 / Blow Count	25	26	26		
Tare No	T60	G115	T74		
Wet Soil + Tare Mass (g)	40.46	42.25	34.70		
Dry Soil + Tare Mass (g)	31.40	31.70	28.55		
Tare Mass (g)	18.46	17.34	19.76		
Moisture Content (%)	70.0	73.8	70.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T26	T8	T74		
Wet Soil + Tare Mass (g)	28.66	30.94	31.81		
Dry Soil + Tare Mass (g)	26.83	28.97	29.62		
Tare Mass (g)	18.95	20.24	19.74		
Moisture Content (%)	23.2	22.6	22.2		
Trial No 2 / Tare No	T91	G112	T41		
Wet Soil + Tare Mass (g)	28.77	28.06	30.96		
Dry Soil + Tare Mass (g)	27.07	26.16	28.84		
Tare Mass (g)	19.74	17.73	19.37		
Moisture Content (%)	23.2	22.5	22.4		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	97.98	80.93	78.01		
Dry Soil Mass after Washing (g)	5.15	4.92	7.42		
Test Status					
Liquid Limit	**70**	**74**	**70**		
Plastic Limit	**23**	**23**	**22**		
Plasticity Index	**47**	**51**	**48**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	6.1	9.5		
Fines (%)	94.7	93.9	90.5		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4746
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	775	776	777		
Retest of Test ID		4726+766			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	55+99	108+75	66+70		
Offset	C/L	C/L	F.S. +99		
Lift No	6	8	4		
Latitude (°N)	29.886602	29.874752	29.885180		
Longitude (°W)	90.138540	90.138932	90.135664		
Elevation (ft)	9.7	12.6	4.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27	27		
Tare No	G107	G126	T6		
Wet Soil + Tare Mass (g)	29.72	28.48	32.80		
Dry Soil + Tare Mass (g)	22.80	23.52	27.38		
Tare Mass (g)	13.79	16.70	19.16		
Moisture Content (%)	76.8	73.4	66.6		
Trial No 2 / Blow Count	24	27	28		
Tare No	T17	T76	T9		
Wet Soil + Tare Mass (g)	32.33	29.26	35.37		
Dry Soil + Tare Mass (g)	24.66	23.71	29.13		
Tare Mass (g)	14.70	16.13	19.71		
Moisture Content (%)	76.6	73.9	67.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T97	G118	T73		
Wet Soil + Tare Mass (g)	26.19	26.42	27.04		
Dry Soil + Tare Mass (g)	23.97	24.42	24.98		
Tare Mass (g)	15.39	15.55	15.83		
Moisture Content (%)	25.9	22.5	22.5		
Trial No 2 / Tare No	T92	T14	G109		
Wet Soil + Tare Mass (g)	37.74	27.02	27.42		
Dry Soil + Tare Mass (g)	35.21	24.89	25.30		
Tare Mass (g)	25.50	15.24	15.77		
Moisture Content (%)	26.1	22.1	22.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.42	120.27	120.75		
Dry Soil Mass after Washing (g)	4.28	7.22	6.51		
Test Status					
Liquid Limit	**77**	**74**	**67**		
Plastic Limit	**26**	**22**	**22**		
Plasticity Index	**51**	**52**	**45**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	6.0	5.3		
Fines (%)	96.4	94.0	94.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4748A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	768	769	770	771	772
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	98+49	93+50	88+57	83+57	57+48
Offset	F.S. + 68	F.S. +93	F.S. +94	F.S. +73	C/L
Lift No	4	4	4	4	5
Latitude (°N)	29.877530	29.878863	29.880165	29.881465	29.886520
Longitude (°W)	90.137493	90.137117	90.136678	90.136166	90.138081
Elevation (ft)	5.8	4.8	5.0	6.4	8.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	27	28	26
Tare No	T28	G116	T33	T421	T9
Wet Soil + Tare Mass (g)	33.86	28.40	27.10	36.17	35.52
Dry Soil + Tare Mass (g)	27.14	23.02	22.11	29.47	29.08
Tare Mass (g)	17.83	16.37	14.94	19.74	19.72
Moisture Content (%)	72.9	80.9	70.2	69.8	69.1
Trial No 2 / Blow Count	27	25	27	27	27
Tare No	T104	T21	T35	T70	T6
Wet Soil + Tare Mass (g)	35.60	31.31	30.35	34.79	35.72
Dry Soil + Tare Mass (g)	28.04	24.24	24.31	28.23	28.97
Tare Mass (g)	17.73	15.47	15.55	18.67	19.17
Moisture Content (%)	74.0	80.6	69.6	69.3	69.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T30	T34	T32	T86	G109
Wet Soil + Tare Mass (g)	32.94	29.07	28.98	27.69	29.90
Dry Soil + Tare Mass (g)	30.50	26.66	26.86	25.56	27.11
Tare Mass (g)	20.23	17.49	17.64	16.68	15.77
Moisture Content (%)	23.8	26.3	23.0	24.0	24.6
Trial No 2 / Tare No	T68	T82	T19	T79	T73
Wet Soil + Tare Mass (g)	34.32	29.62	28.82	28.21	29.91
Dry Soil + Tare Mass (g)	31.70	27.28	26.77	25.89	27.13
Tare Mass (g)	20.73	18.24	17.78	16.18	15.84
Moisture Content (%)	23.9	25.9	22.8	23.9	24.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.28	107.25	118.03	125.75	131.16
Dry Soil Mass after Washing (g)	8.64	7.59	7.05	8.26	5.55
Test Status					
Liquid Limit	**73**	**81**	**70**	**70**	**69**
Plastic Limit	**24**	**26**	**23**	**24**	**25**
Plasticity Index	**49**	**55**	**47**	**46**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	8.7	7.1	6.0	6.6	4.2
Fines (%)	91.3	92.9	94.0	93.4	95.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4748B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	5/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	773	774			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	78+56	73+50			
Offset	F.S. +78	F.S. +85			
Lift No	4	4			
Latitude (°N)	29.882789	29.884129			
Longitude (°W)	90.135729	90.135293			
Elevation (ft)	5.5	5.3			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	24			
Tare No	T76	T97			
Wet Soil + Tare Mass (g)	34.96	32.33			
Dry Soil + Tare Mass (g)	27.65	25.68			
Tare Mass (g)	16.12	15.38			
Moisture Content (%)	63.1	64.2			
Trial No 2 / Blow Count	25	23			
Tare No	G126	T92			
Wet Soil + Tare Mass (g)	35.24	41.63			
Dry Soil + Tare Mass (g)	28.07	35.28			
Tare Mass (g)	16.69	25.47			
Moisture Content (%)	63.0	64.1			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T14	T17			
Wet Soil + Tare Mass (g)	27.53	25.69			
Dry Soil + Tare Mass (g)	25.31	23.78			
Tare Mass (g)	15.25	14.70			
Moisture Content (%)	22.1	21.0			
Trial No 2 / Tare No	G118	G107			
Wet Soil + Tare Mass (g)	29.03	25.59			
Dry Soil + Tare Mass (g)	26.61	23.52			
Tare Mass (g)	15.55	13.79			
Moisture Content (%)	21.9	21.3			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	104.67	110.04			
Dry Soil Mass after Washing (g)	9.30	11.93			
Test Status					
Liquid Limit	**63**	**64**			
Plastic Limit	**22**	**21**			
Plasticity Index	**41**	**43**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	8.9	10.8			
Fines (%)	91.1	89.2			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**PASS**	**PASS**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4762A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	778	779	780	781	782
Retest of Test ID	4675A+744	4605A+711	4605A+712	4605B+713	4675A+742
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+94	133+14	135+19	137+09	87+48
Offset	P.S. -151	P.S. -63	P.S. -73	P.S. -88	C/L
Lift No	6	3	3	3	10
Latitude (°N)	29.881456	29.872237	29.872217	29.872218	29.880374
Longitude (°W)	90.135430	90.132950	90.132301	90.132301	90.136280
Elevation (ft)	2.4	6.8	6.6	6.0	13.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	28	24	28
Tare No	G-107	G-126	T-6	T-86	T-32
Wet Soil + Tare Mass (g)	27.34	29.00	31.09	29.95	30.01
Dry Soil + Tare Mass (g)	21.95	24.33	26.31	24.68	25.00
Tare Mass (g)	13.79	16.70	19.16	16.66	17.65
Moisture Content (%)	66.7	61.2	67.8	65.4	69.1
Trial No 2 / Blow Count	26	24	28	24	28
Tare No	T-17	T-76	T-9	T-79	T-19
Wet Soil + Tare Mass (g)	27.67	29.12	32.54	28.44	31.51
Dry Soil + Tare Mass (g)	22.50	24.18	27.40	23.56	25.95
Tare Mass (g)	14.70	16.12	19.68	16.18	17.80
Moisture Content (%)	66.6	61.0	67.5	65.8	69.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-41	G-112	T-92	T-14	G-109
Wet Soil + Tare Mass (g)	28.67	28.27	36.28	28.28	26.92
Dry Soil + Tare Mass (g)	27.03	26.56	34.27	26.05	24.98
Tare Mass (g)	19.40	17.76	25.47	15.24	15.77
Moisture Content (%)	21.5	19.4	22.8	20.6	21.1
Trial No 2 / Tare No	T-7	T-8	T-97	G-118	T-73
Wet Soil + Tare Mass (g)	28.68	32.53	26.58	28.48	27.89
Dry Soil + Tare Mass (g)	27.12	30.51	24.53	26.20	25.78
Tare Mass (g)	19.75	20.26	15.38	15.54	15.83
Moisture Content (%)	21.2	19.7	22.4	21.4	21.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.88	120.01	77.05	108.36	125.19
Dry Soil Mass after Washing (g)	3.70	4.60	3.35	6.69	4.38
Test Status					
Liquid Limit	**67**	**61**	**68**	**66**	**69**
Plastic Limit	**21**	**20**	**23**	**21**	**21**
Plasticity Index	**46**	**41**	**45**	**45**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.7	3.8	4.3	6.2	3.5
Fines (%)	96.3	96.2	95.7	93.8	96.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4762B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	783	784	785		
Retest of Test ID	4675A+740	4726-767			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	77+49	101+00	97+99		
Offset	C/L	C/L	F.S. +15		
Lift No	10	11	11		
Latitude (°N)	29.883008	29.876808	29.877620		
Longitude (°W)	90.135388	90.137489	90.137288		
Elevation (ft)	13.2	13.7	11.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	26		
Tare No	T-30	T-40	T-21		
Wet Soil + Tare Mass (g)	34.65	33.02	28.71		
Dry Soil + Tare Mass (g)	28.54	27.27	22.98		
Tare Mass (g)	20.24	19.31	15.48		
Moisture Content (%)	74.3	72.9	76.8		
Trial No 2 / Blow Count	25	28	28		
Tare No	T-68	T-31	G-116		
Wet Soil + Tare Mass (g)	35.15	32.76	26.99		
Dry Soil + Tare Mass (g)	29.05	27.22	22.39		
Tare Mass (g)	20.75	19.51	16.37		
Moisture Content (%)	73.5	72.8	77.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-421	T-33	T-82		
Wet Soil + Tare Mass (g)	33.23	28.00	34.27		
Dry Soil + Tare Mass (g)	30.71	25.68	31.22		
Tare Mass (g)	19.73	14.91	18.24		
Moisture Content (%)	23.0	21.5	23.5		
Trial No 2 / Tare No	T-70	T-35	T-34		
Wet Soil + Tare Mass (g)	32.52	29.54	33.28		
Dry Soil + Tare Mass (g)	29.94	27.04	30.26		
Tare Mass (g)	18.66	15.54	17.49		
Moisture Content (%)	22.9	21.7	23.6		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.86	106.64	99.69		
Dry Soil Mass after Washing (g)	5.88	3.60	5.59		
Test Status					
Liquid Limit	**74**	**73**	**77**		
Plastic Limit	**23**	**22**	**24**		
Plasticity Index	**51**	**51**	**53**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.1	3.4	5.6		
Fines (%)	94.9	96.6	94.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4798
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	786	787	788		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	105+15	100+95	92+68		
Offset	P.S. -150	P.S. -155	C/L		
Lift No	5	5	11		
Latitude (°N)	29.875600	29.876714	29.879007		
Longitude (°W)	90.137348	90.137009	90.136761		
Elevation (ft)	2.9	2.9	13.7		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	24		
Tare No	T28	G125	G102		
Wet Soil + Tare Mass (g)	31.09	32.57	32.48		
Dry Soil + Tare Mass (g)	25.46	27.72	27.54		
Tare Mass (g)	17.83	20.59	20.83		
Moisture Content (%)	73.4	68.7	73.3		
Trial No 2 / Blow Count	23	26	26		
Tare No	T104	T72	T39		
Wet Soil + Tare Mass (g)	31.00	34.23	33.43		
Dry Soil + Tare Mass (g)	25.34	29.80	28.07		
Tare Mass (g)	17.73	23.31	20.80		
Moisture Content (%)	73.6	68.6	74.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T71	T91	T60		
Wet Soil + Tare Mass (g)	32.17	31.86	33.72		
Dry Soil + Tare Mass (g)	29.80	29.59	30.96		
Tare Mass (g)	19.78	19.74	18.46		
Moisture Content (%)	23.7	23.0	22.1		
Trial No 2 / Tare No	T63	T26	T67		
Wet Soil + Tare Mass (g)	30.96	30.62	35.35		
Dry Soil + Tare Mass (g)	28.75	28.44	32.35		
Tare Mass (g)	19.33	18.94	18.94		
Moisture Content (%)	23.5	22.9	22.4		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.17	66.30	81.05		
Dry Soil Mass after Washing (g)	5.93	2.18	3.50		
Test Status					
Liquid Limit	**74**	**69**	**74**		
Plastic Limit	**24**	**23**	**22**		
Plasticity Index	**50**	**46**	**52**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	3.3	4.3		
Fines (%)	94.7	96.7	95.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**PASS**	**PASS**	**PASS**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4828A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	789	790	791	792	793
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	96+31	91+00	108+85	87+57	82+50
Offset	P.S. -103	P.S. -99	C/L	C/L	C/L
Lift No	6	7	9	11	11
Latitude (°N)	29.877967	29.879370	29.874714	29.880357	29.881689
Longitude (°W)	90.136778	90.136311	90.138100	90.136317	90.135841
Elevation (ft)	4.0	4.0	13.2	13.6	13.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	27	24	28	24
Tare No	G116	T104	T72	T39	T29
Wet Soil + Tare Mass (g)	27.90	31.61	33.98	33.35	33.18
Dry Soil + Tare Mass (g)	23.02	25.69	29.32	28.00	26.71
Tare Mass (g)	16.37	17.74	23.31	20.79	18.18
Moisture Content (%)	74.4	75.2	77.2	75.2	75.5
Trial No 2 / Blow Count	27	28	25	27	24
Tare No	T82	T71	T91	T60	G111
Wet Soil + Tare Mass (g)	30.42	33.36	32.22	31.55	29.04
Dry Soil + Tare Mass (g)	25.23	27.57	26.76	25.96	23.39
Tare Mass (g)	18.24	19.77	19.73	18.45	15.99
Moisture Content (%)	74.9	75.3	77.7	75.1	76.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T34	T63	T26	T67	T11
Wet Soil + Tare Mass (g)	36.14	30.40	27.92	29.65	24.96
Dry Soil + Tare Mass (g)	32.78	28.24	26.24	27.59	23.15
Tare Mass (g)	17.49	19.33	18.93	18.92	15.15
Moisture Content (%)	22.0	24.2	23.0	23.8	22.6
Trial No 2 / Tare No	T28	G125	G102	T80	G129
Wet Soil + Tare Mass (g)	35.41	31.26	30.14	26.33	26.43
Dry Soil + Tare Mass (g)	32.26	29.19	28.40	24.49	24.85
Tare Mass (g)	17.84	20.60	20.83	16.58	17.83
Moisture Content (%)	21.8	24.1	23.0	23.3	22.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	88.77	109.93	100.33	121.80	120.11
Dry Soil Mass after Washing (g)	3.44	5.33	7.83	4.83	8.47
Test Status					
Liquid Limit	**75**	**75**	**77**	**75**	**76**
Plastic Limit	**22**	**24**	**23**	**24**	**23**
Plasticity Index	**53**	**51**	**54**	**51**	**53**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.9	4.8	7.8	4.0	7.1
Fines (%)	96.1	95.2	92.2	96.0	92.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4849A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	800	801	802	803	804
Retest of Test ID	4583+703				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	122+97	108+39	59+31	150+50	152+47
Offset	P.S. -82	C/L	F.S. +7	P.S. -52	P.S. -84
Lift No	3	11	7	3	3
Latitude (°N)	29.872528	29.874835	29.886398	29.871819	29.871865
Longitude (°W)	90.136143	90.138055	90.137518	90.127492	90.126867
Elevation (ft)	6.3	13.7	10.2	7.2	6.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	26	28	23
Tare No	T14	G116	T63	T72	G102
Wet Soil + Tare Mass (g)	27.79	30.18	37.92	45.15	37.22
Dry Soil + Tare Mass (g)	22.96	24.01	29.91	36.48	30.56
Tare Mass (g)	15.24	16.37	19.33	23.32	20.82
Moisture Content (%)	62.6	81.1	76.1	66.8	67.7
Trial No 2 / Blow Count	26	27	25	29	22
Tare No	G118	T82	G125	T91	T26
Wet Soil + Tare Mass (g)	28.50	31.55	40.41	43.74	40.44
Dry Soil + Tare Mass (g)	23.57	25.62	31.86	34.21	31.71
Tare Mass (g)	15.54	18.25	20.59	19.74	18.93
Moisture Content (%)	61.7	81.2	75.9	67.1	67.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T8	T6	T79	T19	T34
Wet Soil + Tare Mass (g)	30.95	28.97	26.33	31.13	29.83
Dry Soil + Tare Mass (g)	29.05	26.96	24.49	28.81	27.75
Tare Mass (g)	20.24	19.16	16.17	17.79	17.48
Moisture Content (%)	21.6	25.8	22.1	21.1	20.3
Trial No 2 / Tare No	G112	T9	G109	T32	T28
Wet Soil + Tare Mass (g)	28.94	29.75	27.64	29.70	28.40
Dry Soil + Tare Mass (g)	26.96	27.69	25.47	27.59	26.63
Tare Mass (g)	17.74	19.69	15.77	17.64	17.83
Moisture Content (%)	21.5	25.8	22.4	21.2	20.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.28	109.72	105.07	115.86	108.79
Dry Soil Mass after Washing (g)	3.78	6.03	4.69	3.90	4.27
Test Status					
Liquid Limit	**62**	**81**	**76**	**67**	**67**
Plastic Limit	**22**	**26**	**22**	**21**	**20**
Plasticity Index	**40**	**55**	**54**	**46**	**47**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.3	5.5	4.5	3.4	3.9
Fines (%)	96.7	94.5	95.5	96.6	96.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4849B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	805				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	154+38				
Offset	P.S. -96				
Lift No	3				
Latitude (°N)	29.871856				
Longitude (°W)	90.126265				
Elevation (ft)	5.9				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	T39				
Wet Soil + Tare Mass (g)	35.26				
Dry Soil + Tare Mass (g)	29.38				
Tare Mass (g)	20.80				
Moisture Content (%)	68.9				
Trial No 2 / Blow Count	25				
Tare No	T60				
Wet Soil + Tare Mass (g)	31.66				
Dry Soil + Tare Mass (g)	26.29				
Tare Mass (g)	18.47				
Moisture Content (%)	68.7				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T104				
Wet Soil + Tare Mass (g)	29.76				
Dry Soil + Tare Mass (g)	27.50				
Tare Mass (g)	17.75				
Moisture Content (%)	23.2				
Trial No 2 / Tare No	T71				
Wet Soil + Tare Mass (g)	32.03				
Dry Soil + Tare Mass (g)	29.75				
Tare Mass (g)	19.78				
Moisture Content (%)	22.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	119.89				
Dry Soil Mass after Washing (g)	4.45				
Test Status					
Liquid Limit	**69**				
Plastic Limit	**23**				
Plasticity Index	**46**				
Gravel Content (%)	0.0				
Sand Content (%)	3.7				
Fines (%)	96.3				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4876
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/13/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	806	807	808	809	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	146+31	148+44	156+63	158+63	
Offset	P.S. -78	P.S. -99	P.S. -84	P.S. -87	
Lift No	3	3	3	3	
Latitude (°N)	29.871980	29.871991	28.632241	29.871741	
Longitude (°W)	90.128805	90.128133	90.140366	90.124929	
Elevation (ft)	6.3	5.7	6.5	6.1	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	25	25	
Tare No	G-111	T-92	T-5	T-82	
Wet Soil + Tare Mass (g)	30.66	42.62	33.07	32.46	
Dry Soil + Tare Mass (g)	25.28	35.78	27.45	26.78	
Tare Mass (g)	15.99	25.47	19.24	18.24	
Moisture Content (%)	58.2	66.3	68.5	66.5	
Trial No 2 / Blow Count	27	25	26	25	
Tare No	T-29	T-97	T-76	G-116	
Wet Soil + Tare Mass (g)	38.27	34.47	32.72	30.77	
Dry Soil + Tare Mass (g)	30.89	26.84	25.98	25.01	
Tare Mass (g)	18.17	15.39	16.12	16.38	
Moisture Content (%)	58.6	66.6	68.7	66.7	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-80	G-129	T-86	G-118	
Wet Soil + Tare Mass (g)	32.31	30.80	32.21	30.40	
Dry Soil + Tare Mass (g)	29.89	28.26	29.19	27.78	
Tare Mass (g)	16.59	17.83	16.70	15.55	
Moisture Content (%)	18.2	24.4	24.2	21.4	
Trial No 2 / Tare No	T-67	T-11	T-73	T-14	
Wet Soil + Tare Mass (g)	30.99	27.58	30.65	31.35	
Dry Soil + Tare Mass (g)	29.13	25.14	27.77	28.40	
Tare Mass (g)	18.93	15.13	15.86	15.25	
Moisture Content (%)	18.2	24.4	24.2	22.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	121.19	76.23	124.68	124.03	
Dry Soil Mass after Washing (g)	3.80	3.90	5.00	5.40	
Test Status					
Liquid Limit	**58**	**66**	**69**	**67**	
Plastic Limit	**18**	**24**	**24**	**22**	
Plasticity Index	**40**	**42**	**45**	**45**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	3.2	5.1	4.0	4.4	
Fines (%)	96.8	94.9	96.0	95.6	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4900
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	810	811	812		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	68+29	72+99	78+05		
Offset	PS-103	PS-132	PS-128		
Lift No	4	6	6		
Latitude (°N)	29.885552	29.884097	29.882761		
Longitude (°W)	90.134970	90.134591	90.135060		
Elevation (ft)	4.0	3.5	3.4		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	25		
Tare No	T-91	G-112	G-118		
Wet Soil + Tare Mass (g)	35.52	36.96	29.77		
Dry Soil + Tare Mass (g)	29.35	28.69	23.71		
Tare Mass (g)	19.75	17.72	15.55		
Moisture Content (%)	64.6	75.4	74.3		
Trial No 2 / Blow Count	26	25	26		
Tare No	G-109	T-8	T-14		
Wet Soil + Tare Mass (g)	29.54	38.41	30.95		
Dry Soil + Tare Mass (g)	24.15	30.60	24.26		
Tare Mass (g)	15.80	20.22	15.24		
Moisture Content (%)	64.9	75.2	74.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-125	T-9	T-82		
Wet Soil + Tare Mass (g)	34.82	33.46	29.93		
Dry Soil + Tare Mass (g)	32.33	30.80	27.61		
Tare Mass (g)	20.60	19.70	18.29		
Moisture Content (%)	21.2	24.0	24.9		
Trial No 2 / Tare No	T-63	T-6	G-116		
Wet Soil + Tare Mass (g)	30.12	31.31	28.77		
Dry Soil + Tare Mass (g)	28.17	28.91	26.23		
Tare Mass (g)	19.34	19.17	16.39		
Moisture Content (%)	22.1	24.6	25.8		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	114.65	120.80	86.19		
Dry Soil Mass after Washing (g)	3.45	4.12	2.80		
Test Status					
Liquid Limit	**65**	**75**	**74**		
Plastic Limit	**22**	**24**	**25**		
Plasticity Index	**43**	**51**	**49**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.0	3.4	3.2		
Fines (%)	97.0	96.6	96.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4914A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/16/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	813	814	815	816	817
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	161+33	163+19	165+12	166+95	169+08
Offset	P.S. -135	P.S. -111	P.S. -111	P.S. -139	P.S. -138
Lift No	3	3	3	3	3
Latitude (°N)	29.871817	29.871710	29.871671	29.871708	29.871662
Longitude (°W)	90.124067	90.123490	90.122879	90.122301	90.121628
Elevation (ft)	4.7	5.3	5.5	4.5	4.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	27	28	25
Tare No	T-79	T-39	T-26	G-109	T-8
Wet Soil + Tare Mass (g)	31.99	35.53	30.12	28.56	35.29
Dry Soil + Tare Mass (g)	25.28	29.40	25.25	23.17	29.01
Tare Mass (g)	16.17	20.80	18.93	15.78	20.23
Moisture Content (%)	72.9	71.6	77.8	73.9	71.5
Trial No 2 / Blow Count	23	27	26	29	26
Tare No	T-71	T-28	T-19	G-125	T-9
Wet Soil + Tare Mass (g)	33.64	36.27	29.66	33.85	33.42
Dry Soil + Tare Mass (g)	27.77	28.59	24.50	28.29	27.69
Tare Mass (g)	19.78	17.73	17.79	20.59	19.69
Moisture Content (%)	72.7	71.4	77.3	73.5	72.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-104	T-34	T-32	T-63	T-6
Wet Soil + Tare Mass (g)	25.60	25.28	27.80	26.64	28.57
Dry Soil + Tare Mass (g)	24.08	23.78	25.82	25.32	26.79
Tare Mass (g)	17.74	17.49	17.64	19.34	19.16
Moisture Content (%)	24.0	23.8	24.2	22.1	23.3
Trial No 2 / Tare No	T-60	G-102	T-91	G-112	G-118
Wet Soil + Tare Mass (g)	27.98	27.88	27.07	25.79	26.13
Dry Soil + Tare Mass (g)	26.11	26.53	25.67	24.33	24.12
Tare Mass (g)	18.46	20.82	19.75	17.74	15.55
Moisture Content (%)	24.4	23.6	23.6	22.2	23.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	109.88	100.46	113.12	98.54	99.41
Dry Soil Mass after Washing (g)	5.75	6.50	4.35	4.24	4.99
Test Status					
Liquid Limit	**73**	**71**	**78**	**74**	**72**
Plastic Limit	**24**	**24**	**24**	**22**	**23**
Plasticity Index	**49**	**47**	**54**	**52**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.2	6.5	3.8	4.3	5.0
Fines (%)	94.8	93.5	96.2	95.7	95.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4914B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/16/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	818				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	171+31				
Offset	P.S. -130				
Lift No	3				
Latitude (°N)	29.871591				
Longitude (°W)	90.120929				
Elevation (ft)	4.8				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T-14				
Wet Soil + Tare Mass (g)	27.05				
Dry Soil + Tare Mass (g)	22.02				
Tare Mass (g)	15.25				
Moisture Content (%)	74.3				
Trial No 2 / Blow Count	26				
Tare No	G-116				
Wet Soil + Tare Mass (g)	28.64				
Dry Soil + Tare Mass (g)	23.39				
Tare Mass (g)	16.37				
Moisture Content (%)	75.1				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-82				
Wet Soil + Tare Mass (g)	25.29				
Dry Soil + Tare Mass (g)	23.94				
Tare Mass (g)	18.27				
Moisture Content (%)	23.8				
Trial No 2 / Tare No	T-86				
Wet Soil + Tare Mass (g)	25.07				
Dry Soil + Tare Mass (g)	23.45				
Tare Mass (g)	16.67				
Moisture Content (%)	23.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	73.91				
Dry Soil Mass after Washing (g)	2.55				
Test Status					
Liquid Limit	**75**				
Plastic Limit	**24**				
Plasticity Index	**51**				
Gravel Content (%)	0.0				
Sand Content (%)	3.5				
Fines (%)	96.5				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4920
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	819	820	821	822	823
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	173+22	175+29	177+10	179+16	181+27
Offset	PS-129	PS-113	PS-111	PS-106	PS-120
Lift No	3	3	3	3	3
Latitude (°N)	29.871549	29.871460	29.871417	29.871277	29.871176
Longitude (°W)	90.120328	90.119680	90.119112	90.118425	90.117769
Elevation (ft)	4.6	5.3	5.4	5.7	4.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23	24	26
Tare No	T-5	T-68	T-31	G-111	T-92
Wet Soil + Tare Mass (g)	29.45	35.94	29.80	27.98	35.62
Dry Soil + Tare Mass (g)	25.20	29.64	25.49	22.84	31.30
Tare Mass (g)	19.26	20.75	19.52	16.01	25.47
Moisture Content (%)	71.5	71.2	71.5	74.9	74.5
Trial No 2 / Blow Count	26	25	24	25	27
Tare No	G-129	T-421	T-35	T-67	T-7
Wet Soil + Tare Mass (g)	29.53	32.65	28.49	32.22	34.59
Dry Soil + Tare Mass (g)	24.64	27.29	23.03	26.52	28.21
Tare Mass (g)	17.86	19.73	15.54	18.93	19.73
Moisture Content (%)	72.5	70.9	72.5	75.1	75.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-11	T-70	T-33	T-80	T-41
Wet Soil + Tare Mass (g)	22.91	29.57	24.97	25.41	28.54
Dry Soil + Tare Mass (g)	21.46	27.61	23.18	23.80	26.79
Tare Mass (g)	15.15	18.65	14.90	16.59	19.37
Moisture Content (%)	23.0	21.9	21.6	22.3	23.6
Trial No 2 / Tare No	T-30	T-40	T-29	T-97	T-17
Wet Soil + Tare Mass (g)	28.17	29.11	27.54	23.95	24.61
Dry Soil + Tare Mass (g)	26.69	27.35	25.87	22.38	22.72
Tare Mass (g)	20.24	19.30	18.18	15.38	14.72
Moisture Content (%)	22.9	21.9	21.7	22.4	23.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	88.57	85.09	79.46	102.96	90.91
Dry Soil Mass after Washing (g)	2.54	4.34	5.05	3.31	3.10
Test Status					
Liquid Limit	**72**	**71**	**72**	**75**	**75**
Plastic Limit	**23**	**22**	**22**	**22**	**24**
Plasticity Index	**49**	**49**	**50**	**53**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.9	5.1	6.3	3.2	3.4
Fines (%)	97.1	94.9	93.7	96.8	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**PASS**	**PASS**	**PASS**	**PASS**	**PASS**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4956
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	824	825	826	827	828
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	55+97	61+57	123+92	129+55	123+59
Offset	PS-11	PS-15	C/L	C/L	P.S. -165
Lift No	8	8	9	9	4
Latitude (°N)	29.886631	29.886141	29.872289	29.872150	29.872739
Longitude (°W)	90.138542	90.136934	90.135864	90.134096	90.135926
Elevation (ft)	11.1	10.9	13.3	13.3	3.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	25	26	24
Tare No	G-109	T-9	G-116	G-126	G-129
Wet Soil + Tare Mass (g)	28.77	30.83	29.30	28.51	29.58
Dry Soil + Tare Mass (g)	23.67	26.36	23.87	23.70	24.96
Tare Mass (g)	15.78	19.69	16.37	16.69	17.85
Moisture Content (%)	65.2	67.6	72.4	68.9	64.7
Trial No 2 / Blow Count	27	27	24	25	25
Tare No	T-63	G-118	T-86	T-72	T-30
Wet Soil + Tare Mass (g)	34.88	31.23	32.53	38.49	36.15
Dry Soil + Tare Mass (g)	28.80	24.91	25.86	32.28	29.87
Tare Mass (g)	19.33	15.55	16.68	23.31	20.23
Moisture Content (%)	64.8	68.2	72.3	69.2	65.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-112	T-6	T-82	T-76	T-11
Wet Soil + Tare Mass (g)	29.12	30.91	26.75	26.99	23.38
Dry Soil + Tare Mass (g)	26.90	28.72	25.03	24.80	21.83
Tare Mass (g)	17.73	19.15	18.24	16.12	15.14
Moisture Content (%)	24.2	22.9	25.3	25.2	23.2
Trial No 2 / Tare No	T-8	T-14	T-73	T-5	T-68
Wet Soil + Tare Mass (g)	33.10	27.26	27.85	35.65	28.25
Dry Soil + Tare Mass (g)	30.59	24.98	25.35	32.30	26.84
Tare Mass (g)	20.23	15.25	15.83	19.25	20.75
Moisture Content (%)	24.2	23.4	26.3	25.7	23.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	123.24	104.32	76.46	120.79	101.46
Dry Soil Mass after Washing (g)	4.94	3.40	2.37	4.30	2.95
Test Status					
Liquid Limit	**65**	**68**	**72**	**69**	**65**
Plastic Limit	**24**	**23**	**26**	**25**	**23**
Plasticity Index	**41**	**45**	**46**	**44**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.9	3.3	3.1	2.0	2.9
Fines (%)	96.0	96.7	96.9	98.0	97.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4980
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	829	830	831		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.			
Station	60+88	55+80	156+63		
Offset	CL	PS-6	PS-136		
Lift No	9	9	4		
Latitude (°N)	29.886258	29.886623	29.872561		
Longitude (°W)	90.137096	90.138579	90.134604		
Elevation (ft)	12.3	12.1	4.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	27		
Tare No	T-91	T-421	T-8		
Wet Soil + Tare Mass (g)	33.28	33.55	31.14		
Dry Soil + Tare Mass (g)	27.74	28.10	26.93		
Tare Mass (g)	19.74	19.74	20.24		
Moisture Content (%)	69.9	65.5	63.5		
Trial No 2 / Blow Count	27	26	28		
Tare No	T-32	T-86	T-14		
Wet Soil + Tare Mass (g)	31.12	30.70	29.30		
Dry Soil + Tare Mass (g)	25.59	25.14	23.86		
Tare Mass (g)	17.64	16.67	15.25		
Moisture Content (%)	70.2	66.0	64.1		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-125	T-17	T-40		
Wet Soil + Tare Mass (g)	31.26	26.75	28.27		
Dry Soil + Tare Mass (g)	29.32	24.55	26.68		
Tare Mass (g)	20.59	14.70	19.30		
Moisture Content (%)	22.2	22.3	21.5		
Trial No 2 / Tare No	T-41	T-17	T-70		
Wet Soil + Tare Mass (g)	29.45	26.75	27.36		
Dry Soil + Tare Mass (g)	27.67	24.55	25.81		
Tare Mass (g)	19.36	14.70	18.67		
Moisture Content (%)	21.4	22.3	21.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	117.72	99.90	96.24		
Dry Soil Mass after Washing (g)	7.30	4.81	3.85		
Test Status					
Liquid Limit	**70**	**66**	**64**		
Plastic Limit	**22**	**22**	**22**		
Plasticity Index	**48**	**44**	**42**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	6.2	4.8	4.0		
Fines (%)	93.8	95.2	96.0		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4992A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	832	833	834	835	836
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	133+57	133+79	139+50	143+82	147+92
Offset	PS-147	CL	PS-134	PS-142	PS-131
Lift No	4	9	4	4	4
Latitude (°N)	29.872457	29.872049	29.872282	29.872207	29.872090
Longitude (°W)	90.132792	90.132761	90.130932	90.129576	90.128287
Elevation (ft)	4.0	13.5	4.4	4.1	4.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	24	24	26
Tare No	T-90	T-94	T-87	G-147	G-107
Wet Soil + Tare Mass (g)	31.60	25.95	31.03	35.61	28.38
Dry Soil + Tare Mass (g)	26.98	21.67	26.64	30.69	22.62
Tare Mass (g)	19.69	15.60	19.88	22.82	13.81
Moisture Content (%)	63.7	71.2	64.6	62.2	65.7
Trial No 2 / Blow Count	26	25	25	25	26
Tare No	T-101	T-46	T-61	T-10	G-112
Wet Soil + Tare Mass (g)	30.34	34.44	30.46	30.55	31.93
Dry Soil + Tare Mass (g)	25.23	28.40	24.64	24.74	26.30
Tare Mass (g)	17.14	19.90	15.71	15.48	17.73
Moisture Content (%)	63.5	71.1	65.2	62.7	66.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-74	T-84	G-104	G-115	G-109
Wet Soil + Tare Mass (g)	32.66	31.53	24.70	25.78	28.38
Dry Soil + Tare Mass (g)	30.39	29.68	23.26	24.40	26.28
Tare Mass (g)	19.75	22.06	16.08	17.34	15.79
Moisture Content (%)	21.3	24.3	20.1	19.5	20.0
Trial No 2 / Tare No	T-1022	T-50	T-95	T-62	T-86
Wet Soil + Tare Mass (g)	32.16	28.35	29.77	29.11	29.14
Dry Soil + Tare Mass (g)	29.95	26.53	28.21	27.26	27.07
Tare Mass (g)	19.73	19.10	20.44	17.80	16.68
Moisture Content (%)	21.6	24.5	20.1	19.6	19.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	97.75	102.00	102.64	119.75	89.99
Dry Soil Mass after Washing (g)	2.80	2.50	3.58	6.55	3.05
Test Status					
Liquid Limit	**64**	**71**	**65**	**62**	**66**
Plastic Limit	**21**	**24**	**20**	**20**	**20**
Plasticity Index	**43**	**47**	**45**	**42**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.9	2.5	3.5	5.5	3.4
Fines (%)	97.1	97.5	96.5	94.5	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	4992B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	837	838	839	840	841
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	138+59	144+25	149+80	154+30	157+47
Offset	CL	CL	CL	PS-138	PS-129
Lift No	9	9	9	4	4
Latitude (°N)	29.872457	29.872049	29.872282	29.872207	29.872090
Longitude (°W)	90.132792	90.132761	90.130932	90.129576	90.128287
Elevation (ft)	13.7	12.8	12.8	4.1	4.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	27	26	27
Tare No	T-17	T-70	T-41	T-71	T-28
Wet Soil + Tare Mass (g)	28.26	30.75	30.94	33.26	30.35
Dry Soil + Tare Mass (g)	22.65	25.44	25.96	27.79	25.27
Tare Mass (g)	14.70	18.65	19.36	19.77	17.83
Moisture Content (%)	70.9	78.6	76.2	68.5	68.9
Trial No 2 / Blow Count	26	25	28	25	26
Tare No	T-31	T-40	G-125	T-60	G-102
Wet Soil + Tare Mass (g)	34.73	32.07	34.95	31.94	37.31
Dry Soil + Tare Mass (g)	28.42	26.44	28.75	26.46	30.58
Tare Mass (g)	19.52	19.30	20.59	18.46	20.82
Moisture Content (%)	71.2	78.9	77.0	68.5	69.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-8	T-32	T-421	T-104	T-34
Wet Soil + Tare Mass (g)	29.90	33.07	30.32	26.70	26.81
Dry Soil + Tare Mass (g)	28.17	30.13	28.50	25.18	25.14
Tare Mass (g)	20.24	17.64	19.73	17.74	17.49
Moisture Content (%)	21.8	23.5	20.8	20.4	21.8
Trial No 2 / Tare No	T-14	T-91	T-79	T-39	T-26
Wet Soil + Tare Mass (g)	25.14	34.97	31.59	28.99	27.23
Dry Soil + Tare Mass (g)	23.35	32.12	28.98	27.56	25.75
Tare Mass (g)	15.25	19.74	16.18	20.80	18.94
Moisture Content (%)	22.1	23.0	20.4	21.2	21.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.97	110.25	124.01	83.10	97.97
Dry Soil Mass after Washing (g)	5.29	5.49	3.83	3.06	3.03
Test Status					
Liquid Limit	**71**	**79**	**77**	**69**	**69**
Plastic Limit	**22**	**23**	**21**	**21**	**22**
Plasticity Index	**49**	**56**	**56**	**48**	**47**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.2	5.0	3.1	3.7	3.1
Fines (%)	94.8	95.0	96.9	96.3	96.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5003
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	842	843	844	845	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	60+63	58+29	155+34	159+04	
Offset	CL	CL	CL	CL	
Lift No	10	10	9	9	
Latitude (°N)	29.886317	29.886484	29.871572	29.871494	
Longitude (°W)	90.137135	90.137828	90.125987	90.124822	
Elevation (ft)	13.3	13.2	12.8	12.9	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	28	25	
Tare No	T-421	T-84	T-46	T-101	
Wet Soil + Tare Mass (g)	31.65	35.71	30.47	29.40	
Dry Soil + Tare Mass (g)	27.03	30.34	26.26	24.50	
Tare Mass (g)	19.73	22.06	19.91	17.15	
Moisture Content (%)	63.0	65.2	67.2	66.7	
Trial No 2 / Blow Count	23	25	28	25	
Tare No	G-104	T-94	T-1022	T-11	
Wet Soil + Tare Mass (g)	33.98	31.71	37.06	28.41	
Dry Soil + Tare Mass (g)	27.00	25.34	30.16	23.09	
Tare Mass (g)	16.08	15.63	19.73	15.13	
Moisture Content (%)	63.3	65.6	67.1	66.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-95	T-87	T-74	G-126	
Wet Soil + Tare Mass (g)	32.02	32.59	33.61	29.86	
Dry Soil + Tare Mass (g)	29.93	30.23	30.86	27.36	
Tare Mass (g)	20.43	19.89	19.76	16.70	
Moisture Content (%)	22.0	22.8	24.8	23.5	
Trial No 2 / Tare No	T-61	T-50	T-90	T-72	
Wet Soil + Tare Mass (g)	26.57	31.18	28.89	35.08	
Dry Soil + Tare Mass (g)	24.59	28.99	27.08	32.82	
Tare Mass (g)	15.73	19.10	19.71	23.31	
Moisture Content (%)	22.3	22.1	24.6	23.8	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.18	114.78	108.21	116.55	
Dry Soil Mass after Washing (g)	13.60	5.66	3.30	4.74	
Test Status					
Liquid Limit	**63**	**65**	**67**	**67**	
Plastic Limit	**22**	**22**	**25**	**24**	
Plasticity Index	**41**	**43**	**42**	**43**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	13.1	5.0	3.0	4.1	
Fines (%)	86.9	95.0	97.0	95.9	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5016A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	846	847	848	849	850
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	163+74	169+16	165+89	169+40	61+27
Offset	CL	CL	PS-155	PS-162	CL
Lift No	9	9	4	4	11
Latitude (°N)	29.871399	29.871285	29.871775	29.871721	29.886176
Longitude (°W)	90.123342	90.121637	90.122630	90.121522	90.173010
Elevation (ft)	13.2	13.1	4.0	3.7	13.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	28	27	26
Tare No	T-17	T-107	G-147	G-129	T-28
Wet Soil + Tare Mass (g)	30.57	28.06	37.94	29.96	32.97
Dry Soil + Tare Mass (g)	23.93	21.82	31.91	25.17	27.04
Tare Mass (g)	14.72	13.82	22.87	17.86	17.85
Moisture Content (%)	72.4	78.4	67.6	66.1	64.8
Trial No 2 / Blow Count	25	26	28	27	25
Tare No	T-86	G-115	T-68	T-34	T-104
Wet Soil + Tare Mass (g)	31.43	29.28	39.17	32.79	31.00
Dry Soil + Tare Mass (g)	25.26	24.03	31.80	26.69	25.78
Tare Mass (g)	16.68	17.34	20.74	17.49	17.74
Moisture Content (%)	71.9	78.8	67.6	66.9	64.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-109	T-62	T-30	T-26	T-39
Wet Soil + Tare Mass (g)	23.63	26.43	29.01	25.73	27.95
Dry Soil + Tare Mass (g)	22.39	24.89	27.56	24.66	26.88
Tare Mass (g)	15.78	17.80	20.24	18.94	20.80
Moisture Content (%)	18.8	21.7	19.8	18.7	17.6
Trial No 2 / Tare No	G-112	T-107	T-19	G-102	T-60
Wet Soil + Tare Mass (g)	27.78	24.27	26.57	27.73	26.25
Dry Soil + Tare Mass (g)	26.18	22.67	25.14	26.66	25.09
Tare Mass (g)	17.75	15.50	17.81	20.83	18.47
Moisture Content (%)	19.0	22.3	19.5	18.4	17.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	97.29	117.17	114.85	93.99	93.25
Dry Soil Mass after Washing (g)	5.50	3.98	3.68	4.06	7.12
Test Status					
Liquid Limit	**72**	**79**	**68**	**67**	**65**
Plastic Limit	**19**	**22**	**20**	**19**	**18**
Plasticity Index	**53**	**57**	**48**	**48**	**47**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.7	3.4	3.2	4.3	7.6
Fines (%)	94.3	96.6	96.8	95.7	92.4
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5016B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	6/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	851	852	853	854	855
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	55+71	174+30	178+50	178+64	174+44
Offset	PS-5	PS-144	PS-154	CL	CL
Lift No	11	4	4	9	9
Latitude (°N)	29.886630	29.871566	29.871451	29.871035	29.871173
Longitude (°W)	90.138624	90.119985	90.118590	90.118662	90.119976
Elevation (ft)	13.5	4.6	4.4	13.5	13.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27	24	24	28
Tare No	T-71	G-126	T-90	T-87	T-5
Wet Soil + Tare Mass (g)	34.68	32.22	33.86	35.81	31.97
Dry Soil + Tare Mass (g)	28.45	25.93	28.10	28.76	26.90
Tare Mass (g)	19.79	16.69	19.70	19.90	19.24
Moisture Content (%)	71.9	68.7	68.2	79.2	67.1
Trial No 2 / Blow Count	25	27	24	23	27
Tare No	G-125	T-101	T-1022	T-84	T-76
Wet Soil + Tare Mass (g)	36.36	29.49	33.75	40.82	34.31
Dry Soil + Tare Mass (g)	29.77	24.48	28.07	32.45	27.00
Tare Mass (g)	20.60	17.18	19.75	22.08	16.12
Moisture Content (%)	71.9	69.3	67.9	79.9	67.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-79	T-11	T-46	T-94	T-82
Wet Soil + Tare Mass (g)	27.80	27.54	28.58	24.32	26.04
Dry Soil + Tare Mass (g)	26.06	25.55	27.17	22.70	24.71
Tare Mass (g)	16.18	15.15	19.92	15.62	18.24
Moisture Content (%)	17.6	19.1	19.4	22.9	20.6
Trial No 2 / Tare No	T-72	T-74	T-50	T-61	T-73
Wet Soil + Tare Mass (g)	33.41	35.34	28.80	23.80	23.08
Dry Soil + Tare Mass (g)	31.93	32.85	27.22	22.30	21.83
Tare Mass (g)	23.30	19.75	19.10	15.73	15.83
Moisture Content (%)	17.1	19.0	19.5	22.8	20.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	133.54	99.60	98.88	73.59	124.35
Dry Soil Mass after Washing (g)	6.99	2.81	3.64	4.18	4.24
Test Status					
Liquid Limit	**72**	**69**	**68**	**80**	**67**
Plastic Limit	**17**	**19**	**19**	**23**	**21**
Plasticity Index	**55**	**50**	**49**	**57**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.2	2.8	3.7	5.7	3.4
Fines (%)	94.8	97.2	96.3	94.3	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5053
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	856	857			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	123+48	127+88			
Offset	FS-72	FS-87			
Lift No	4	4			
Latitude (°N)	29.872090	29.871946			
Longitude (°W)	90.136025	90.134643			
Elevation (ft)	5.5	5.2			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24			
Tare No	G-116	G-104			
Wet Soil + Tare Mass (g)	31.70	28.36			
Dry Soil + Tare Mass (g)	24.90	22.48			
Tare Mass (g)	16.37	16.09			
Moisture Content (%)	79.7	91.6			
Trial No 2 / Blow Count	24	23			
Tare No	T-95	T-421			
Wet Soil + Tare Mass (g)	34.79	27.85			
Dry Soil + Tare Mass (g)	28.41	23.95			
Tare Mass (g)	20.44	19.75			
Moisture Content (%)	79.7	91.9			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-6	T-9			
Wet Soil + Tare Mass (g)	28.71	28.24			
Dry Soil + Tare Mass (g)	26.74	26.49			
Tare Mass (g)	19.15	19.67			
Moisture Content (%)	26.0	25.7			
Trial No 2 / Tare No	G-118	T-63			
Wet Soil + Tare Mass (g)	27.60	27.73			
Dry Soil + Tare Mass (g)	25.30	26.04			
Tare Mass (g)	16.55	19.33			
Moisture Content (%)	26.3	25.2			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	84.02	97.43			
Dry Soil Mass after Washing (g)	6.73	6.61			
Test Status					
Liquid Limit	**80**	**92**			
Plastic Limit	**26**	**25**			
Plasticity Index	**54**	**67**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	8.0	6.8			
Fines (%)	92.0	93.2			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5065A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	858	859	860	861	862
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	58+69	54+87	133+39	138+74	144+15
Offset	CL	CL	FS-79	FS-58	FS-93
Lift No	12	12	4	4	4
Latitude (°N)	29.886454	29.886630	29.871838	29.871772	29.871553
Longitude (°W)	90.137706	90.138883	90.132911	90.131224	90.129527
Elevation (ft)	14.6	14.6	5.0	5.8	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	26	26	28	24
Tare No	G-116	G-118	T-421	T-9	T-71
Wet Soil + Tare Mass (g)	31.72	27.23	29.76	30.63	30.95
Dry Soil + Tare Mass (g)	25.61	22.63	25.49	25.79	26.41
Tare Mass (g)	16.40	15.55	19.74	19.68	19.79
Moisture Content (%)	67.0	65.3	74.6	80.3	68.2
Trial No 2 / Blow Count	28	26	27	28	24
Tare No	T-95	T-6	G-104	T-63	T-79
Wet Soil + Tare Mass (g)	34.39	32.13	30.91	30.78	29.67
Dry Soil + Tare Mass (g)	28.82	27.01	24.60	25.71	24.16
Tare Mass (g)	20.44	19.15	16.09	19.33	16.18
Moisture Content (%)	67.4	65.4	74.8	80.6	68.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-78	T-51	T-69	T-21	G-111
Wet Soil + Tare Mass (g)	29.80	28.33	28.21	27.23	26.26
Dry Soil + Tare Mass (g)	27.97	26.54	26.87	24.99	24.56
Tare Mass (g)	17.87	17.48	19.59	15.49	16.01
Moisture Content (%)	18.1	19.8	18.4	23.6	19.9
Trial No 2 / Tare No	T-107	T-65	T-52	T-61	T-35
Wet Soil + Tare Mass (g)	27.54	28.90	28.53	27.64	26.97
Dry Soil + Tare Mass (g)	26.10	27.05	27.24	25.98	25.06
Tare Mass (g)	18.28	17.61	20.31	18.95	15.55
Moisture Content (%)	18.4	19.6	18.6	23.6	20.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	116.48	94.36	116.53	88.60	94.30
Dry Soil Mass after Washing (g)	5.86	6.18	6.23	6.32	5.30
Test Status					
Liquid Limit	**67**	**65**	**75**	**80**	**68**
Plastic Limit	**18**	**20**	**19**	**24**	**20**
Plasticity Index	**49**	**45**	**56**	**56**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.0	6.5	5.3	7.1	5.6
Fines (%)	95.0	93.5	94.7	92.9	94.4
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5065B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	863	864	865		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	148+77	153+36	158+77		
Offset	FS-76	FS-90	FS-60		
Lift No	4	4	4		
Latitude (°N)	29.871503	29.871365	29.871334		
Longitude (°W)	90.128072	90.126632	90.124920		
Elevation (ft)	5.2	5.1	5.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	26		
Tare No	T-72	T-101	T-74		
Wet Soil + Tare Mass (g)	33.60	27.34	28.80		
Dry Soil + Tare Mass (g)	29.40	23.39	25.11		
Tare Mass (g)	23.31	17.16	19.76		
Moisture Content (%)	68.6	64.0	69.3		
Trial No 2 / Blow Count	23	27	26		
Tare No	G-126	T-11	T-90		
Wet Soil + Tare Mass (g)	31.08	28.80	34.24		
Dry Soil + Tare Mass (g)	25.19	23.50	28.32		
Tare Mass (g)	16.70	15.15	19.72		
Moisture Content (%)	68.7	64.1	69.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-33	T-92	T-80		
Wet Soil + Tare Mass (g)	27.51	36.00	27.32		
Dry Soil + Tare Mass (g)	25.27	34.04	25.35		
Tare Mass (g)	14.91	25.48	16.58		
Moisture Content (%)	21.6	22.9	22.5		
Trial No 2 / Tare No	T-72	T-97	T-29		
Wet Soil + Tare Mass (g)	31.74	27.18	28.82		
Dry Soil + Tare Mass (g)	29.62	24.99	26.85		
Tare Mass (g)	19.73	15.38	18.18		
Moisture Content (%)	21.4	22.8	22.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.57	133.12	104.73		
Dry Soil Mass after Washing (g)	5.54	5.43	3.40		
Test Status					
Liquid Limit	**69**	**64**	**69**		
Plastic Limit	**22**	**23**	**23**		
Plasticity Index	**47**	**41**	**46**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.1	4.1	3.2		
Fines (%)	94.9	95.9	96.8		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5077A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/8/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	866	867	868	869	870
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	60+52	110+66	164+10	168+33	173+43
Offset	CL	FS-6	FS-83	FS-92	FS-87
Lift No	12	1	4	4	4
Latitude (°N)	29.886344	29.874237	29.871157	29.871042	29.870950
Longitude (°W)	90.137149	90.138257	90.123249	90.121921	90.120317
Elevation (ft)	14.6	10.0	5.4	5.1	5.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	27	23	24
Tare No	T-69	T-421	T-101	T-74	T-79
Wet Soil + Tare Mass (g)	32.57	28.64	30.94	31.84	26.89
Dry Soil + Tare Mass (g)	27.44	24.98	24.55	26.85	22.18
Tare Mass (g)	19.56	19.71	17.13	19.73	16.16
Moisture Content (%)	64.4	69.8	86.9	69.4	77.9
Trial No 2 / Blow Count	23	26	27	23	23
Tare No	T-9	T-80	T-11	T-92	G-111
Wet Soil + Tare Mass (g)	36.08	32.69	31.31	40.81	32.50
Dry Soil + Tare Mass (g)	29.62	26.08	23.83	34.49	25.24
Tare Mass (g)	19.66	16.56	15.13	25.44	15.98
Moisture Content (%)	64.2	69.8	86.8	69.1	77.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-67	T-7	T-29	T-33	T-63
Wet Soil + Tare Mass (g)	29.87	27.69	28.74	27.30	31.03
Dry Soil + Tare Mass (g)	28.02	26.24	26.42	25.18	28.76
Tare Mass (g)	18.90	19.71	18.15	14.89	19.32
Moisture Content (%)	20.3	22.2	28.1	20.6	24.0
Trial No 2 / Tare No	T-71	T-97	T-90	T-72	T-21
Wet Soil + Tare Mass (g)	30.70	26.51	29.92	32.71	27.72
Dry Soil + Tare Mass (g)	28.84	24.48	27.68	31.11	25.33
Tare Mass (g)	19.76	15.35	19.68	23.28	15.46
Moisture Content (%)	20.5	22.2	28.0	20.4	24.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	95.53	113.44	113.58	101.65	79.25
Dry Soil Mass after Washing (g)	6.96	10.56	8.91	3.84	3.32
Test Status					
Liquid Limit	**64**	**70**	**87**	**69**	**78**
Plastic Limit	**20**	**22**	**28**	**21**	**24**
Plasticity Index	**44**	**48**	**59**	**48**	**54**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	7.3	9.3	7.8	3.8	4.2
Fines (%)	92.7	90.7	92.2	96.2	95.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5077B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/8/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	871				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	178+87				
Offset	FS-98				
Lift No	4				
Latitude (°N)	29.870749				
Longitude (°W)	90.118667				
Elevation (ft)	4.8				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	G-118				
Wet Soil + Tare Mass (g)	25.61				
Dry Soil + Tare Mass (g)	21.20				
Tare Mass (g)	15.54				
Moisture Content (%)	78.6				
Trial No 2 / Blow Count	27				
Tare No	T-65				
Wet Soil + Tare Mass (g)	31.13				
Dry Soil + Tare Mass (g)	25.20				
Tare Mass (g)	17.59				
Moisture Content (%)	78.7				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-52				
Wet Soil + Tare Mass (g)	27.72				
Dry Soil + Tare Mass (g)	26.25				
Tare Mass (g)	20.28				
Moisture Content (%)	24.6				
Trial No 2 / Tare No	G-104				
Wet Soil + Tare Mass (g)	27.13				
Dry Soil + Tare Mass (g)	24.96				
Tare Mass (g)	16.07				
Moisture Content (%)	24.4				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	115.08				
Dry Soil Mass after Washing (g)	4.57				
Test Status					
Liquid Limit	**79**				
Plastic Limit	**25**				
Plasticity Index	**54**				
Gravel Content (%)	0.0				
Sand Content (%)	4.0				
Fines (%)	96.0				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5078A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	872	873	874	875	876
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	121+84	124+11	128+09	133+12	137+83
Offset	CL	CL	CL	CL	CL
Lift No	10	10	10	10	10
Latitude (°N)	29.872326	29.872271	29.872182	29.872068	29.871958
Longitude (°W)	90.136519	90.135806	90.134554	90.132976	90.131493
Elevation (ft)	13.8	13.8	13.8	13.8	13.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	27	26	25
Tare No	G-125	T-28	G-129	G-147	G-115
Wet Soil + Tare Mass (g)	36.95	31.94	27.01	35.97	30.35
Dry Soil + Tare Mass (g)	30.31	26.48	23.39	30.74	25.08
Tare Mass (g)	20.60	17.84	17.84	22.83	17.33
Moisture Content (%)	68.7	63.8	65.8	66.4	68.0
Trial No 2 / Blow Count	26	27	27	26	24
Tare No	T-39	G-102	T-30	T-10	G-109
Wet Soil + Tare Mass (g)	35.63	36.63	33.92	29.45	31.63
Dry Soil + Tare Mass (g)	29.60	30.52	28.52	23.89	25.19
Tare Mass (g)	20.79	20.82	20.23	15.48	15.78
Moisture Content (%)	68.8	63.6	65.7	66.4	68.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-60	T-26	T-19	T-62	G-112
Wet Soil + Tare Mass (g)	26.15	26.56	24.40	26.61	26.50
Dry Soil + Tare Mass (g)	24.80	25.22	23.18	25.00	24.99
Tare Mass (g)	18.46	18.94	17.80	17.79	17.73
Moisture Content (%)	21.3	21.3	22.7	22.3	20.8
Trial No 2 / Tare No	T-104	T-34	T-68	G-107	T-86
Wet Soil + Tare Mass (g)	25.37	24.44	27.33	23.33	24.75
Dry Soil + Tare Mass (g)	24.05	23.21	26.12	21.60	23.36
Tare Mass (g)	17.74	17.49	20.74	13.80	16.67
Moisture Content (%)	20.9	21.5	22.5	22.2	20.8
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.30	118.01	113.70	61.03	104.84
Dry Soil Mass after Washing (g)	5.12	5.09	4.06	2,31	4.00
Test Status					
Liquid Limit	**69**	**64**	**66**	**66**	**68**
Plastic Limit	**21**	**21**	**23**	**22**	**21**
Plasticity Index	**48**	**43**	**43**	**44**	**47**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.3	4.3	3.6	3,8	3.8
Fines (%)	95.7	95.7	96.4	96.2	96.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5078B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	877	878	879	880	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	143+77	148+16	152+74	157+89	
Offset	CL	CL	CL	CL	
Lift No	10	10	10	10	
Latitude (°N)	29.871819	29.871720	29.871631	29.871517	
Longitude (°W)	90.129626	90.128246	90.126802	90.125185	
Elevation (ft)	13.2	13.2	13.2	13.2	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	27	23	24	
Tare No	T-17	T-63	T-72	T-90	
Wet Soil + Tare Mass (g)	28.84	31.65	32.46	30.60	
Dry Soil + Tare Mass (g)	22.83	26.38	28.50	26.21	
Tare Mass (g)	14.71	19.32	23.31	19.68	
Moisture Content (%)	75.0	75.3	75.5	66.9	
Trial No 2 / Blow Count	28	28	24	24	
Tare No	T-65	T-79	T-74	T-101	
Wet Soil + Tare Mass (g)	31.51	27.81	32.15	27.16	
Dry Soil + Tare Mass (g)	25.58	22.85	26.80	23.13	
Tare Mass (g)	17.59	16.19	19.74	17.13	
Moisture Content (%)	75.2	75.5	75.4	66.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-118	G-111	T-92	T-11	
Wet Soil + Tare Mass (g)	22.45	24.62	33.68	24.87	
Dry Soil + Tare Mass (g)	21.15	22.86	32.28	23.08	
Tare Mass (g)	15.54	15.98	25.45	15.12	
Moisture Content (%)	23.2	25.6	20.5	22.5	
Trial No 2 / Tare No	T-21	T-33	T-29	T-7	
Wet Soil + Tare Mass (g)	22.60	22.53	26.32	26.98	
Dry Soil + Tare Mass (g)	21.26	20.97	24.94	25.65	
Tare Mass (g)	15.45	14.89	18.15	19.71	
Moisture Content (%)	23.1	25.7	20.3	22.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	121.17	105.02	105.77	105.12	
Dry Soil Mass after Washing (g)	7.15	3.51	3.98	5.25	
Test Status					
Liquid Limit	**75**	**75**	**75**	**67**	
Plastic Limit	**23**	**26**	**20**	**22**	
Plasticity Index	**52**	**49**	**55**	**45**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	5.9	3.3	3.8	5.0	
Fines (%)	94.1	96.7	96.2	95.0	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5112
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	881	882	883	884	885
Retest of Test ID	5077+867				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	110+66	122+33	127+74	132+76	125+29
Offset	PS-6	PS-121	PS-134	PS-150	PS-126
Lift No	1	5	5	5	6
Latitude (°N)	29.874237	29.872481	29.872558	29.872484	29.872592
Longitude (°W)	90.138257	90.136334	90.134630	90.133045	90.135402
Elevation (ft)	10.0	5.7	5.2	4.3	5.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	27	28	25
Tare No	G-126	T-95	T-32	T-104	T-16
Wet Soil + Tare Mass (g)	31.10	37.56	34.27	31.97	32.69
Dry Soil + Tare Mass (g)	25.29	30.92	27.98	26.51	27.64
Tare Mass (g)	16.67	20.42	17.63	17.72	19.95
Moisture Content (%)	67.1	63.2	61.3	63.0	65.7
Trial No 2 / Blow Count	24	25	26	28	25
Tare No	T-27	T-50	T-91	T-1022	G-125
Wet Soil + Tare Mass (g)	33.05	35.35	38.93	36.11	36.53
Dry Soil + Tare Mass (g)	27.78	29.04	31.64	29.81	30.20
Tare Mass (g)	19.95	19.09	19.71	19.71	20.57
Moisture Content (%)	67.0	63.4	61.4	63.2	65.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-78	T-84	T-19	T-46	T-81
Wet Soil + Tare Mass (g)	25.62	31.24	26.53	28.40	29.17
Dry Soil + Tare Mass (g)	24.39	29.64	24.92	26.78	27.58
Tare Mass (g)	17.84	22.06	17.78	19.87	20.74
Moisture Content (%)	18.8	21.1	22.5	23.4	23.2
Trial No 2 / Tare No	G-116	T-41	T-30	T-39	T-35
Wet Soil + Tare Mass (g)	24.83	27.22	29.42	30.09	23.27
Dry Soil + Tare Mass (g)	23.47	25.84	27.74	28.31	21.80
Tare Mass (g)	16.36	19.35	20.22	20.78	15.53
Moisture Content (%)	19.1	21.3	22.3	23.6	23.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	123.94	95.40	104.99	123.34	92.18
Dry Soil Mass after Washing (g)	5.52	3.48	3.78	3.98	7.79
Test Status					
Liquid Limit	**67**	**63**	**61**	**63**	**66**
Plastic Limit	**19**	**21**	**22**	**24**	**23**
Plasticity Index	**48**	**42**	**39**	**39**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.5	3.6	3.6	3.2	8.5
Fines (%)	95.5	96.4	96.4	96.8	91.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5126
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/13/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	886	887			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	112+24	112+14			
Offset	FS-26	FS-29			
Lift No	1	2			
Latitude (°N)	29.873829	29.873859			
Longitude (°W)	90.138443	90.138443			
Elevation (ft)	0.0	1.0			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	NO	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	23			
Tare No	T-81	T-87			
Wet Soil + Tare Mass (g)	35.21	36.21			
Dry Soil + Tare Mass (g)	28.73	29.30			
Tare Mass (g)	20.81	20.83			
Moisture Content (%)	82.2	80.8			
Trial No 2 / Blow Count	27	24			
Tare No	T-11	T-17			
Wet Soil + Tare Mass (g)	31.71	32.75			
Dry Soil + Tare Mass (g)	24.25	24.90			
Tare Mass (g)	15.18	15.19			
Moisture Content (%)	83.0	80.4			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T40	T-87			
Wet Soil + Tare Mass (g)	30.83	31.82			
Dry Soil + Tare Mass (g)	28.62	29.60			
Tare Mass (g)	20.83	20.82			
Moisture Content (%)	28.4	25.3			
Trial No 2 / Tare No	T-81	T-9			
Wet Soil + Tare Mass (g)	31.16	32.19			
Dry Soil + Tare Mass (g)	28.62	29.60			
Tare Mass (g)	19.78	19.75			
Moisture Content (%)	28.7	26.3			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.57	104.73			
Dry Soil Mass after Washing (g)	5.54	3.40			
Test Status					
Liquid Limit	**83**	**81**			
Plastic Limit	**29**	**26**			
Plasticity Index	**54**	**55**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	5.1	3.2			
Fines (%)	94.9	96.8			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5138
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	7/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	888				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	112+66				
Offset	FS-22				
Lift No	3				
Latitude (°N)	29.873714				
Longitude (°W)	90.138462				
Elevation (ft)	1.8				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T-22				
Wet Soil + Tare Mass (g)	36.19				
Dry Soil + Tare Mass (g)	28.35				
Tare Mass (g)	18.97				
Moisture Content (%)	83.6				
Trial No 2 / Blow Count	25				
Tare No	T-28				
Wet Soil + Tare Mass (g)	36.74				
Dry Soil + Tare Mass (g)	28.13				
Tare Mass (g)	17.81				
Moisture Content (%)	83.4				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-60				
Wet Soil + Tare Mass (g)	33.20				
Dry Soil + Tare Mass (g)	30.15				
Tare Mass (g)	18.44				
Moisture Content (%)	26.0				
Trial No 2 / Tare No	G-102				
Wet Soil + Tare Mass (g)	30.16				
Dry Soil + Tare Mass (g)	28.21				
Tare Mass (g)	20.81				
Moisture Content (%)	26.4				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	120.51				
Dry Soil Mass after Washing (g)	7.48				
Test Status					
Liquid Limit	**84**				
Plastic Limit	**26**				
Plasticity Index	**58**				
Gravel Content (%)	0.0				
Sand Content (%)	6.2				
Fines (%)	93.8				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5842
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/20/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1105	1106	1107		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	37+14	56+88	56+80		
Offset	CL	CL	CL		
Lift No	11	10	11		
Latitude (°N)	29.887256	29.886568	29.886581		
Longitude (°W)	90.144325	90.138263	90.138285		
Elevation (ft)	13.4	13.6	14.1		
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	25	24		
Tare No	T-10	T-104	G-116		
Wet Soil + Tare Mass (g)	27.00	33.81	33.33		
Dry Soil + Tare Mass (g)	22.26	27.61	26.71		
Tare Mass (g)	15.46	17.73	16.37		
Moisture Content (%)	69.0	62.8	63.7		
Trial No 2 / Blow Count	22	24	24		
Tare No	T-97	T-421	G-127		
Wet Soil + Tare Mass (g)	29.64	36.63	32.38		
Dry Soil + Tare Mass (g)	23.72	30.09	27.15		
Tare Mass (g)	15.35	19.71	18.96		
Moisture Content (%)	69.6	62.7	63.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-13	T-30	G-110		
Wet Soil + Tare Mass (g)	26.69	28.16	23.32		
Dry Soil + Tare Mass (g)	25.19	26.72	21.94		
Tare Mass (g)	18.02	20.22	15.66		
Moisture Content (%)	20.9	22.2	22.0		
Trial No 2 / Tare No	G-119	T71	G-102		
Wet Soil + Tare Mass (g)	24.56	27.65	28.36		
Dry Soil + Tare Mass (g)	23.15	26.21	27.00		
Tare Mass (g)	16.42	19.76	20.80		
Moisture Content (%)	21.0	22.3	21.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	81.19	113.77	106.19		
Dry Soil Mass after Washing (g)	4.61	7.53	8.13		
Test Status					
Liquid Limit	**69**	**63**	**64**		
Plastic Limit	**21**	**22**	**22**		
Plasticity Index	**48**	**41**	**42**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.7	6.6	7.7		
Fines (%)	94.3	93.4	92.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5444
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	889	890	891	892	893
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	141+12	145+63	148+80	156+39	158+49
Offset	PS-147	PS-60	PS-152	PS-137	PS-130
Lift No	5	5	5	5	5
Latitude (°N)	29.872281	29.871944	29.872129	29.871926	29.871864
Longitude (°W)	90.130418	90.129024	90.128005	90.125623	90.124961
Elevation (ft)	4.3	6.9	4.0	4.7	5.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	24	25	27
Tare No	T-38	G-127	T-10	T-97	T-29
Wet Soil + Tare Mass (g)	28.11	30.42	28.46	29.10	29.28
Dry Soil + Tare Mass (g)	23.75	25.99	23.41	23.77	25.18
Tare Mass (g)	16.79	18.96	15.46	15.36	18.14
Moisture Content (%)	62.3	63.6	63.2	63.4	58.8
Trial No 2 / Blow Count	24	27	24	26	26
Tare No	G-110	G-147	T-105	T-76	T-90
Wet Soil + Tare Mass (g)	27.58	37.72	30.09	29.94	36.32
Dry Soil + Tare Mass (g)	23.00	31.95	24.44	24.58	30.18
Tare Mass (g)	15.68	22.81	15.58	16.10	19.66
Moisture Content (%)	62.3	63.7	63.5	63.5	58.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-108	T-8	G-114	T-82	T-101
Wet Soil + Tare Mass (g)	28.55	31.73	27.87	27.82	27.23
Dry Soil + Tare Mass (g)	27.16	29.81	26.02	26.25	25.64
Tare Mass (g)	19.32	20.20	16.13	18.22	17.11
Moisture Content (%)	17.7	20.0	18.7	19.6	18.6
Trial No 2 / Tare No	T-83	T-25	T-13	T-21	T-62
Wet Soil + Tare Mass (g)	25.97	25.93	29.37	27.35	27.75
Dry Soil + Tare Mass (g)	24.56	24.34	27.58	25.40	26.18
Tare Mass (g)	16.57	16.52	18.01	15.45	17.79
Moisture Content (%)	17.6	20.3	18.7	19.6	18.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	91.67	85.62	120.29	109.14	106.10
Dry Soil Mass after Washing (g)	4.96	5.42	7.96	4.89	4.44
Test Status					
Liquid Limit	**62**	**64**	**63**	**63**	**59**
Plastic Limit	**18**	**20**	**19**	**20**	**19**
Plasticity Index	**44**	**44**	**44**	**43**	**40**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.4	6.3	6.6	4.1	4.2
Fines (%)	94.7	93.7	93.4	95.9	95.8
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5474
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/17/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	894	895	896
Retest of Test ID	3499+318		4641+722
Material Source	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	133+02	112+46	88+03
Offset	CL	FS-30	PS-130
Lift No	4	4	6
Latitude (°N)	29.872076	29.873774	29.880129
Longitude (°W)	90.133027	90.138472	90.135950
Elevation (ft)	9.6	3.2	2.9
Estimated Retained No 40 (%)	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)			
Trial No 1 / Blow Count	23	26	24
Tare No	G-110	G-125	T-87
Wet Soil + Tare Mass (g)	31.99	32.93	31.03
Dry Soil + Tare Mass (g)	24.85	27.63	26.64
Tare Mass (g)	16.20	20.60	19.88
Moisture Content (%)	81.7	75.7	64.6
Trial No 2 / Blow Count	24	26	25
Tare No	T-101	T-91	T-61
Wet Soil + Tare Mass (g)	28.45	37.97	30.46
Dry Soil + Tare Mass (g)	23.76	30.14	24.68
Tare Mass (g)	18.05	19.73	15.71
Moisture Content (%)	81.7	75.6	64.4
Plastic Limit (ASTM D 4318)			
Trial No 1 / Tare No	T-21	T-82	G-104
Wet Soil + Tare Mass (g)	23.00	28.22	24.70
Dry Soil + Tare Mass (g)	21.78	26.14	23.26
Tare Mass (g)	17.30	18.24	16.08
Moisture Content (%)	27.2	26.3	20.1
Trial No 2 / Tare No	T-19	T-10	T-95
Wet Soil + Tare Mass (g)	24.09	24.89	29.77
Dry Soil + Tare Mass (g)	22.95	22.93	28.21
Tare Mass (g)	18.75	15.47	20.44
Moisture Content (%)	27.1	26.3	20.1
Materials Finer than No 200 Sieve (ASTM D 1140)			
Initial Dry Soil Mass (g)	115.81	122.53	105.40
Dry Soil Mass after Washing (g)	5.30	14.15	4.41
Test Status			
Liquid Limit	**82**	**76**	**65**
Plastic Limit	**27**	**26**	**20**
Plasticity Index	**55**	**50**	**45**
Gravel Content (%)	0.0	0.0	0.0
Sand Content (%)	4.6	11.5	4.2
Fines (%)	95.4	88.5	95.8
Group Symbol	CH	CH	CL
Group Name	FAT CLAY	FAT CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**
Remarks			
Version	**MVNQS06-100903**		

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5502A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	899	900	901	902	903
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	2+51	7+25	31+95	31+91	36+87
Offset	PS-154	PS-116	CL	CL	CL
Lift No	3	3	8	8	8
Latitude (°N)	29.889591	29.889227	29.887552	29.887554	29.887261
Longitude (°W)	90.154930	90.153489	90.145925	90.145939	90.144408
Elevation (ft)	0.8	1.9	11.4	11.4	11.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	25	24	23
Tare No	T-86	T-92	G-101	G-119	T-50
Wet Soil + Tare Mass (g)	29.98	35.74	29.50	24.65	29.70
Dry Soil + Tare Mass (g)	24.54	31.56	25.29	21.24	25.39
Tare Mass (g)	16.67	25.43	19.27	16.41	19.12
Moisture Content (%)	69.5	68.5	69.9	70.3	68.0
Trial No 2 / Blow Count	26	26	25	23	23
Tare No	T-80	T-34	T-47	T-37	T-14
Wet Soil + Tare Mass (g)	34.80	33.42	34.38	32.90	31.57
Dry Soil + Tare Mass (g)	27.37	26.95	27.16	26.52	24.91
Tare Mass (g)	16.55	17.47	16.82	17.55	15.22
Moisture Content (%)	69.0	68.6	69.8	70.4	68.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-69	T-67	T-12	G-103	T-70
Wet Soil + Tare Mass (g)	28.86	27.87	28.61	27.84	26.27
Dry Soil + Tare Mass (g)	27.21	26.43	27.24	26.15	24.72
Tare Mass (g)	19.55	18.90	19.59	19.60	18.64
Moisture Content (%)	21.5	19.1	17.9	25.8	25.5
Trial No 2 / Tare No	G-115	T-51	G-128	T-31	G-112
Wet Soil + Tare Mass (g)	27.40	25.35	28.00	26.87	25.25
Dry Soil + Tare Mass (g)	25.60	24.09	26.47	25.35	23.72
Tare Mass (g)	17.32	17.45	17.84	19.49	17.71
Moisture Content (%)	21.7	19.0	17.7	25.9	25.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.88	107.69	130.27	97.41	116.63
Dry Soil Mass after Washing (g)	4.45	7.03	12.28	13.33	22.55
Test Status					
Liquid Limit	**69**	**69**	**70**	**70**	**68**
Plastic Limit	**22**	**19**	**18**	**26**	**25**
Plasticity Index	**47**	**50**	**52**	**44**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.1	6.5	9.4	13.7	19.3
Fines (%)	95.9	93.5	90.6	86.3	80.7
Group Symbol	CL	CH	CH	CL	CL
Group Name	LEAN CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5502B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/19/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	904	905	906	907	908
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	41+89	46+85	51+70	11+89	16+90
Offset	CL	CL	CL	CL	PS-11
Lift No	8	8	8	8	8
Latitude (°N)	29.886992	29.886715	29.886435	29.888663	29.888410
Longitude (°W)	90.142856	90.141321	90.139828	90.152127	90.150572
Elevation (ft)	11.5	11.6	11.6	11.4	11.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	26	24
Tare No	T-28	T-35	G-125	T-39	T-1022
Wet Soil + Tare Mass (g)	33.45	31.65	35.75	35.60	35.65
Dry Soil + Tare Mass (g)	26.98	25.01	29.45	29.10	28.60
Tare Mass (g)	17.81	15.52	20.59	20.76	19.71
Moisture Content (%)	70.6	70.0	71.1	78.3	78.9
Trial No 2 / Blow Count	24	24	25	25	25
Tare No	T-22	T-81	T-16	T-46	T-104
Wet Soil + Tare Mass (g)	27.90	35.82	30.10	30.80	35.79
Dry Soil + Tare Mass (g)	24.20	29.59	26.15	25.99	27.83
Tare Mass (g)	18.98	20.73	20.59	19.86	17.72
Moisture Content (%)	70.5	70.0	71.0	78.5	78.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-18	G-102	T-19	T-91	T-84
Wet Soil + Tare Mass (g)	24.25	29.86	27.95	27.86	34.75
Dry Soil + Tare Mass (g)	22.85	28.16	26.01	26.18	32.00
Tare Mass (g)	17.27	20.80	17.76	19.72	22.05
Moisture Content (%)	25.1	23.1	23.5	26.0	27.6
Trial No 2 / Tare No	T-44	T-60	T-30	T-32	T-41
Wet Soil + Tare Mass (g)	21.79	27.92	34.82	27.90	27.93
Dry Soil + Tare Mass (g)	20.41	26.14	32.05	25.77	26.08
Tare Mass (g)	14.93	18.43	20.22	17.64	19.34
Moisture Content (%)	25.2	23.1	23.4	26.2	27.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	128.09	83.32	136.52	116.36	113.51
Dry Soil Mass after Washing (g)	16.23	8.62	15.46	14.04	13.13
Test Status					
Liquid Limit	**71**	**70**	**71**	**78**	**79**
Plastic Limit	**25**	**23**	**23**	**26**	**28**
Plasticity Index	**46**	**47**	**48**	**52**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	12.7	10.3	11.3	12.1	10.7
Fines (%)	87.3	89.7	88.7	87.9	89.3
Group Symbol	CL	CL	CL	CH	CH
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5513A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	909	910	911	912	913
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	11+95	16+90	2+00	6+96	21+83
Offset	PS-118	PS-117	FS-9	PS-12	PS-116
Lift No	3	3	8	8	3
Latitude (°N)	29.888970	29.888694	29.889181	29.888963	29.888418
Longitude (°W)	90.152034	90.150505	90.155190	90.153644	90.148980
Elevation (ft)	2.1	2.6	11.2	11.3	2.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	26	25	25
Tare No	G-102	T-70	G-103	G-119	T-32
Wet Soil + Tare Mass (g)	35.45	31.50	32.00	28.12	29.76
Dry Soil + Tare Mass (g)	29.83	26.47	27.17	23.59	24.98
Tare Mass (g)	20.85	18.64	19.60	16.43	17.64
Moisture Content (%)	63.2	64.8	64.1	63.3	65.1
Trial No 2 / Blow Count	26	26	26	25	25
Tare No	T-60	G-112	T-31	T-37	T-91
Wet Soil + Tare Mass (g)	32.08	34.03	33.10	34.93	32.48
Dry Soil + Tare Mass (g)	26.82	27.63	27.80	28.20	27.45
Tare Mass (g)	18.44	17.71	19.49	17.57	19.73
Moisture Content (%)	63.1	64.8	64.1	63.3	65.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-18	T-14	T-41	T-78	T-27
Wet Soil + Tare Mass (g)	28.29	24.27	30.63	26.36	27.84
Dry Soil + Tare Mass (g)	26.56	22.82	28.69	24.93	26.55
Tare Mass (g)	17.28	15.24	19.35	17.84	19.94
Moisture Content (%)	18.6	19.1	20.8	20.2	19.5
Trial No 2 / Tare No	T-44	T-50	T-95	G-116	G-126
Wet Soil + Tare Mass (g)	26.05	26.84	28.92	25.23	24.19
Dry Soil + Tare Mass (g)	24.30	25.60	27.45	23.75	22.97
Tare Mass (g)	14.93	19.13	20.43	16.36	16.69
Moisture Content (%)	18.7	19.2	20.9	20.0	19.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.50	122.85	110.61	66.09	118.43
Dry Soil Mass after Washing (g)	4.02	4.05	12.62	9.43	4.34
Test Status					
Liquid Limit	**63**	**65**	**64**	**63**	**65**
Plastic Limit	**19**	**19**	**21**	**20**	**19**
Plasticity Index	**44**	**46**	**43**	**43**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.6	3.3	11.4	14.3	3.7
Fines (%)	96.4	96.7	88.6	85.7	96.3
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5513A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	909	910	911	912	913
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	11+95	16+90	2+00	6+96	21+83
Offset	PS-11	PS-117	FS-9	PS-12	PS-116
Lift No	3	3	8	8	3
Latitude (°N)	29.888970	29.888694	29.889181	29.888963	29.888418
Longitude (°W)	90.152034	90.150505	90.155190	90.153644	90.148980
Elevation (ft)	2.1	2.6	11.2	11.3	2.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	26	25	25
Tare No	G-102	T-70	G-103	G-119	T-32
Wet Soil + Tare Mass (g)	35.45	31.50	32.00	28.12	29.76
Dry Soil + Tare Mass (g)	29.83	26.47	27.17	23.59	24.98
Tare Mass (g)	20.85	18.64	19.60	16.43	17.64
Moisture Content (%)	63.2	64.8	64.1	63.3	65.1
Trial No 2 / Blow Count	26	26	26	25	25
Tare No	T-60	G-112	T-31	T-37	T-91
Wet Soil + Tare Mass (g)	32.08	34.03	33.10	34.93	32.48
Dry Soil + Tare Mass (g)	26.82	27.63	27.80	28.20	27.45
Tare Mass (g)	18.44	17.71	19.49	17.57	19.73
Moisture Content (%)	63.1	64.8	64.1	63.3	65.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-18	T-14	T-41	T-78	T-27
Wet Soil + Tare Mass (g)	28.29	24.27	30.63	26.36	27.84
Dry Soil + Tare Mass (g)	26.56	22.82	28.69	24.93	26.55
Tare Mass (g)	17.28	15.24	19.35	17.84	19.94
Moisture Content (%)	18.6	19.1	20.8	20.2	19.5
Trial No 2 / Tare No	T-44	T-50	T-95	G-116	G-126
Wet Soil + Tare Mass (g)	26.05	26.84	28.92	25.23	24.19
Dry Soil + Tare Mass (g)	24.30	25.60	27.45	23.75	22.97
Tare Mass (g)	14.93	19.13	20.43	16.36	16.69
Moisture Content (%)	18.7	19.2	20.9	20.0	19.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.50	122.85	110.61	66.09	118.43
Dry Soil Mass after Washing (g)	4.02	4.05	12.62	9.43	4.34
Test Status					
Liquid Limit	**63**	**65**	**64**	**63**	**65**
Plastic Limit	**19**	**19**	**21**	**20**	**19**
Plasticity Index	**44**	**46**	**43**	**43**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.6	3.3	11.4	14.3	3.7
Fines (%)	96.4	96.7	88.6	85.7	96.3
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5513B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/22/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	914				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	26+81				
Offset	PS-134				
Lift No	3				
Latitude (°N)	29.888189				
Longitude (°W)	90.147430				
Elevation (ft)	2.4				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25				
Tare No	T-1022				
Wet Soil + Tare Mass (g)	30.08				
Dry Soil + Tare Mass (g)	25.98				
Tare Mass (g)	19.71				
Moisture Content (%)	65.4				
Trial No 2 / Blow Count	25				
Tare No	T-46				
Wet Soil + Tare Mass (g)	30.16				
Dry Soil + Tare Mass (g)	26.10				
Tare Mass (g)	19.87				
Moisture Content (%)	65.2				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-113				
Wet Soil + Tare Mass (g)	29.28				
Dry Soil + Tare Mass (g)	27.41				
Tare Mass (g)	17.64				
Moisture Content (%)	19.1				
Trial No 2 / Tare No	T-84				
Wet Soil + Tare Mass (g)	33.45				
Dry Soil + Tare Mass (g)	31.62				
Tare Mass (g)	22.05				
Moisture Content (%)	19.1				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	112.51				
Dry Soil Mass after Washing (g)	6.77				
Test Status					
Liquid Limit	**65**				
Plastic Limit	**19**				
Plasticity Index	**46**				
Gravel Content (%)	0.0				
Sand Content (%)	6.0				
Fines (%)	94.0				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5526A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	915	916	917	918	919
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	163+51	168+42	31+82	37+00	173+35
Offset	PS-112	PS-127	PS-115	PS-137	PS-127
Lift No	5	5	3	3	5
Latitude (°N)	29.871708	29.871645	29.887858	29.887629	29.871541
Longitude (°W)	90.123387	90.121839	90.145894	90.144279	90.120287
Elevation (ft)	5.7	5.5	3.0	2.5	5.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27	25	27
Tare No	T-39	T-35	T-78	T-27	G-126
Wet Soil + Tare Mass (g)	43.09	33.70	29.10	39.82	33.27
Dry Soil + Tare Mass (g)	34.64	26.80	24.58	31.56	27.02
Tare Mass (g)	20.78	15.52	17.84	19.93	16.67
Moisture Content (%)	61.0	61.2	67.7	71.0	61.0
Trial No 2 / Blow Count	25	26	27	25	27
Tare No	T-104	T-16	T-1022	T-32	G-116
Wet Soil + Tare Mass (g)	35.07	41.49	34.50	30.90	32.69
Dry Soil + Tare Mass (g)	28.50	33.15	28.56	25.39	26.52
Tare Mass (g)	17.73	19.48	19.69	17.64	16.35
Moisture Content (%)	61.0	61.3	67.6	71.1	61.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-19	T-28	T-8	G-127	T-83
Wet Soil + Tare Mass (g)	27.43	26.50	27.52	26.56	24.69
Dry Soil + Tare Mass (g)	26.05	25.25	26.37	25.30	23.49
Tare Mass (g)	17.77	17.82	20.20	18.97	16.57
Moisture Content (%)	16.7	16.8	18.6	19.9	17.3
Trial No 2 / Tare No	T-30	T-22	T-25	G-147	G-108
Wet Soil + Tare Mass (g)	28.75	28.79	23.95	29.55	28.22
Dry Soil + Tare Mass (g)	27.52	27.39	22.79	28.44	26.91
Tare Mass (g)	20.22	18.97	16.52	22.84	19.31
Moisture Content (%)	16.8	16.6	18.5	19.8	17.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.32	117.40	105.06	127.04	112.99
Dry Soil Mass after Washing (g)	3.63	3.94	2.95	4.08	3.71
Test Status					
Liquid Limit	**61**	**61**	**68**	**71**	**61**
Plastic Limit	**17**	**17**	**19**	**20**	**17**
Plasticity Index	**44**	**44**	**49**	**51**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	3.4	2.8	3.2	3.3
Fines (%)	96.9	96.6	97.2	96.8	96.7
Group Symbol	CL	CL	CL	CH	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	FAT CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5526B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/23/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	920				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	178+38				
Offset	PS-142				
Lift No	5				
Latitude (°N)	29.871427				
Longitude (°W)	90.118637				
Elevation (ft)	4.9				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	T-91				
Wet Soil + Tare Mass (g)	35.36				
Dry Soil + Tare Mass (g)	29.37				
Tare Mass (g)	19.72				
Moisture Content (%)	62.4				
Trial No 2 / Blow Count	26				
Tare No	G-119				
Wet Soil + Tare Mass (g)	30.30				
Dry Soil + Tare Mass (g)	24.98				
Tare Mass (g)	16.43				
Moisture Content (%)	62.5				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-38				
Wet Soil + Tare Mass (g)	25.34				
Dry Soil + Tare Mass (g)	23.81				
Tare Mass (g)	16.79				
Moisture Content (%)	21.8				
Trial No 2 / Tare No	G-110				
Wet Soil + Tare Mass (g)	24.18				
Dry Soil + Tare Mass (g)	22.66				
Tare Mass (g)	15.64				
Moisture Content (%)	21.7				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	108.13				
Dry Soil Mass after Washing (g)	4.41				
Test Status					
Liquid Limit	**62**				
Plastic Limit	**22**				
Plasticity Index	**40**				
Gravel Content (%)	0.0				
Sand Content (%)	4.1				
Fines (%)	95.9				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5557A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	921	922	923	924	925
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	34+43	42+45	14+34	2+16	5+96
Offset	PS-155	PS-137	PS-137	FS-62	FS-53
Lift No	3	3	3	4	4
Latitude (°N)	29.887820	29.887327	29.888890	29.889026	29.888839
Longitude (°W)	90.145064	90.142597	90.151282	90.155174	90.153995
Elevation (ft)	2.0	2.1	2.1	5.2	5.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	26	28	26
Tare No	T-10	T-97	T-90	T-38	T-83
Wet Soil + Tare Mass (g)	31.34	27.99	32.86	30.41	30.22
Dry Soil + Tare Mass (g)	25.12	23.07	27.66	24.95	24.62
Tare Mass (g)	15.47	15.37	19.68	16.80	16.57
Moisture Content (%)	64.8	64.5	65.5	67.9	69.9
Trial No 2 / Blow Count	26	27	27	27	25
Tare No	T-105	T-76	T-29	G-110	G-108
Wet Soil + Tare Mass (g)	32.40	31.62	32.85	29.89	32.77
Dry Soil + Tare Mass (g)	25.81	25.58	27.06	24.17	27.22
Tare Mass (g)	15.60	16.11	18.14	15.67	19.30
Moisture Content (%)	64.9	64.4	65.5	67.9	70.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-114	T-82	T-62	T-91	G-126
Wet Soil + Tare Mass (g)	24.55	27.67	26.12	27.10	24.04
Dry Soil + Tare Mass (g)	23.27	25.85	24.61	25.66	22.72
Tare Mass (g)	16.12	18.23	17.78	19.73	16.67
Moisture Content (%)	17.9	23.9	22.1	24.3	21.8
Trial No 2 / Tare No	T-13	T-21	T-101	G-119	G-116
Wet Soil + Tare Mass (g)	26.45	24.57	24.15	24.82	23.16
Dry Soil + Tare Mass (g)	25.17	22.80	22.88	23.18	21.94
Tare Mass (g)	18.01	15.44	17.11	16.45	16.37
Moisture Content (%)	17.9	24.0	22.0	24.4	21.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	125.64	91.38	110.19	87.71	122.45
Dry Soil Mass after Washing (g)	3.70	3.52	2.17	3.53	6.05
Test Status					
Liquid Limit	**65**	**64**	**65**	**68**	**70**
Plastic Limit	**18**	**24**	**22**	**24**	**22**
Plasticity Index	**47**	**40**	**43**	**44**	**48**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.9	3.9	2.0	4.0	4.9
Fines (%)	97.1	96.1	98.0	96.0	95.1
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5557B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	926				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	45+80				
Offset	PS-115				
Lift No	3				
Latitude (°N)	29.887079				
Longitude (°W)	90.141576				
Elevation (ft)	2.8				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	G-127				
Wet Soil + Tare Mass (g)	29.22				
Dry Soil + Tare Mass (g)	25.07				
Tare Mass (g)	18.97				
Moisture Content (%)	68.7				
Trial No 2 / Blow Count	26				
Tare No	G-147				
Wet Soil + Tare Mass (g)	35.43				
Dry Soil + Tare Mass (g)	30.30				
Tare Mass (g)	22.81				
Moisture Content (%)	68.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-27				
Wet Soil + Tare Mass (g)	26.92				
Dry Soil + Tare Mass (g)	25.58				
Tare Mass (g)	19.94				
Moisture Content (%)	23.8				
Trial No 2 / Tare No	T-32				
Wet Soil + Tare Mass (g)	24.72				
Dry Soil + Tare Mass (g)	23.36				
Tare Mass (g)	17.64				
Moisture Content (%)	23.8				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.49				
Dry Soil Mass after Washing (g)	4.26				
Test Status					
Liquid Limit	**69**				
Plastic Limit	**24**				
Plasticity Index	**45**				
Gravel Content (%)	0.0				
Sand Content (%)	3.9				
Fines (%)	96.1				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5566
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/29/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	927	928	929		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	2+15	5+96	10+06		
Offset	PS-100	PS-101	PS-104		
Lift No	4	4	4		
Latitude (°N)	29.889465	29.889256	29.889038		
Longitude (°W)	90.155076	90.153896	90.152627		
Elevation (ft)	3.6	3.5	3.5		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	26		
Tare No	G-110	G-108	G-147		
Wet Soil + Tare Mass (g)	28.39	30.90	32.04		
Dry Soil + Tare Mass (g)	22.95	26.21	28.36		
Tare Mass (g)	15.69	19.32	22.81		
Moisture Content (%)	74.6	68.1	66.6		
Trial No 2 / Blow Count	24	26	26		
Tare No	G-119	G-126	T-32		
Wet Soil + Tare Mass (g)	28.31	32.08	30.33		
Dry Soil + Tare Mass (g)	23.22	25.85	25.27		
Tare Mass (g)	16.45	16.67	17.63		
Moisture Content (%)	74.8	68.2	66.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-91	G-116	T-27		
Wet Soil + Tare Mass (g)	26.80	23.39	28.45		
Dry Soil + Tare Mass (g)	25.42	22.00	27.00		
Tare Mass (g)	19.73	16.36	19.94		
Moisture Content (%)	24.3	24.6	20.5		
Trial No 2 / Tare No	T-83	G-127	T-38		
Wet Soil + Tare Mass (g)	24.68	25.97	25.99		
Dry Soil + Tare Mass (g)	23.09	24.58	24.41		
Tare Mass (g)	16.58	18.96	16.79		
Moisture Content (%)	24.4	24.7	20.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	124.54	124.69	93.98		
Dry Soil Mass after Washing (g)	7.86	2.92	4.92		
Test Status					
Liquid Limit	**75**	**68**	**67**		
Plastic Limit	**24**	**25**	**21**		
Plasticity Index	**51**	**43**	**46**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	6.3	2.3	5.2		
Fines (%)	93.7	97.7	94.8		
Group Symbol	CH	CL	CL		
Group Name	FAT CLAY	LEAN CLAY	LEAN CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5577
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/30/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	930	931	932	933	934
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	14+07	143+07	147+97	152+91	157+90
Offset	PS-85	CL	CL	CL	CL
Lift No	4	11	11	11	11
Latitude (°N)	29.888766	29.871841	29.871724	29.871618	29.871509
Longitude (°W)	90.151399	90.129846	90.128305	90.126751	90.125180
Elevation (ft)	4.7	13.5	13.7	13.8	13.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	24	26	24
Tare No	T-25	T-78	T-39	T-22	T-19
Wet Soil + Tare Mass (g)	28.39	30.88	32.10	30.95	29.40
Dry Soil + Tare Mass (g)	23.31	26.15	28.03	26.26	24.41
Tare Mass (g)	16.59	19.85	22.70	19.75	17.76
Moisture Content (%)	75.2	75.4	76.0	72.4	74.7
Trial No 2 / Blow Count	25	25	25	25	25
Tare No	T-8	G-113	T-104	T-35	T-81
Wet Soil + Tare Mass (g)	28.31	32.10	30.35	32.10	32.20
Dry Soil + Tare Mass (g)	23.22	25.90	24.90	25.80	25.86
Tare Mass (g)	16.45	17.67	17.73	17.10	17.35
Moisture Content (%)	75.2	75.3	76.0	72.4	74.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-91	T-16	G-147	G-127	G-126
Wet Soil + Tare Mass (g)	26.80	23.40	28.47	26.01	28.50
Dry Soil + Tare Mass (g)	25.42	22.70	27.02	24.58	26.50
Tare Mass (g)	19.73	19.97	19.95	18.96	16.67
Moisture Content (%)	24.3	25.6	20.5	25.4	20.3
Trial No 2 / Tare No	T-30	T-27	G-116	G-108	T-91
Wet Soil + Tare Mass (g)	24.68	25.88	25.97	24.67	27.40
Dry Soil + Tare Mass (g)	23.09	24.68	24.40	23.03	26.10
Tare Mass (g)	16.58	19.94	16.75	16.58	19.73
Moisture Content (%)	24.4	25.3	20.5	25.4	20.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.91	93.03	78.87	121.29	141.58
Dry Soil Mass after Washing (g)	4.13	9.40	3.22	8.31	4.45
Test Status					
Liquid Limit	**75**	**75**	**76**	**72**	**75**
Plastic Limit	**24**	**25**	**21**	**25**	**20**
Plasticity Index	**51**	**50**	**55**	**47**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.7	10.1	4.1	6.9	3.1
Fines (%)	96.3	89.9	95.9	93.1	96.9
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5588
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	8/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	R.FISHER	**Reviewed By**	B.LANDERS	**Submitted By**	B.LANDERS
Test No	935				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	18+05				
Offset	PS-103				
Lift No	4				
Latitude (°N)	29.888592				
Longitude (°W)	90.150160				
Elevation (ft)	4.0				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	T-28				
Wet Soil + Tare Mass (g)	30.45				
Dry Soil + Tare Mass (g)	25.02				
Tare Mass (g)	17.80				
Moisture Content (%)	75.6				
Trial No 2 / Blow Count	25				
Tare No	T-12				
Wet Soil + Tare Mass (g)	31.10				
Dry Soil + Tare Mass (g)	26.15				
Tare Mass (g)	19.58				
Moisture Content (%)	75.3				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-115				
Wet Soil + Tare Mass (g)	26.80				
Dry Soil + Tare Mass (g)	25.41				
Tare Mass (g)	19.75				
Moisture Content (%)	24.6				
Trial No 2 / Tare No	T-80				
Wet Soil + Tare Mass (g)	24.65				
Dry Soil + Tare Mass (g)	23.05				
Tare Mass (g)	16.55				
Moisture Content (%)	24.6				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Sample Mass (g)	80.17				
Dry Mass after Washing (g)	4.49				
Test Status					
Liquid Limit	**75**				
Plastic Limit	**25**				
Plasticity Index	**50**				
Gravel (%)	0.0				
Sand (%)	5.6				
Fines (%)	94.4				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-110523**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5642
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/9/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	R.FISHER	**Reviewed By**	B.LANDERS	**Submitted By**	B.LANDERS
Test No	936				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	22+11				
Offset	PS-124				
Lift No	4				
Latitude (°N)	29.888423				
Longitude (°W)	90.148889				
Elevation (ft)	3.6				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	NO				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27				
Tare No	T-62				
Wet Soil + Tare Mass (g)	31.17				
Dry Soil + Tare Mass (g)	25.01				
Tare Mass (g)	17.77				
Moisture Content (%)	85.9				
Trial No 2 / Blow Count	27				
Tare No	T-90				
Wet Soil + Tare Mass (g)	39.56				
Dry Soil + Tare Mass (g)	30.42				
Tare Mass (g)	19.67				
Moisture Content (%)	85.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-1022				
Wet Soil + Tare Mass (g)	27.28				
Dry Soil + Tare Mass (g)	25.90				
Tare Mass (g)	19.70				
Moisture Content (%)	22.3				
Trial No 2 / Tare No	T-29				
Wet Soil + Tare Mass (g)	25.98				
Dry Soil + Tare Mass (g)	24.55				
Tare Mass (g)	18.15				
Moisture Content (%)	22.3				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Sample Mass (g)	103.22				
Dry Mass after Washing (g)	14.12				
Test Status					
Liquid Limit	**86**				
Plastic Limit	**22**				
Plasticity Index	**64**				
Gravel (%)	0.0				
Sand (%)	13.7				
Fines (%)	86.3				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-110523**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5643A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	940	941	942	943	944
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	146+57	151+14	156+02	34+45	37+83
Offset	CL	CL	CL	PS-99	PS-142
Lift No	12	12	12	4	4
Latitude (°N)	29.871763	29.871653	29.871566	29.887669	29.887596
Longitude (°W)	90.128743	90.127306	90.125771	90.145093	90.144020
Elevation (ft)	13.7	13.8	13.7	4.2	3.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	23	26	24	26
Tare No	G-118	T-7	T-79	T-9	T-71
Wet Soil + Tare Mass (g)	31.65	32.51	28.99	32.66	30.00
Dry Soil + Tare Mass (g)	24.89	27.11	23.59	27.20	25.79
Tare Mass (g)	15.53	19.71	16.16	19.66	19.75
Moisture Content (%)	72.2	72.2	73.0	72.1	70.0
Trial No 2 / Blow Count	25	24	26	23	26
Tare No	T-63	T-11	T-33	G-104	T-52
Wet Soil + Tare Mass (g)	31.76	27.17	30.39	33.45	33.49
Dry Soil + Tare Mass (g)	26.55	22.10	23.85	26.12	28.06
Tare Mass (g)	19.31	15.12	14.89	16.07	20.27
Moisture Content (%)	72.0	72.3	73.3	72.2	70.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-73	T-70	T-31	G-103	T-67
Wet Soil + Tare Mass (g)	22.93	25.77	26.35	26.21	27.40
Dry Soil + Tare Mass (g)	21.61	24.52	25.13	25.04	25.92
Tare Mass (g)	15.82	18.65	19.49	19.60	18.90
Moisture Content (%)	22.8	21.3	21.6	21.5	21.1
Trial No 2 / Tare No	T-5	T-50	T-14	T-95	T-21
Wet Soil + Tare Mass (g)	26.47	26.59	22.15	27.60	24.41
Dry Soil + Tare Mass (g)	25.13	25.26	20.93	26.34	22.84
Tare Mass (g)	19.23	19.10	15.23	20.41	15.44
Moisture Content (%)	22.7	21.6	21.4	21.2	21.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.46	119.99	91.39	136.98	86.12
Dry Soil Mass after Washing (g)	2.65	2.70	6.88	2.92	7.55
Test Status					
Liquid Limit	**72**	**72**	**73**	**72**	**70**
Plastic Limit	**23**	**21**	**22**	**21**	**21**
Plasticity Index	**49**	**51**	**51**	**51**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.6	2.3	7.5	2.1	8.8
Fines (%)	97.4	97.7	92.6	97.9	91.2
Group Symbol	CL	CH	CH	CH	CL
Group Name	LEAN CLAY	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5643B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/12/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	R.FISHER	**Reviewed By**	B.LANDERS	**Submitted By**	B.LANDERS

Test No	945	946	947	948	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	41+63	160+93	163+68	165+32	
Offset	PS-108	CL	FS-45	CL	
Lift No	4	12	5	10	
Latitude (°N)	29.887291	29.555942	29.871273	29.871377	
Longitude (°W)	90.142869	90.124227	90.123373	90.122844	
Elevation (ft)	3.9	13.7	6.3	13.7	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	NO	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	24	25	
Tare No	T-94	T-87	T-89	T-46	
Wet Soil + Tare Mass (g)	25.96	30.06	28.98	30.46	
Dry Soil + Tare Mass (g)	21.55	25.72	24.99	25.97	
Tare Mass (g)	15.57	19.87	19.56	19.87	
Moisture Content (%)	74.1	74.2	73.1	73.6	
Trial No 2 / Blow Count	26	25	24	24	
Tare No	T-61	G-111	G-129	G-102	
Wet Soil + Tare Mass (g)	27.88	29.10	30.77	35.61	
Dry Soil + Tare Mass (g)	22.71	23.52	25.28	29.34	
Tare Mass (g)	15.70	15.98	17.83	20.84	
Moisture Content (%)	74.1	74.0	73.3	73.4	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-76	T-13	G-114	T-105	
Wet Soil + Tare Mass (g)	24.41	26.40	24.96	23.23	
Dry Soil + Tare Mass (g)	22.92	24.79	23.36	21.85	
Tare Mass (g)	16.11	18.02	16.13	15.61	
Moisture Content (%)	21.9	23.8	22.1	22.1	
Trial No 2 / Tare No	T-82	T-97	T-10	T-37	
Wet Soil + Tare Mass (g)	26.59	23.30	23.27	25.04	
Dry Soil + Tare Mass (g)	25.08	21.78	21.86	23.68	
Tare Mass (g)	18.22	15.36	15.47	17.57	
Moisture Content (%)	22.0	23.7	22.1	22.3	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Sample Mass (g)	116.31	121.62	125.53	120.53	
Dry Mass after Washing (g)	3.10	5.33	3.36	4.09	
Test Status					
Liquid Limit	**74**	**74**	**73**	**74**	
Plastic Limit	**22**	**24**	**22**	**22**	
Plasticity Index	**52**	**50**	**51**	**52**	
Gravel (%)	0.0	0.0	0.0	0.0	
Sand (%)	2.7	4.4	2.7	3.4	
Fines (%)	97.3	95.6	97.3	96.6	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-110523**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5644
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	R.FISHER	**Reviewed By**	B.LANDERS	**Submitted By**	B.LANDERS
Test No	937	938	939		
Retest of Test ID		5642+936			
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	30+10	22+11	26+07		
Offset	PS-133	PS-124	PS-111		
Lift No	4	4	4		
Latitude (°N)	29.887999	29.888423	29.888168		
Longitude (°W)	90.146402	90.148889	90.147673		
Elevation (ft)	3.3	3.6	3.8		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	23	24		
Tare No	T-67	T-69	T-86		
Wet Soil + Tare Mass (g)	33.06	30.80	33.70		
Dry Soil + Tare Mass (g)	27.22	26.17	26.64		
Tare Mass (g)	18.90	19.55	16.67		
Moisture Content (%)	69.8	69.2	70.5		
Trial No 2 / Blow Count	24	23	25		
Tare No	T-92	T-80	T-101		
Wet Soil + Tare Mass (g)	40.61	33.88	32.25		
Dry Soil + Tare Mass (g)	34.36	26.74	25.99		
Tare Mass (g)	25.45	16.56	17.11		
Moisture Content (%)	69.8	69.4	70.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-34	T-29	T-62		
Wet Soil + Tare Mass (g)	26.54	25.34	24.62		
Dry Soil + Tare Mass (g)	24.83	24.19	23.52		
Tare Mass (g)	17.49	18.15	17.78		
Moisture Content (%)	23.3	19.0	19.2		
Trial No 2 / Tare No	G-115	T-1022	T-90		
Wet Soil + Tare Mass (g)	27.10	26.18	26.19		
Dry Soil + Tare Mass (g)	25.24	25.13	25.14		
Tare Mass (g)	17.31	19.69	19.72		
Moisture Content (%)	23.5	19.3	19.4		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Sample Mass (g)	90.50	133.26	130.13		
Dry Mass after Washing (g)	2.60	3.86	4.08		
Test Status					
Liquid Limit	**70**	**69**	**70**		
Plastic Limit	**23**	**19**	**19**		
Plasticity Index	**47**	**50**	**51**		
Gravel (%)	0.0	0.0	0.0		
Sand (%)	2.9	2.9	3.1		
Fines (%)	97.1	97.1	96.9		
Group Symbol	CL	CH	CH		
Group Name	LEAN CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-110523**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5657
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/14/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	949	950			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	45+60	49+08			
Offset	PS-87	PS-105			
Lift No	4	4			
Latitude (°N)	29.887014	29.886868			
Longitude (°W)	90.141654	90.140567			
Elevation (ft)	4.6	4.2			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26			
Tare No	T-60	T-44			
Wet Soil + Tare Mass (g)	28.74	24.34			
Dry Soil + Tare Mass (g)	24.40	20.41			
Tare Mass (g)	18.45	14.93			
Moisture Content (%)	72.9	72.1			
Trial No 2 / Blow Count	25	25			
Tare No	T-18	G-112			
Wet Soil + Tare Mass (g)	26.79	26.23			
Dry Soil + Tare Mass (g)	22.78	22.66			
Tare Mass (g)	17.28	17.72			
Moisture Content (%)	72.9	72.3			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-74	T-26			
Wet Soil + Tare Mass (g)	27.48	29.19			
Dry Soil + Tare Mass (g)	26.04	27.22			
Tare Mass (g)	19.73	18.91			
Moisture Content (%)	22.8	23.7			
Trial No 2 / Tare No	G-147	T-72			
Wet Soil + Tare Mass (g)	30.48	31.95			
Dry Soil + Tare Mass (g)	29.06	30.30			
Tare Mass (g)	22.84	23.28			
Moisture Content (%)	22.8	23.5			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.50	122.85			
Dry Soil Mass after Washing (g)	4.02	4.05			
Test Status					
Liquid Limit	**73**	**72**			
Plastic Limit	**23**	**24**			
Plasticity Index	**50**	**48**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.6	3.3			
Fines (%)	96.4	96.7			
Group Symbol	CH	CL			
Group Name	FAT CLAY	LEAN CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5709
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	951	952	953		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	170+16	175+12	180+07		
Offset	CL	CL	CL		
Lift No	10	10	10		
Latitude (°N)	29.871250	29.871161	29.870949		
Longitude (°W)	90.121322	90.119763	90.118223		
Elevation (ft)	13.6	13.6	13.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	N0	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27		
Tare No	T-60	T-26	T-97		
Wet Soil + Tare Mass (g)	32.65	30.85	26.98		
Dry Soil + Tare Mass (g)	27.23	26.28	22.54		
Tare Mass (g)	18.47	18.92	15.36		
Moisture Content (%)	61.9	62.1	62.4		
Trial No 2 / Blow Count	25	26	26		
Tare No	T-46	T-37	T-44		
Wet Soil + Tare Mass (g)	36.72	36.50	28.96		
Dry Soil + Tare Mass (g)	30.30	29.27	23.61		
Tare Mass (g)	19.92	17.57	14.98		
Moisture Content (%)	61.8	62.1	62.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-125	G-147	G-114		
Wet Soil + Tare Mass (g)	26.15	29.85	24.97		
Dry Soil + Tare Mass (g)	24.80	28.60	23.39		
Tare Mass (g)	17.85	22.83	16.11		
Moisture Content (%)	19.4	21.7	21.7		
Trial No 2 / Tare No	G-111	T-10	T-13		
Wet Soil + Tare Mass (g)	23.32	23.23	26.37		
Dry Soil + Tare Mass (g)	22.12	21.86	24.88		
Tare Mass (g)	15.99	15.46	18.01		
Moisture Content (%)	19.6	21.4	21.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	127.93	123.23	98.96		
Dry Soil Mass after Washing (g)	7.86	2.09	2.63		
Test Status					
Liquid Limit	**62**	**62**	**62**		
Plastic Limit	**20**	**22**	**22**		
Plasticity Index	**42**	**40**	**40**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	6.1	1.7	2.7		
Fines (%)	93.9	98.3	97.3		
Group Symbol	CL	CL	CL		
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5713A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	954	955	956	957	958
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	124+40	122+23	2+91	6+51	10+24
Offset	PS-42	PS-69	PS-81	PS-67	PS-75
Lift No	1	1	5	5	5
Latitude (°N)	29.872383	29.872508	29.889372	29.889136	29.889950
Longitude (°W)	90.135704	90.136379	90.154853	90.153749	90.152590
Elevation (ft)	5.5	4.6	4.8	5.1	4.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	26	28	23
Tare No	T-5	G-420	G-421	G-331	G-101
Wet Soil + Tare Mass (g)	27.79	30.18	37.92	45.15	37.22
Dry Soil + Tare Mass (g)	22.96	24.01	29.91	36.48	30.56
Tare Mass (g)	15.24	16.37	19.33	23.32	20.82
Moisture Content (%)	62.6	81.1	76.1	66.8	67.7
Trial No 2 / Blow Count	26	27	25	29	22
Tare No	G-330	T-72	T-112	G-336	G-401
Wet Soil + Tare Mass (g)	28.50	31.55	40.41	43.74	40.44
Dry Soil + Tare Mass (g)	23.57	25.62	31.86	34.21	31.71
Tare Mass (g)	15.54	18.25	20.59	19.74	18.93
Moisture Content (%)	61.7	81.2	75.9	67.1	67.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-105	T-4	T-114	T-117	G-19
Wet Soil + Tare Mass (g)	30.95	28.97	26.33	31.13	29.83
Dry Soil + Tare Mass (g)	29.05	26.96	24.49	28.81	27.75
Tare Mass (g)	20.24	19.16	16.17	17.79	17.48
Moisture Content (%)	21.6	25.8	22.1	21.1	20.3
Trial No 2 / Tare No	G-335	T-2	T-141	T-120	G-30
Wet Soil + Tare Mass (g)	28.94	29.75	27.64	29.70	28.40
Dry Soil + Tare Mass (g)	26.96	27.69	25.47	27.59	26.63
Tare Mass (g)	17.74	19.69	15.77	17.64	17.83
Moisture Content (%)	21.5	25.8	22.4	21.2	20.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	106.76	125.16	128.36	85.35	122.92
Dry Soil Mass after Washing (g)	2.05	3.29	4.13	2.45	3.27
Test Status					
Liquid Limit	**62**	**81**	**76**	**67**	**67**
Plastic Limit	**22**	**26**	**22**	**21**	**20**
Plasticity Index	**40**	**55**	**54**	**46**	**47**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	1.9	2.6	3.2	2.9	2.7
Fines (%)	98.1	97.4	96.8	97.1	97.3
Group Symbol	CL	CH	CH	CL	CL
Group Name	LEAN CLAY	FAY CLAY	FAT CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5713B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/27/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	959				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	13+20				
Offset	PS-62				
Lift No	5				
Latitude (°N)	29.888752				
Longitude (°W)	90.151685				
Elevation (ft)	5.0				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	N0				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26				
Tare No	G-35				
Wet Soil + Tare Mass (g)	35.26				
Dry Soil + Tare Mass (g)	29.38				
Tare Mass (g)	20.80				
Moisture Content (%)	68.9				
Trial No 2 / Blow Count	25				
Tare No	G-60				
Wet Soil + Tare Mass (g)	31.66				
Dry Soil + Tare Mass (g)	26.29				
Tare Mass (g)	18.47				
Moisture Content (%)	68.7				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-144				
Wet Soil + Tare Mass (g)	29.76				
Dry Soil + Tare Mass (g)	27.50				
Tare Mass (g)	17.76				
Moisture Content (%)	23.2				
Trial No 2 / Tare No	T-424				
Wet Soil + Tare Mass (g)	32.03				
Dry Soil + Tare Mass (g)	29.75				
Tare Mass (g)	19.78				
Moisture Content (%)	22.9				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.22				
Dry Soil Mass after Washing (g)	4.28				
Test Status					
Liquid Limit	**69**				
Plastic Limit	**23**				
Plasticity Index	**46**				
Gravel Content (%)	0.0				
Sand Content (%)	4.8				
Fines (%)	95.2				
Group Symbol	CL				
Group Name	LEAN CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5719A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	1
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	960	961	962	963	964
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	112+23	112+34	112+03	169+97	170+01
Offset	FS-9.6	FS-7.3	FS-8.5	PS-137	PS-138
Lift No	1	2	3	1	2
Latitude (°N)	29.873820	29.873791	29.873873	29.871640	29.871640
Longitude (°W)	90.138390	90.138391	90.138371	90.121348	90.121335
Elevation (ft)	2.0	2.9	3.5	2.3	3.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	24	26	23
Tare No	T-25	T-78	T-39	T-22	T-19
Wet Soil + Tare Mass (g)	28.39	30.88	32.10	30.95	29.40
Dry Soil + Tare Mass (g)	23.31	26.15	28.03	26.26	24.91
Tare Mass (g)	16.59	19.85	22.70	19.75	17.76
Moisture Content (%)	75.2	75.4	76.0	72.4	62.2
Trial No 2 / Blow Count	25	25	25	25	24
Tare No	T-8	G-113	T-104	T-35	T-81
Wet Soil + Tare Mass (g)	28.31	32.10	30.35	32.10	32.20
Dry Soil + Tare Mass (g)	23.22	25.90	24.90	25.80	26.50
Tare Mass (g)	16.45	17.67	17.73	17.10	17.35
Moisture Content (%)	75.2	75.3	76.0	72.4	62.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-91	T-16	G-147	G-127	G-126
Wet Soil + Tare Mass (g)	26.80	23.40	28.47	26.01	28.50
Dry Soil + Tare Mass (g)	25.42	22.70	27.02	24.58	26.65
Tare Mass (g)	19.73	19.97	19.95	18.96	16.67
Moisture Content (%)	24.3	25.6	20.5	25.4	18.5
Trial No 2 / Tare No	T-30	T-27	G-116	G-108	T-91
Wet Soil + Tare Mass (g)	24.68	25.88	25.97	24.67	27.40
Dry Soil + Tare Mass (g)	23.09	24.68	24.40	23.03	26.20
Tare Mass (g)	16.58	19.94	16.75	16.58	19.73
Moisture Content (%)	24.4	25.3	20.5	25.4	18.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	128.09	83.32	136.52	116.36	113.51
Dry Soil Mass after Washing (g)	16.23	8.62	15.46	14.04	12.13
Test Status					
Liquid Limit	**75**	**75**	**76**	**72**	**62**
Plastic Limit	**24**	**25**	**21**	**25**	**19**
Plasticity Index	**51**	**50**	**55**	**47**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	12.7	10.3	11.3	12.1	10.7
Fines (%)	87.3	89.7	88.7	87.9	89.3
Group Symbol	CH	CH	CH	CL	CL
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5719A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	960	961	962	963	964
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	112+23	112+34	112+03	169+97	170+01
Offset	FS-9.6	FS-7.3	FS-8.5	PS-137	PS-138
Lift No	1	2	3	12	2
Latitude (°N)	29.873820	29.873791	29.873873	29.871640	29.871640
Longitude (°W)	90.138390	90.138391	90.138371	90.121348	90.121335
Elevation (ft)	2.0	2.9	3.5	2.3	3.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	24	26	23
Tare No	T-25	T-78	T-39	T-22	T-19
Wet Soil + Tare Mass (g)	28.39	30.88	32.10	30.95	29.40
Dry Soil + Tare Mass (g)	23.31	26.15	28.03	26.26	24.91
Tare Mass (g)	16.59	19.85	22.70	19.75	17.76
Moisture Content (%)	75.2	75.4	76.0	72.4	62.2
Trial No 2 / Blow Count	25	25	25	25	24
Tare No	T-8	G-113	T-104	T-35	T-81
Wet Soil + Tare Mass (g)	28.31	32.10	30.35	32.10	32.20
Dry Soil + Tare Mass (g)	23.22	25.90	24.90	25.80	26.50
Tare Mass (g)	16.45	17.67	17.73	17.10	17.35
Moisture Content (%)	75.2	75.3	76.0	72.4	62.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-91	T-16	G-147	G-127	G-126
Wet Soil + Tare Mass (g)	26.80	23.40	28.47	26.01	28.50
Dry Soil + Tare Mass (g)	25.42	22.70	27.02	24.58	26.65
Tare Mass (g)	19.73	19.97	19.95	18.96	16.67
Moisture Content (%)	24.3	25.6	20.5	25.4	18.5
Trial No 2 / Tare No	T-30	T-27	G-116	G-108	T-91
Wet Soil + Tare Mass (g)	24.68	25.88	25.97	24.67	27.40
Dry Soil + Tare Mass (g)	23.09	24.68	24.40	23.03	26.20
Tare Mass (g)	16.58	19.94	16.75	16.58	19.73
Moisture Content (%)	24.4	25.3	20.5	25.4	18.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	128.09	83.32	136.52	116.36	113.51
Dry Soil Mass after Washing (g)	16.23	8.62	15.46	14.04	12.13
Test Status					
Liquid Limit	**75**	**75**	**76**	**72**	**62**
Plastic Limit	**24**	**25**	**21**	**25**	**19**
Plasticity Index	**51**	**50**	**55**	**47**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	12.7	10.3	11.3	12.1	10.7
Fines (%)	87.3	89.7	88.7	87.9	89.3
Group Symbol	CH	CH	CH	CL	CL
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5719B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/28/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	965	966	967	968	969
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	169+97	170+03	170+05	170+01	149+99
Offset	PS-140	PS-136	CL	CL	CL
Lift No	3	4	1	2	1
Latitude (°N)	29.871648	29.871636	29.871254	29.871259	29.871678
Longitude (°W)	90.121349	90.121331	90.121359	90.121364	90.127669
Elevation (ft)	4.2	5.1	11.2	12.4	9.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	27	25	27
Tare No	T-39	T-35	T-78	T-27	G-126
Wet Soil + Tare Mass (g)	43.09	33.70	29.10	39.82	33.27
Dry Soil + Tare Mass (g)	34.67	26.80	24.58	31.56	27.02
Tare Mass (g)	20.78	15.52	17.84	19.93	16.67
Moisture Content (%)	60.3	61.2	67.7	71.0	61.0
Trial No 2 / Blow Count	25	26	27	25	27
Tare No	T-104	T-16	T-1022	T-32	G-116
Wet Soil + Tare Mass (g)	35.07	41.49	34.50	30.90	32.69
Dry Soil + Tare Mass (g)	28.50	33.15	28.52	25.39	26.52
Tare Mass (g)	17.73	19.48	19.69	17.64	16.35
Moisture Content (%)	61.0	61.3	68.4	71.1	61.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-19	T-28	T-8	G-127	T-83
Wet Soil + Tare Mass (g)	27.43	26.50	27.52	26.56	24.69
Dry Soil + Tare Mass (g)	26.05	25.25	26.37	25.30	23.49
Tare Mass (g)	17.77	17.82	20.20	18.97	16.57
Moisture Content (%)	16.7	16.8	18.6	19.9	17.3
Trial No 2 / Tare No	T-30	T-22	T-25	G-147	G-108
Wet Soil + Tare Mass (g)	28.75	28.79	23.95	29.55	28.22
Dry Soil + Tare Mass (g)	27.52	27.39	22.79	28.44	26.91
Tare Mass (g)	20.22	18.97	16.52	22.84	19.31
Moisture Content (%)	16.8	16.6	18.5	19.8	17.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.88	107.69	130.27	97.41	116.63
Dry Soil Mass after Washing (g)	4.45	7.03	12.28	13.33	22.55
Test Status					
Liquid Limit	**61**	**61**	**68**	**71**	**61**
Plastic Limit	**17**	**17**	**19**	**20**	**17**
Plasticity Index	**44**	**44**	**49**	**51**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.1	6.5	9.4	13.7	19.3
Fines (%)	95.9	93.5	90.6	86.3	80.7
Group Symbol	CL	CL	CL	CH	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	FAT CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5739A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	970	971	972	973	974
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	3+56	8+53	13+56	13+51	8+48
Offset	CL	CL	CL	FS-61	FS-50
Lift No	9	9	9	4	4
Latitude (°N)	29.889116	29.888843	29.888575	29.888400	29.888709
Longitude (°W)	90.154705	90.153166	90.151608	90.151665	90.153215
Elevation (ft)	12.1	12.4	12.5	5.4	6.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	23	24	24
Tare No	T-94	T-11	T-76	G-103	T-70
Wet Soil + Tare Mass (g)	27.12	24.91	28.18	31.60	30.69
Dry Soil + Tare Mass (g)	22.65	20.98	23.31	26.79	25.87
Tare Mass (g)	15.59	15.13	16.10	19.61	18.65
Moisture Content (%)	63.9	67.2	66.9	66.7	66.4
Trial No 2 / Blow Count	27	25	24	23	25
Tare No	T-71	G-118	T-67	T-31	T-5
Wet Soil + Tare Mass (g)	29.85	26.26	30.31	31.14	31.03
Dry Soil + Tare Mass (g)	25.95	21.96	25.72	26.46	26.32
Tare Mass (g)	19.78	15.56	18.89	19.50	19.23
Moisture Content (%)	63.8	67.2	66.9	66.6	66.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-104	T-61	T-9	T-7	T-82
Wet Soil + Tare Mass (g)	24.14	23.64	29.28	27.12	27.30
Dry Soil + Tare Mass (g)	22.62	22.16	27.56	25.84	25.64
Tare Mass (g)	16.10	15.71	19.68	19.73	18.23
Moisture Content (%)	23.3	22.9	21.8	20.9	22.4
Trial No 2 / Tare No	T-79	T-52	T-33	T-63	T-21
Wet Soil + Tare Mass (g)	24.33	27.97	22.92	27.05	24.70
Dry Soil + Tare Mass (g)	22.78	26.55	21.48	25.72	23.02
Tare Mass (g)	16.19	20.31	14.91	19.33	15.45
Moisture Content (%)	23.5	22.8	21.9	20.8	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.04	122.20	107.20	116.36	122.88
Dry Soil Mass after Washing (g)	6.03	4.02	2.83	3.66	12.67
Test Status					
Liquid Limit	**64**	**67**	**67**	**67**	**66**
Plastic Limit	**23**	**23**	**22**	**21**	**22**
Plasticity Index	**41**	**44**	**45**	**46**	**44**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.5	3.3	2.6	3.1	10.3
Fines (%)	94.5	96.7	97.4	96.9	89.7
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5739B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	975	976	977	978	979
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	3+56	170+07	170+07	160+00	160+00
Offset	FS-39	CL	CL	FS-53	FS-49
Lift No	4	3	4	1	2
Latitude (°N)	29.889010	29.888705	29.871268	29.871352	29.871340
Longitude (°W)	90.154727	90.121139	90.121349	90.124533	90.124532
Elevation (ft)	6.4	13.0	13.6	4.6	5.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	27	27	23
Tare No	T-95	T-50	G-112	G-102	T-87
Wet Soil + Tare Mass (g)	31.12	29.63	27.85	29.61	30.58
Dry Soil + Tare Mass (g)	26.89	25.53	23.89	26.21	26.34
Tare Mass (g)	20.43	19.11	17.75	20.87	19.90
Moisture Content (%)	65.5	63.9	65.1	64.3	65.2
Trial No 2 / Blow Count	25	25	27	28	22
Tare No	T-14	T-73	T-18	T-89	T-72
Wet Soil + Tare Mass (g)	28.12	28.61	29.71	33.56	36.63
Dry Soil + Tare Mass (g)	23.01	23.63	24.84	28.13	31.31
Tare Mass (g)	15.23	15.82	17.29	19.57	23.29
Moisture Content (%)	65.7	63.8	65.1	64.3	65.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-28	G-110	T-83	G-126	G-127
Wet Soil + Tare Mass (g)	25.85	24.20	24.40	24.96	26.33
Dry Soil + Tare Mass (g)	24.52	22.77	23.10	23.63	25.18
Tare Mass (g)	17.83	15.69	16.58	16.75	18.97
Moisture Content (%)	19.9	20.2	19.9	19.3	18.5
Trial No 2 / Tare No	G-125	G-119	T-91	G-108	G-116
Wet Soil + Tare Mass (g)	28.89	25.46	27.60	27.16	24.22
Dry Soil + Tare Mass (g)	27.53	23.94	26.30	25.90	22.98
Tare Mass (g)	20.59	16.45	19.73	19.34	16.36
Moisture Content (%)	19.6	20.3	19.8	19.2	18.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.39	130.15	117.94	116.92	112.88
Dry Soil Mass after Washing (g)	3.78	5.70	5.00	9.52	4.20
Test Status					
Liquid Limit	**66**	**64**	**65**	**64**	**65**
Plastic Limit	**20**	**20**	**20**	**19**	**19**
Plasticity Index	**46**	**44**	**45**	**45**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.6	4.4	4.2	8.1	3.7
Fines (%)	96.4	95.6	95.8	91.9	96.3
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5739C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	980	981	982	983	984
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	160+02	18+56	18+52	150+00	150+00
Offset	FS-49	CL	FS-57	CL	CL
Lift No	3	9	5	1	2
Latitude (°N)	29.871336	29.888276	29.888133	29.871694	29.871682
Longitude (°W)	90.124526	90.150070	90.150116	90.127665	90.127666
Elevation (ft)	6.4	12.5	6.0	8.4	9.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	24	26	28	24
Tare No	T-105	G-114	T-97	T-10	T-26
Wet Soil + Tare Mass (g)	23.95	24.22	27.28	24.78	28.21
Dry Soil + Tare Mass (g)	20.60	21.05	23.11	21.51	24.86
Tare Mass (g)	15.60	16.13	15.44	15.47	18.94
Moisture Content (%)	66.3	64.1	54.6	54.9	56.3
Trial No 2 / Blow Count	24	24	26	28	24
Tare No	T-74	T-13	T-44	G-147	T-37
Wet Soil + Tare Mass (g)	33.03	32.18	29.75	32.59	27.78
Dry Soil + Tare Mass (g)	27.70	26.64	24.53	29.17	24.10
Tare Mass (g)	19.73	18.02	14.95	22.83	17.61
Moisture Content (%)	66.5	64.0	54.7	54.7	56.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-38	T-30	T-81	T-35	T-104
Wet Soil + Tare Mass (g)	24.24	28.72	28.66	23.24	25.76
Dry Soil + Tare Mass (g)	23.04	27.27	27.21	21.91	24.41
Tare Mass (g)	16.80	20.23	20.75	15.55	17.74
Moisture Content (%)	19.2	20.6	22.4	20.9	20.2
Trial No 2 / Tare No	T-27	T-16	T-84	T-19	T-22
Wet Soil + Tare Mass (g)	28.29	27.09	30.12	25.46	27.40
Dry Soil + Tare Mass (g)	26.94	25.88	28.66	24.14	25.96
Tare Mass (g)	19.94	19.97	22.09	17.78	18.87
Moisture Content (%)	19.3	20.5	22.2	20.8	20.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	117.17	123.44	88.67	105.23	98.43
Dry Soil Mass after Washing (g)	4.90	7.97	2.23	7.59	2.77
Test Status					
Liquid Limit	**66**	**64**	**55**	**55**	**56**
Plastic Limit	**19**	**21**	**22**	**21**	**20**
Plasticity Index	**47**	**43**	**33**	**34**	**36**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.2	6.5	2.5	7.2	2.8
Fines (%)	95.8	93.5	97.5	92.8	97.2
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5739D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	985	986	987	988	989
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	149+98	150+04	150+03	149+99	150+04
Offset	CL	CL	CL	CL	CL
Lift No	3	4	5	6	7
Latitude (°N)	29.871686	29.871690	29.871685	29.871687	29.871686
Longitude (°W)	90.127671	90.127654	90.127653	90.127670	90.127652
Elevation (ft)	10.5	11.5	12.4	13.1	13.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	25	25	24	25
Tare No	G-129	T-60	T-421	T-47	G-128
Wet Soil + Tare Mass (g)	27.89	27.66	29.44	27.54	29.18
Dry Soil + Tare Mass (g)	24.28	24.41	25.96	23.72	25.11
Tare Mass (g)	17.83	18.55	19.71	16.84	17.85
Moisture Content (%)	55.7	55.5	55.7	55.2	56.1
Trial No 2 / Blow Count	23	25	26	24	25
Tare No	G-111	T-46	T-51	G-101	T-12
Wet Soil + Tare Mass (g)	27.07	34.15	30.17	32.24	35.43
Dry Soil + Tare Mass (g)	23.09	29.06	25.65	27.60	29.73
Tare Mass (g)	15.99	19.91	17.46	19.24	19.57
Moisture Content (%)	55.5	55.6	55.5	55.2	56.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-34	T-69	T-80	G-113	T-8
Wet Soil + Tare Mass (g)	26.59	27.32	29.07	28.34	39.23
Dry Soil + Tare Mass (g)	24.76	25.97	26.75	26.43	35.84
Tare Mass (g)	17.48	19.59	16.58	17.69	20.21
Moisture Content (%)	25.1	21.2	22.8	21.9	21.7
Trial No 2 / Tare No	T-77	T-62	G-115	T-39	T-78
Wet Soil + Tare Mass (g)	29.81	25.33	26.36	30.00	37.04
Dry Soil + Tare Mass (g)	28.22	24.02	24.69	28.35	33.65
Tare Mass (g)	21.85	17.79	17.32	20.81	17.85
Moisture Content (%)	25.0	21.0	22.7	21.9	21.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	87.02	77.66	104.80	69.70	89.83
Dry Soil Mass after Washing (g)	5.82	3.78	5.84	6.85	2.62
Test Status					
Liquid Limit	**56**	**56**	**56**	**55**	**56**
Plastic Limit	**25**	**21**	**23**	**22**	**22**
Plasticity Index	**31**	**35**	**33**	**33**	**34**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.7	4.9	5.6	9.8	2.9
Fines (%)	93.3	95.1	94.4	90.2	97.1
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5748A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	990	991	992	993	994
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	145+01	144+90	144+97	139+96	140+01
Offset	PS-126	PS-131	PS-129	FS-52	FS-53
Lift No	1	2	3	1	2
Latitude (°N)	29.872139	29.872152	29.872148	29.871760	29.871756
Longitude (°W)	90.129204	90.129215	90.129214	90.130837	90.130822
Elevation (ft)	3.3	4.3	5.5	4.5	5.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	20	28	30	30
Tare No	T-80	T-39	T-8	G-101	G-114
Wet Soil + Tare Mass (g)	25.22	40.87	41.90	36.36	34.31
Dry Soil + Tare Mass (g)	21.96	33.55	34.12	29.54	27.10
Tare Mass (g)	16.57	20.79	20.23	19.33	16.18
Moisture Content (%)	60.2	55.8	56.8	68.3	67.5
Trial No 2 / Blow Count	25	22	27	30	29
Tare No	G-113	G-128	G-115	T-12	T-27
Wet Soil + Tare Mass (g)	28.64	37.74	37.97	35.01	35.11
Dry Soil + Tare Mass (g)	24.52	30.57	30.55	28.86	29.05
Tare Mass (g)	17.67	17.91	17.34	19.64	19.94
Moisture Content (%)	60.1	55.8	56.7	68.2	67.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-78	T-51	T-69	T-77	T-46
Wet Soil + Tare Mass (g)	25.89	26.01	27.31	29.77	27.35
Dry Soil + Tare Mass (g)	24.61	24.64	25.92	28.32	26.14
Tare Mass (g)	17.84	17.48	19.56	21.79	19.91
Moisture Content (%)	18.9	19.1	21.9	22.2	19.4
Trial No 2 / Tare No	T-421	T-62	T-34	T-60	G-111
Wet Soil + Tare Mass (g)	27.62	26.07	26.78	27.33	24.87
Dry Soil + Tare Mass (g)	26.36	24.75	25.10	25.79	23.43
Tare Mass (g)	19.74	17.79	17.48	18.85	16.03
Moisture Content (%)	19.0	19.0	22.0	22.2	19.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.21	107.65	67.65	94.02	66.77
Dry Soil Mass after Washing (g)	4.41	4.08	3.98	4.98	5.32
Test Status					
Liquid Limit	**60**	**56**	**57**	**68**	**68**
Plastic Limit	**19**	**19**	**22**	**22**	**19**
Plasticity Index	**41**	**37**	**35**	**46**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.4	3.8	5.9	5.3	8.0
Fines (%)	95.6	96.2	94.1	94.7	92.0
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5748B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	995	996	997	998	999
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	140+00	123+54	123+54	123+53	23+44
Offset	FS-50	FS-65	FS-70	FS-68	CL
Lift No	3	1	2	3	9
Latitude (°N)	29.871764	29.872107	29.872096	29.872101	29.888036
Longitude (°W)	90.130824	90.136004	90.136004	90.136007	90.148552
Elevation (ft)	6.3	3.9	4.8	5.5	12.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	21	20	29	20
Tare No	T-38	T-30	T-97	T-13	G-126
Wet Soil + Tare Mass (g)	32.19	36.13	33.97	35.33	30.22
Dry Soil + Tare Mass (g)	26.10	29.73	26.73	28.55	24.80
Tare Mass (g)	16.80	20.23	15.40	18.04	16.75
Moisture Content (%)	65.8	66.0	62.2	65.7	65.5
Trial No 2 / Blow Count	25	22	20	28	20
Tare No	T-16	T-44	G-147	T-10	G-108
Wet Soil + Tare Mass (g)	34.54	30.30	42.28	30.71	33.94
Dry Soil + Tare Mass (g)	28.75	24.17	34.72	24.74	28.07
Tare Mass (g)	19.97	15.01	22.89	15.54	19.34
Moisture Content (%)	65.9	65.9	62.2	65.8	65.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-84	T-37	G-129	T-104	G-101
Wet Soil + Tare Mass (g)	31.00	28.14	26.97	27.16	24.64
Dry Soil + Tare Mass (g)	29.35	26.28	25.32	25.42	23.67
Tare Mass (g)	22.07	17.60	17.87	17.73	19.31
Moisture Content (%)	22.7	21.4	22.1	22.6	22.2
Trial No 2 / Tare No	T-19	T-47	T-22	T-35	T-13
Wet Soil + Tare Mass (g)	25.42	27.63	28.10	24.40	23.14
Dry Soil + Tare Mass (g)	24.01	25.72	26.45	22.76	22.21
Tare Mass (g)	17.78	16.84	18.98	15.54	18.04
Moisture Content (%)	22.6	21.5	22.1	22.7	22.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.20	68.41	116.19	107.62	80.54
Dry Soil Mass after Washing (g)	6.79	8.38	7.61	7.87	5.80
Test Status					
Liquid Limit	**66**	**66**	**62**	**66**	**65**
Plastic Limit	**23**	**21**	**22**	**23**	**22**
Plasticity Index	**43**	**45**	**40**	**43**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.6	12.2	6.5	7.3	7.2
Fines (%)	93.2	87.8	93.5	92.7	92.8
Group Symbol	CL	CL	CL	CL	CL
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5748C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1000	1001	1002	1003	1004
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	23+41	27+66	27+76	124+41	124+41
Offset	FS-46	CL	FS-52	PS-38	PS-42
Lift No	4	9	4	1	2
Latitude (°N)	29.887891	29.887782	29.887633	29.872373	29.872383
Longitude (°W)	90.148597	90.147257	90.147256	90.135702	90.135702
Elevation (ft)	6.4	12.5	6.4	5.0	5.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	21	27	24	26	27
Tare No	T-83	T-87	T-18	T-82	T-9
Wet Soil + Tare Mass (g)	32.04	34.99	30.57	32.83	34.26
Dry Soil + Tare Mass (g)	25.04	28.58	25.47	27.29	28.73
Tare Mass (g)	16.58	19.89	17.32	18.23	19.68
Moisture Content (%)	81.0	74.5	62.3	61.4	61.7
Trial No 2 / Blow Count	21	26	24	27	27
Tare No	T-91	T-72	G-112	T-21	T-33
Wet Soil + Tare Mass (g)	34.16	41.18	37.10	27.08	28.40
Dry Soil + Tare Mass (g)	27.63	33.58	29.65	22.68	23.28
Tare Mass (g)	19.73	23.32	17.77	15.45	14.90
Moisture Content (%)	80.9	74.4	62.4	61.4	61.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-119	T-89	T-50	T-63	T-52
Wet Soil + Tare Mass (g)	25.35	28.28	27.13	29.02	29.05
Dry Soil + Tare Mass (g)	23.58	26.49	25.62	27.38	27.53
Tare Mass (g)	16.45	19.58	19.14	19.32	20.30
Moisture Content (%)	24.8	25.9	23.3	20.3	21.0
Trial No 2 / Tare No	G-110	G-102	T-73	T-7	T-61
Wet Soil + Tare Mass (g)	24.06	28.72	22.95	29.32	23.86
Dry Soil + Tare Mass (g)	22.40	27.10	21.62	27.68	22.45
Tare Mass (g)	15.70	20.88	15.85	19.72	15.72
Moisture Content (%)	24.8	26.0	23.1	20.6	21.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	68.45	114.75	73.65	131.65	85.92
Dry Soil Mass after Washing (g)	4.22	6.12	3.26	4.09	2.99
Test Status					
Liquid Limit	**81**	**74**	**62**	**61**	**62**
Plastic Limit	**25**	**26**	**23**	**20**	**21**
Plasticity Index	**56**	**48**	**39**	**41**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	6.2	5.3	4.4	3.1	3.5
Fines (%)	93.8	94.7	95.6	96.9	96.5
Group Symbol	CH	CL	CL	CL	CL
Group Name	FAT CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5748D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/4/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1005	1006	1007	1008	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	124+10	122+24	122+22	122+22	
Offset	PS-38	PS-67	PS-64	PS-68	
Lift No	3	1	2	3	
Latitude (°N)	29.872373	29.872503	29.872495	29.872506	
Longitude (°W)	90.135706	90.136378	90.136382	90.136381	
Elevation (ft)	7.2	4.9	6.0	6.6	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	N0	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	26	28	24	
Tare No	G-104	T-14	T-5	G-103	
Wet Soil + Tare Mass (g)	28.35	26.16	29.80	30.14	
Dry Soil + Tare Mass (g)	23.63	21.95	25.74	26.03	
Tare Mass (g)	16.10	15.24	19.24	19.65	
Moisture Content (%)	62.4	63.0	63.3	64.1	
Trial No 2 / Blow Count	24	27	28	23	
Tare No	T-79	T-95	T-70	T-31	
Wet Soil + Tare Mass (g)	28.52	34.01	31.02	29.89	
Dry Soil + Tare Mass (g)	23.77	28.80	26.28	25.81	
Tare Mass (g)	16.18	20.46	18.70	19.50	
Moisture Content (%)	62.3	63.1	63.4	64.0	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-28	T-67	T-11	T-71	
Wet Soil + Tare Mass (g)	26.46	26.83	22.93	27.18	
Dry Soil + Tare Mass (g)	24.99	25.50	21.59	25.87	
Tare Mass (g)	17.82	18.92	15.14	19.78	
Moisture Content (%)	20.5	20.2	20.8	21.5	
Trial No 2 / Tare No	G-125	T-76	G-118	T-94	
Wet Soil + Tare Mass (g)	29.71	24.58	22.92	22.77	
Dry Soil + Tare Mass (g)	28.16	23.15	21.58	21.50	
Tare Mass (g)	20.58	16.13	15.15	15.61	
Moisture Content (%)	20.4	20.4	20.8	21.6	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	63.83	122.05	107.28	95.12	
Dry Soil Mass after Washing (g)	7.30	5.16	6.60	3.18	
Test Status					
Liquid Limit	**62**	**63**	**63**	**64**	
Plastic Limit	**20**	**20**	**21**	**22**	
Plasticity Index	**42**	**43**	**42**	**42**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	11.4	4.2	6.2	3.3	
Fines (%)	88.6	95.8	93.8	96.7	
Group Symbol	CL	CL	CL	CL	
Group Name	LEAN CLAY	LEAN CLAY	LEAN CLAY	LEAN CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1009	1010	1011	1012	1013
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	111+79	55+99	59+31	90+00	88+99
Offset	FS-74	PS-92	PS-88	CL	CL
Lift No	4	1	1	1	1
Latitude (°N)	29.873938	29.886848	29.886477	29.879713	29.879714
Longitude (°W)	90.138348	90.138484	90.117927	90.136523	90.136518
Elevation (ft)	6.6	3.3	3.5	10.5	10.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	25	25	26
Tare No	G-103	T-83	G-110	T-28	G-128
Wet Soil + Tare Mass (g)	32.00	31.80	31.50	32.25	33.55
Dry Soil + Tare Mass (g)	27.17	25.80	25.30	26.58	27.38
Tare Mass (g)	19.60	16.56	15.69	17.80	17.83
Moisture Content (%)	64.1	64.9	64.5	64.6	64.9
Trial No 2 / Blow Count	26	25	25	25	25
Tare No	T-31	G-119	G-125	T-12	G-101
Wet Soil + Tare Mass (g)	33.10	33.15	32.10	33.25	33.36
Dry Soil + Tare Mass (g)	27.80	26.58	27.58	27.88	27.85
Tare Mass (g)	19.49	16.44	20.56	19.58	19.35
Moisture Content (%)	64.1	64.8	64.4	64.7	64.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-41	T-67	T-32	G-115	T-86
Wet Soil + Tare Mass (g)	30.63	30.50	33.10	32.56	33.25
Dry Soil + Tare Mass (g)	28.69	28.40	30.20	29.78	30.21
Tare Mass (g)	19.35	18.88	17.48	17.30	16.67
Moisture Content (%)	20.8	22.1	22.8	22.3	22.5
Trial No 2 / Tare No	T-95	T-92	T-69	T-8	T-101
Wet Soil + Tare Mass (g)	28.92	28.80	29.20	28.75	28.60
Dry Soil + Tare Mass (g)	27.45	27.30	27.40	26.52	26.48
Tare Mass (g)	20.43	20.52	19.53	16.55	17.10
Moisture Content (%)	20.9	22.1	22.9	22.4	22.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	82.22	125.16	122.92	104.84	99.83
Dry Soil Mass after Washing (g)	4.28	3.29	3.27	3.32	3.50
Test Status					
Liquid Limit	**64**	**65**	**64**	**65**	**65**
Plastic Limit	**21**	**22**	**23**	**22**	**23**
Plasticity Index	**43**	**43**	**41**	**43**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.8	2.6	2.7	3.2	3.5
Fines (%)	95.2	97.4	97.3	96.8	96.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1014	1015	1016	1017	1018
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	89+99	89+98	89+97	32+61	32+60
Offset	CL	CL	CL	CL	FS-73
Lift No	3	4	5	9	3
Latitude (°N)	29.879713	29.879716	29.879721	29.887526	29.887307
Longitude (°W)	90.136515	90.136509	90.136518	90.145719	90.145773
Elevation (ft)	12.5	13.0	13.5	12.5	5.7
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	27	25
Tare No	T-25	T-78	T-39	T-26	T-47
Wet Soil + Tare Mass (g)	35.25	34.35	39.61	32.84	33.20
Dry Soil + Tare Mass (g)	27.85	27.96	32.28	26.36	25.49
Tare Mass (g)	16.52	17.82	20.80	18.96	16.82
Moisture Content (%)	65.3	63.0	63.9	88.4	88.9
Trial No 2 / Blow Count	25	26	25	28	25
Tare No	T-8	G-113	T104	T-81	T-51
Wet Soil + Tare Mass (g)	33.40	34.25	36.25	36.49	34.16
Dry Soil + Tare Mass (g)	28.18	27.86	29.03	29.13	26.30
Tare Mass (g)	20.20	17.67	17.73	20.75	17.44
Moisture Content (%)	65.4	63.0	63.9	89.0	88.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-84	T-16	G-147	G-116	T-62
Wet Soil + Tare Mass (g)	29.35	28.36	38.94	24.33	30.10
Dry Soil + Tare Mass (g)	28.01	26.86	36.10	22.59	27.40
Tare Mass (g)	22.09	19.97	22.83	16.37	17.77
Moisture Content (%)	22.6	21.8	21.4	28.0	28.0
Trial No 2 / Tare No	T-30	T-27	G-116	G-127	T-90
Wet Soil + Tare Mass (g)	35.26	31.26	29.65	27.20	31.25
Dry Soil + Tare Mass (g)	32.51	29.24	27.30	25.40	28.72
Tare Mass (g)	20.21	19.94	16.36	18.97	19.72
Moisture Content (%)	22.4	21.7	21.5	28.0	28.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	94.85	93.42	104.74	92.23	101.92
Dry Soil Mass after Washing (g)	3.29	3.26	3.32	3.89	4.54
Test Status					
Liquid Limit	**65**	**63**	**64**	**89**	**89**
Plastic Limit	**22**	**22**	**21**	**28**	**28**
Plasticity Index	**43**	**41**	**43**	**61**	**61**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.5	3.5	3.2	4.2	4.5
Fines (%)	96.5	96.5	96.8	95.8	95.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1019	1020	1021	1022	1023
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+82	82+06	82+81	83+06	82+83
Offset	PS-79	PS-60	PS-75	PS-62	PS-78
Lift No	1	1	2	2	3
Latitude (°N)	29.881543	29.881757	29.881548	29.881758	29.881540
Longitude (°W)	90.135638	90.135627	90.135647	90.135620	90.135641
Elevation (ft)	2.5	3.0	3.6	4.0	4.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	24	25
Tare No	T-83	T-82	T-70	G-119	T-32
Wet Soil + Tare Mass (g)	36.25	34.26	32.25	36.25	31.65
Dry Soil + Tare Mass (g)	27.10	26.79	26.96	28.52	26.20
Tare Mass (g)	16.58	18.23	18.64	16.43	17.64
Moisture Content (%)	87.0	87.3	63.9	63.6	63.7
Trial No 2 / Blow Count	25	26	25	25	25
Tare No	T-91	T-21	G-112	T-37	T-91
Wet Soil + Tare Mass (g)	35.16	31.45	34.03	35.23	33.25
Dry Soil + Tare Mass (g)	27.98	24.01	27.68	28.36	27.98
Tare Mass (g)	19.73	15.45	17.71	17.57	19.73
Moisture Content (%)	87.0	87.3	63.7	63.7	63.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G102	T-63	T-14	T-78	T-27
Wet Soil + Tare Mass (g)	31.15	29.65	24.27	27.25	28.65
Dry Soil + Tare Mass (g)	29.18	27.61	22.73	25.52	27.08
Tare Mass (g)	20.88	19.32	15.24	17.84	19.94
Moisture Content (%)	23.7	24.6	20.6	22.5	22.0
Trial No 2 / Tare No	G-110	T-7	T-50	G-116	G-126
Wet Soil + Tare Mass (g)	27.23	29.86	26.84	26.36	26.78
Dry Soil + Tare Mass (g)	25.02	27.85	25.52	24.56	24.95
Tare Mass (g)	15.70	19.72	19.13	16.60	16.69
Moisture Content (%)	23.7	24.7	20.7	22.6	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.83	95.99	97.30	117.07	123.00
Dry Soil Mass after Washing (g)	3.70	4.97	4.06	3.85	3.63
Test Status					
Liquid Limit	**87**	**87**	**64**	**64**	**64**
Plastic Limit	**24**	**25**	**21**	**23**	**22**
Plasticity Index	**63**	**62**	**43**	**41**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.1	5.2	4.2	3.3	3.0
Fines (%)	95.9	94.8	95.8	97.0	97.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1024	1025	1026	1027	1028
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	82+04	79+05	79+05	79+08	80+01
Offset	PS-62	PS-44	PS-48	PS-49	FS-54
Lift No	3	1	9	3	1
Latitude (°N)	29.881762	29.882563	29.882561	29.882552	29.882389
Longitude (°W)	90.135619	90.135403	90.135393	90.135390	90.135791
Elevation (ft)	5.0	3.5	4.5	5.5	4.0
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	27	24
Tare No	T-51	T-63	T-31	T-1021	T-93
Wet Soil + Tare Mass (g)	40.85	38.29	45.26	45.52	45.62
Dry Soil + Tare Mass (g)	31.75	31.05	35.20	33.80	35.28
Tare Mass (g)	17.48	19.63	19.53	15.19	19.36
Moisture Content (%)	63.8	63.4	64.5	63.6	64.6
Trial No 2 / Blow Count	25	26	25	26	25
Tare No	T-421	T-38	T-99	T-28	T-52
Wet Soil + Tare Mass (g)	42.36	41.36	44.58	44.36	45.00
Dry Soil + Tare Mass (g)	33.56	31.90	33.59	34.10	35.32
Tare Mass (g)	19.75	16.91	16.56	17.86	20.34
Moisture Content (%)	63.7	63.4	64.5	63.5	64.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-35	T-17	T-80	T-39	T-79
Wet Soil + Tare Mass (g)	27.58	26.39	25.36	28.65	25.26
Dry Soil + Tare Mass (g)	25.59	24.20	23.75	27.23	23.60
Tare Mass (g)	15.56	14.77	16.59	20.81	16.20
Moisture Content (%)	19.8	23.2	22.5	22.1	22.4
Trial No 2 / Tare No	T-72	T-60	T-15	T-82	T-16
Wet Soil + Tare Mass (g)	35.69	28.98	25.85	28.95	26.45
Dry Soil + Tare Mass (g)	33.65	27.00	23.99	27.02	25.26
Tare Mass (g)	23.32	18.48	15.75	18.27	19.99
Moisture Content (%)	19.7	23.2	22.6	22.1	22.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.24	111.27	102.50	94.37	113.51
Dry Soil Mass after Washing (g)	4.64	3.34	3.34	2.83	2.75
Test Status					
Liquid Limit	**64**	**63**	**65**	**64**	**65**
Plastic Limit	**20**	**23**	**23**	**22**	**23**
Plasticity Index	**44**	**40**	**42**	**42**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.7	3.0	3.0	3.0	2.4
Fines (%)	95.3	97.0	97.0	97.0	97.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1029	1030	1031	1032	1033
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	79+99	83+54	2+85	7+82	12+76
Offset	FS-51	FS-66	CL	CL	CL
Lift No	1	2	10	10	10
Latitude (°N)	29.882391	29.881469	29.889166	29.888874	29.888599
Longitude (°W)	90.135779	90.136144	90.154921	90.153387	90.151860
Elevation (ft)	4.0	3.5	13.1	13.0	13.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	24	25	25	26
Tare No	T-92	T-101	T-86	T-41	T-46
Wet Soil + Tare Mass (g)	47.25	45.23	41.65	48.05	40.30
Dry Soil + Tare Mass (g)	38.82	34.20	31.46	36.95	31.57
Tare Mass (g)	25.52	17.16	16.65	19.41	19.88
Moisture Content (%)	63.1	64.4	68.8	63.3	75.0
Trial No 2 / Blow Count	25	23	25	25	26
Tare No	T-61	T-25	T-66	T-76	T-50
Wet Soil + Tare Mass (g)	41.36	42.29	40.31	45.92	45.45
Dry Soil + Tare Mass (g)	31.38	32.15	30.10	34.38	34.20
Tare Mass (g)	15.54	16.56	15.26	16.14	19.17
Moisture Content (%)	63.0	64.4	68.8	63.3	75.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-104	T-91	T-420	T-32	T-103
Wet Soil + Tare Mass (g)	27.25	27.41	27.42	25.20	26.88
Dry Soil + Tare Mass (g)	25.45	25.91	25.70	23.75	24.99
Tare Mass (g)	17.76	19.79	17.81	17.64	17.21
Moisture Content (%)	23.4	24.5	21.8	23.7	24.3
Trial No 2 / Tare No	T-102	T-12	T-78	T-45	T-13
Wet Soil + Tare Mass (g)	27.21	27.36	26.08	27.79	26.38
Dry Soil + Tare Mass (g)	25.42	25.84	24.63	26.15	24.75
Tare Mass (g)	17.75	19.63	17.90	19.24	18.05
Moisture Content (%)	23.3	24.5	21.5	23.7	24.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.92	107.06	127.93	117.27	59.93
Dry Soil Mass after Washing (g)	5.56	6.26	7.86	3.68	1.41
Test Status					
Liquid Limit	**63**	**64**	**69**	**63**	**75**
Plastic Limit	**23**	**24**	**22**	**24**	**24**
Plasticity Index	**40**	**40**	**47**	**39**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.6	5.8	6.1	3.1	2.4
Fines (%)	94.4	94.0	93.9	96.9	97.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754F
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1034	1035	1036	1037	1038
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	17+68	22+74	27+55	111+79	118+94
Offset	CL	CL	CL	FS-98	FS-10
Lift No	10	10	10	5	1
Latitude (°N)	29.888332	29.888061	29.887779	29.873940	29.872366
Longitude (°W)	90.150339	90.148772	90.147290	90.138359	90.137434
Elevation (ft)	13.1	13.0	13.0	5.3	4.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	27	26	25
Tare No	T-74	G-102	T-70	G-103	G-119
Wet Soil + Tare Mass (g)	39.14	35.45	31.50	32.00	28.12
Dry Soil + Tare Mass (g)	31.35	29.25	26.01	26.26	22.70
Tare Mass (g)	19.75	20.85	18.64	19.60	16.43
Moisture Content (%)	66.8	74.5	75.2	86.6	86.4
Trial No 2 / Blow Count	23	26	26	26	25
Tare No	T-105	T-60	G-112	T-31	T-37
Wet Soil + Tare Mass (g)	30.55	32.08	34.03	33.10	34.93
Dry Soil + Tare Mass (g)	24.53	26.27	27.05	26.80	26.89
Tare Mass (g)	15.61	18.44	17.71	19.49	17.57
Moisture Content (%)	66.8	74.6	75.1	86.6	86.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-104	T-18	T-14	T-41	T-78
Wet Soil + Tare Mass (g)	25.55	28.29	24.27	30.63	26.36
Dry Soil + Tare Mass (g)	24.32	26.15	22.50	28.40	24.68
Tare Mass (g)	17.75	17.28	15.24	19.35	17.84
Moisture Content (%)	18.7	24.1	24.4	24.6	24.6
Trial No 2 / Tare No	G-111	T-44	T-50	T-95	G-116
Wet Soil + Tare Mass (g)	23.44	26.05	26.84	28.92	25.23
Dry Soil + Tare Mass (g)	22.27	23.88	25.34	27.25	23.48
Tare Mass (g)	16.02	14.93	19.13	20.43	16.36
Moisture Content (%)	18.7	24.2	24.2	24.5	24.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	102.41	102.07	90.33	94.14	98.63
Dry Soil Mass after Washing (g)	3.15	3.51	3.02	3.63	4.96
Test Status					
Liquid Limit	**67**	**75**	**75**	**87**	**86**
Plastic Limit	**19**	**24**	**24**	**25**	**25**
Plasticity Index	**48**	**51**	**51**	**62**	**61**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	3.4	3.3	3.9	5.0
Fines (%)	96.9	96.6	96.7	96.1	95.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5754G
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/5/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1039	1040	1041	1042	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	118+81	83+51	79+99	83+53	
Offset	CL	FS-66	FS-52	FS-66	
Lift No	1	2	3	3	
Latitude (°N)	29.872420	29.881475	29.882393	29.881470	
Longitude (°W)	90.137470	90.136140	90.135780	90.136142	
Elevation (ft)	3.4	4.5	6.0	5.5	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	N0	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	28	27	
Tare No	T-32	T-12	T-51	T-14	
Wet Soil + Tare Mass (g)	29.76	33.71	37.21	32.35	
Dry Soil + Tare Mass (g)	24.10	28.21	29.33	25.66	
Tare Mass (g)	17.64	19.63	17.49	15.26	
Moisture Content (%)	87.6	63.8	67.5	64.9	
Trial No 2 / Blow Count	25	23	27	26	
Tare No	T-91	T-5	T-29	T-43	
Wet Soil + Tare Mass (g)	32.48	39.77	39.86	36.94	
Dry Soil + Tare Mass (g)	26.53	31.76	31.24	29.75	
Tare Mass (g)	19.73	19.24	18.16	18.53	
Moisture Content (%)	87.5	63.3	66.5	64.4	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-27	T-25	T-76	T-22	
Wet Soil + Tare Mass (g)	27.84	27.01	29.20	31.86	
Dry Soil + Tare Mass (g)	26.20	25.00	26.74	29.48	
Tare Mass (g)	19.94	16.56	16.18	19.03	
Moisture Content (%)	26.2	23.8	23.3	22.8	
Trial No 2 / Tare No	G-126	T-47	T-96	T-30	
Wet Soil + Tare Mass (g)	24.19	28.70	29.88	31.67	
Dry Soil + Tare Mass (g)	22.63	26.42	27.56	29.53	
Tare Mass (g)	16.69	16.85	17.59	20.26	
Moisture Content (%)	26.3	23.8	23.3	23.1	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	109.60	87.14	123.23	98.96	
Dry Soil Mass after Washing (g)	4.46	4.81	2.09	2.63	
Test Status					
Liquid Limit	**88**	**64**	**67**	**65**	
Plastic Limit	**26**	**24**	**23**	**23**	
Plasticity Index	**62**	**40**	**44**	**42**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	4.1	5.5	1.7	2.7	
Fines (%)	95.9	94.5	98.3	97.3	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1043	1044	1045	1046	1047
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	74+14	74+16	74+16	74+17	77+82
Offset	PS-17	PS-14	PS-13	PS-12	PS-21
Lift No	1	2	3	4	1
Latitude (°N)	29.883878	29.883877	29.883777	29.883875	29.882906
Longitude (°W)	90.135042	90.135053	90.135056	90.135060	90.135364
Elevation (ft)	8.8	9.5	10.3	11.5	7.4
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	24	24	26	26
Tare No	T-45	T-74	T-107	T-85	T-33
Wet Soil + Tare Mass (g)	30.60	26.96	25.70	26.02	22.50
Dry Soil + Tare Mass (g)	26.15	24.14	22.21	22.68	18.98
Tare Mass (g)	19.23	19.74	18.25	17.49	14.93
Moisture Content (%)	63.7	63.8	87.7	64.7	87.3
Trial No 2 / Blow Count	23	24	24	27	27
Tare No	T-99	T-34	T-75	T-10	T-83
Wet Soil + Tare Mass (g)	25.94	26.89	24.92	24.21	25.64
Dry Soil + Tare Mass (g)	22.27	23.23	20.82	20.81	21.43
Tare Mass (g)	16.56	17.51	16.16	15.50	16.57
Moisture Content (%)	63.6	63.7	87.5	64.6	87.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-78	T-102	T-76	T-20	T-82
Wet Soil + Tare Mass (g)	31.88	31.30	31.75	29.79	32.69
Dry Soil + Tare Mass (g)	29.28	29.26	28.56	27.36	29.66
Tare Mass (g)	17.86	19.71	16.11	17.86	18.24
Moisture Content (%)	22.8	21.4	25.6	25.6	26.5
Trial No 2 / Tare No	T-77	T-105	T-86	T-79	T-43
Wet Soil + Tare Mass (g)	36.08	27.64	30.45	26.99	32.62
Dry Soil + Tare Mass (g)	33.40	25.52	27.65	24.80	29.68
Tare Mass (g)	21.70	15.60	16.70	16.18	18.51
Moisture Content (%)	22.9	21.4	25.6	25.4	26.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.31	95.20	87.44	73.59	91.26
Dry Soil Mass after Washing (g)	2.38	3.78	2.89	2.48	3.03
Test Status					
Liquid Limit	**64**	**64**	**88**	**65**	**87**
Plastic Limit	**23**	**21**	**26**	**25**	**26**
Plasticity Index	**41**	**43**	**62**	**40**	**61**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.3	4.0	3.3	3.4	3.3
Fines (%)	97.7	96.0	96.7	96.8	96.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1048	1049	1050	1051	1052
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	77+82	77+90	77+82	118+89	118+45
Offset	PS-19	PS-69	PS-18	FS-8	PS-10
Lift No	2	1	3	2	2
Latitude (°N)	29.882907	29.882848	29.882909	29.872373	29.872437
Longitude (°W)	90.135367	90.135224	90.135373	90.137449	90.137581
Elevation (ft)	8.3	3.0	9.1	5.0	2.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	23	23	23	25
Tare No	T-84	T-103	T-13	T-95	T-24
Wet Soil + Tare Mass (g)	36.60	31.31	32.73	31.88	29.40
Dry Soil + Tare Mass (g)	30.85	24.84	25.88	26.51	22.10
Tare Mass (g)	22.07	17.43	18.09	20.42	13.78
Moisture Content (%)	64.5	86.4	87.1	87.3	87.7
Trial No 2 / Blow Count	22	22	24	24	24
Tare No	T-17	T-81	T-70	T-52	T-44
Wet Soil + Tare Mass (g)	26.01	31.99	29.74	35.79	27.47
Dry Soil + Tare Mass (g)	21.55	26.74	24.58	28.54	21.60
Tare Mass (g)	14.73	20.75	18.68	20.29	14.94
Moisture Content (%)	64.4	86.3	87.0	87.4	87.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-75	T-30	T-104	T-61	T-67
Wet Soil + Tare Mass (g)	25.28	24.68	24.44	22.40	26.13
Dry Soil + Tare Mass (g)	23.59	23.85	23.10	21.04	24.68
Tare Mass (g)	16.16	20.24	17.73	15.71	18.93
Moisture Content (%)	22.7	23.0	25.0	25.5	25.2
Trial No 2 / Tare No	T-87	T-62	T-64	T-106	T-421
Wet Soil + Tare Mass (g)	27.90	23.11	23.70	23.14	26.33
Dry Soil + Tare Mass (g)	26.45	22.12	22.37	21.66	25.00
Tare Mass (g)	19.86	17.80	17.07	15.86	19.74
Moisture Content (%)	22.0	22.9	25.1	25.5	25.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.33	94.96	74.21	101.10	105.36
Dry Soil Mass after Washing (g)	2.89	3.51	3.10	3.76	4.12
Test Status					
Liquid Limit	**64**	**86**	**87**	**87**	**88**
Plastic Limit	**22**	**23**	**25**	**26**	**25**
Plasticity Index	**42**	**63**	**62**	**61**	**63**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	3.7	4.1	3.7	3.9
Fines (%)	96.9	96.3	95.9	96.3	96.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1053	1054	1055	1056	1057
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	32+46	77+80	77+88	118+48	119+12
Offset	CL	PS-18	PS-68	PS-2	PS-6
Lift No	10	4	2	3	3
Latitude (°N)	29.887499	29.882914	29.882854	29.872400	29.872410
Longitude (°W)	90.145772	90.135371	90.135226	90.137576	90.137372
Elevation (ft)	13.1	9.9	3.9	3.5	7.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24	25	24	25
Tare No	T-69	T-78	T-71	T-83	T-101
Wet Soil + Tare Mass (g)	28.95	27.80	28.33	23.76	27.12
Dry Soil + Tare Mass (g)	24.60	23.16	24.37	20.42	22.47
Tare Mass (g)	19.63	17.90	19.79	16.60	17.15
Moisture Content (%)	87.5	87.8	86.5	87.0	87.4
Trial No 2 / Blow Count	25	24	25	25	25
Tare No	T-60	T77	T-90	T-107	T-73
Wet Soil + Tare Mass (g)	29.27	31.01	27.23	29.63	26.58
Dry Soil + Tare Mass (g)	24.26	26.66	23.74	24.32	21.58
Tare Mass (g)	18.53	21.73	19.71	18.23	15.85
Moisture Content (%)	87.4	87.8	86.6	87.2	87.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-99	T-93	T-40	T-14	T-101
Wet Soil + Tare Mass (g)	23.07	26.88	26.06	23.48	22.24
Dry Soil + Tare Mass (g)	21.78	25.35	24.68	21.85	20.89
Tare Mass (g)	16.56	19.37	19.31	15.27	15.50
Moisture Content (%)	24.7	25.6	25.7	24.8	25.0
Trial No 2 / Tare No	T-45	T-66	T-72	T-15	T-43
Wet Soil + Tare Mass (g)	25.83	21.84	31.25	21.81	25.45
Dry Soil + Tare Mass (g)	24.49	20.50	29.62	20.61	24.06
Tare Mass (g)	19.24	15.29	23.31	15.76	18.51
Moisture Content (%)	25.5	25.7	25.8	24.7	25.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	56.81	106.56	68.70	95.40	100.12
Dry Soil Mass after Washing (g)	3.08	4.94	2.51	2.90	4.91
Test Status					
Liquid Limit	**87**	**88**	**87**	**87**	**87**
Plastic Limit	**25**	**26**	**26**	**25**	**25**
Plasticity Index	**62**	**62**	**61**	**62**	**62**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.4	4.6	3.7	3.0	4.9
Fines (%)	94.6	95.4	96.3	97.0	95.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1058	1059	1060	1061	1062
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	77+99	47+98	77+81	47+98	48+00
Offset	PS-68	PS-94	PS-20	CL	PS-90
Lift No	5	1	5	1	2
Latitude (°N)	29.882827	29.886901	29.882909	29.886651	29.886889
Longitude (°W)	90.135235	90.140916	90.135365	90.140975	90.140911
Elevation (ft)	5.0	2.1	9.8	8.1	3.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	24	25
Tare No	T-420	T-84	T-81	T-24	T-30
Wet Soil + Tare Mass (g)	26.92	34.04	33.82	22.65	29.68
Dry Soil + Tare Mass (g)	23.05	28.90	28.29	19.17	25.66
Tare Mass (g)	17.81	22.07	20.76	13.81	20.24
Moisture Content (%)	73.9	75.3	73.8	64.6	74.2
Trial No 2 / Blow Count	25	26	25	25	26
Tare No	T-68	T-17	T-103	T-99	T-62
Wet Soil + Tare Mass (g)	28.52	24.22	27.69	27.75	26.98
Dry Soil + Tare Mass (g)	25.22	20.15	23.35	23.35	23.06
Tare Mass (g)	20.76	14.73	17.46	16.55	17.80
Moisture Content (%)	74.0	75.4	73.7	64.7	74.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-87	T-86	T-104	T-45	T-13
Wet Soil + Tare Mass (g)	26.64	22.77	24.28	26.01	24.12
Dry Soil + Tare Mass (g)	25.38	21.54	23.08	24.79	22.94
Tare Mass (g)	19.87	16.68	17.73	19.23	18.07
Moisture Content (%)	22.9	25.3	22.4	21.9	24.2
Trial No 2 / Tare No	T-75	T-20	T-64	T-69	T-70
Wet Soil + Tare Mass (g)	22.84	24.64	23.79	25.62	24.85
Dry Soil + Tare Mass (g)	21.60	23.27	22.55	24.54	23.64
Tare Mass (g)	16.16	17.85	17.05	19.63	18.67
Moisture Content (%)	22.8	25.3	22.5	22.0	24.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	105.57	97.39	97.15	108.44	110.77
Dry Soil Mass after Washing (g)	3.73	2.65	4.07	3.76	3.60
Test Status					
Liquid Limit	**74**	**75**	**74**	**65**	**75**
Plastic Limit	**23**	**25**	**22**	**22**	**24**
Plasticity Index	**51**	**50**	**52**	**43**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.5	2.7	4.2	3.5	3.2
Fines (%)	96.5	97.3	95.8	96.5	96.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1063	1064	1065	1066	1067
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	111+95	118+91	118+92	48+00	48+00
Offset	FS-12	PS-8	PS-6	CL	CL
Lift No	6	4	4	2	3
Latitude (°N)	29.873899	29.872421	29.872379	29.886645	29.886636
Longitude (°W)	90.138378	90.137440	90.137440	90.140968	90.140972
Elevation (ft)	5.0	6.7	7.0	9.1	10.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25	27	25	27
Tare No	T-84	T-66	G-118	G-116	T-1022
Wet Soil + Tare Mass (g)	51.67	46.18	43.16	50.34	44.29
Dry Soil + Tare Mass (g)	40.25	32.88	31.54	37.43	34.85
Tare Mass (g)	22.08	15.30	15.56	16.37	19.76
Moisture Content (%)	63.1	75.7	73.4	61.3	63.1
Trial No 2 / Blow Count	26	26	27	26	28
Tare No	T-33	T-24	T-21	G-104	T-72
Wet Soil + Tare Mass (g)	40.11	39.72	33.91	45.55	50.97
Dry Soil + Tare Mass (g)	30.38	28.63	26.15	34.33	40.37
Tare Mass (g)	14.91	13.79	15.49	16.11	23.32
Moisture Content (%)	63.2	75.1	73.5	61.9	63.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-9	T-19	T-79	G-102	G-107
Wet Soil + Tare Mass (g)	31.97	29.22	26.93	32.02	25.04
Dry Soil + Tare Mass (g)	29.78	27.02	24.90	30.13	23.07
Tare Mass (g)	19.69	17.81	16.18	20.83	13.85
Moisture Content (%)	21.7	23.9	23.3	20.3	21.4
Trial No 2 / Tare No	T-10	T-67	T-17	T-63	T-6
Wet Soil + Tare Mass (g)	27.65	31.64	25.36	30.89	30.35
Dry Soil + Tare Mass (g)	25.48	29.19	23.36	28.91	28.41
Tare Mass (g)	15.49	18.93	14.71	19.34	19.17
Moisture Content (%)	21.7	23.9	23.1	20.7	21.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	107.59	105.27	104.99	110.01	115.84
Dry Soil Mass after Washing (g)	3.10	4.24	4.01	7.73	2.88
Test Status					
Liquid Limit	**63**	**75**	**73**	**62**	**63**
Plastic Limit	**22**	**24**	**23**	**21**	**21**
Plasticity Index	**41**	**51**	**50**	**41**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.9	4.0	3.8	7.0	2.5
Fines (%)	97.1	96.0	96.2	93.0	97.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5774F
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/6/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1068	1069			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	48+03	48+01			
Offset	CL	PS-96			
Lift No	4	3			
Latitude (°N)	29.886645	29.886904			
Longitude (°W)	90.140959	90.140904			
Elevation (ft)	11.5	4.2			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25			
Tare No	T-90	T-92			
Wet Soil + Tare Mass (g)	28.67	34.47			
Dry Soil + Tare Mass (g)	25.09	30.90			
Tare Mass (g)	19.69	25.44			
Moisture Content (%)	66.3	65.4			
Trial No 2 / Blow Count	25	25			
Tare No	T-91	T-94			
Wet Soil + Tare Mass (g)	29.31	26.39			
Dry Soil + Tare Mass (g)	25.49	22.12			
Tare Mass (g)	19.72	15.58			
Moisture Content (%)	66.2	65.3			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-52	T-60			
Wet Soil + Tare Mass (g)	29.67	31.92			
Dry Soil + Tare Mass (g)	27.99	29.56			
Tare Mass (g)	20.30	18.52			
Moisture Content (%)	21.8	21.4			
Trial No 2 / Tare No	T-106	T-69			
Wet Soil + Tare Mass (g)	26.49	32.11			
Dry Soil + Tare Mass (g)	24.59	29.90			
Tare Mass (g)	15.87	19.60			
Moisture Content (%)	21.8	21.5			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	118.24	103.68			
Dry Soil Mass after Washing (g)	2.67	0.73			
Test Status					
Liquid Limit	**66**	**65**			
Plastic Limit	**22**	**21**			
Plasticity Index	**44**	**44**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	2.3	0.7			
Fines (%)	97.7	99.3			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5780A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1070	1071	1072	1073	1074
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	111+10	111+35	111+26	118+98	118+89
Offset	FS-74	FS-2	FS-25	PS-5	FS-7
Lift No	5	7	6	5	5
Latitude (°N)	29.874167	29.874052	29.874089	29.872409	29.872376
Longitude (°W)	90.138501	90.138299	90.138362	90.137417	90.137450
Elevation (ft)	5.0	10.6	7.5	9.8	8.3
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23	24	26
Tare No	T-5	T-68	T-31	G-111	T-92
Wet Soil + Tare Mass (g)	29.45	35.94	29.80	27.98	35.62
Dry Soil + Tare Mass (g)	24.72	30.01	25.70	23.15	30.88
Tare Mass (g)	19.26	20.75	19.52	16.01	25.47
Moisture Content (%)	86.6	64.3	65.7	67.3	88.0
Trial No 2 / Blow Count	26	25	24	25	27
Tare No	G-129	T-421	T-35	T-67	T-7
Wet Soil + Tare Mass (g)	29.53	32.65	28.49	32.22	34.59
Dry Soil + Tare Mass (g)	24.13	27.59	23.33	26.88	27.67
Tare Mass (g)	17.86	19.73	15.54	18.93	19.73
Moisture Content (%)	86.5	64.4	65.9	67.2	88.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-11	T-70	T-33	T-80	T-41
Wet Soil + Tare Mass (g)	22.91	29.57	24.97	25.41	28.54
Dry Soil + Tare Mass (g)	21.25	27.61	23.18	23.80	26.58
Tare Mass (g)	15.15	18.65	14.90	16.59	19.37
Moisture Content (%)	27.2	21.9	21.6	22.3	27.2
Trial No 2 / Tare No	T-30	T-40	T-29	T-97	T-17
Wet Soil + Tare Mass (g)	28.17	29.11	27.54	23.95	24.61
Dry Soil + Tare Mass (g)	26.47	27.35	25.87	22.38	22.50
Tare Mass (g)	20.24	19.30	18.18	15.38	14.72
Moisture Content (%)	27.3	21.9	21.7	22.4	27.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.72	91.39	104.93	107.38	92.07
Dry Soil Mass after Washing (g)	4.16	2.76	4.28	2.78	2.78
Test Status					
Liquid Limit	**87**	**64**	**66**	**67**	**88**
Plastic Limit	**27**	**22**	**22**	**22**	**27**
Plasticity Index	**60**	**42**	**44**	**45**	**61**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.2	3.0	4.1	2.6	3.0
Fines (%)	95.8	97.0	95.9	97.4	97.0
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5780B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1075	1076	1077		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	119+08	119+28	119+32		
Offset	FS-60	PS-2	FS-4		
Lift No	5	6	6		
Latitude (°N)	29.872226	29.872396	29.872374		
Longitude (°W)	90.137403	90.137323	90.137316		
Elevation (ft)	5.4	11.7	11.7		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	N0	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	26	27		
Tare No	T-79	T-39	T-26		
Wet Soil + Tare Mass (g)	31.99	35.53	30.12		
Dry Soil + Tare Mass (g)	25.57	29.60	25.60		
Tare Mass (g)	16.17	20.80	18.93		
Moisture Content (%)	67.6	67.7	68.4		
Trial No 2 / Blow Count	23	27	26		
Tare No	T-71	T-28	T-19		
Wet Soil + Tare Mass (g)	33.64	36.27	29.66		
Dry Soil + Tare Mass (g)	28.01	28.82	24.85		
Tare Mass (g)	19.78	17.73	17.79		
Moisture Content (%)	67.7	67.8	68.5		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-104	T-34	T-32		
Wet Soil + Tare Mass (g)	25.60	25.28	27.80		
Dry Soil + Tare Mass (g)	24.08	23.78	25.87		
Tare Mass (g)	17.74	17.49	17.64		
Moisture Content (%)	24.0	23.8	23.5		
Trial No 2 / Tare No	T-60	G-102	T-91		
Wet Soil + Tare Mass (g)	27.98	27.88	27.07		
Dry Soil + Tare Mass (g)	26.11	26.53	25.67		
Tare Mass (g)	18.46	20.82	19.75		
Moisture Content (%)	24.4	23.6	23.6		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.71	77.01	109.69		
Dry Soil Mass after Washing (g)	3.55	3.92	5.17		
Test Status					
Liquid Limit	**68**	**68**	**68**		
Plastic Limit	**24**	**24**	**24**		
Plasticity Index	**44**	**44**	**44**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	5.1	4.7		
Fines (%)	96.4	94.9	95.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5790A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/10/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1078	1079	1080	1081	1082
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	51+27	37+59	37+79	42+53	42+50
Offset	PS-124	CL	FS-72	CL	FS-74
Lift No	3	9	4	9	4
Latitude (°N)	29.886800	29.887218	29.887021	29.886932	29.886751
Longitude (°W)	90.139877	90.144189	90.144171	90.142664	90.142715
Elevation (ft)	2.6	12.5	5.8	12.6	5.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	25	28	27
Tare No	G-104	T-68	T-40	T-86	T-19
Wet Soil + Tare Mass (g)	30.20	34.69	30.44	26.03	29.33
Dry Soil + Tare Mass (g)	23.61	28.21	25.42	21.99	24.32
Tare Mass (g)	16.10	20.74	19.29	16.68	17.78
Moisture Content (%)	88.2	87.6	81.9	77.1	77.3
Trial No 2 / Blow Count	26	26	25	28	28
Tare No	G-102	T-30	T-31	T79	T-32
Wet Soil + Tare Mass (g)	37.26	34.42	34.04	27.99	30.98
Dry Soil + Tare Mass (g)	29.58	27.82	27.50	22.89	25.21
Tare Mass (g)	20.82	20.24	19.51	16.18	17.64
Moisture Content (%)	88.1	87.5	81.9	77.1	77.3
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-63	T-34	T-21	T-421	T-33
Wet Soil + Tare Mass (g)	27.47	26.49	28.35	29.37	27.35
Dry Soil + Tare Mass (g)	25.81	24.66	25.71	27.69	25.10
Tare Mass (g)	19.34	17.49	15.50	19.74	14.91
Moisture Content (%)	25.7	25.5	25.9	21.1	22.1
Trial No 2 / Tare No	T-97	T-82	G-116	T-70	T-35
Wet Soil + Tare Mass (g)	22.33	27.76	28.27	27.98	26.55
Dry Soil + Tare Mass (g)	20.91	25.83	25.83	26.35	24.55
Tare Mass (g)	15.39	18.24	16.39	18.66	15.55
Moisture Content (%)	25.7	25.4	25.8	21.2	22.2
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	64.07	105.36	107.50	77.17	116.87
Dry Soil Mass after Washing (g)	1.58	3.91	3.93	3.65	4.02
Test Status					
Liquid Limit	**88**	**88**	**82**	**77**	**77**
Plastic Limit	**26**	**25**	**26**	**21**	**22**
Plasticity Index	**62**	**63**	**56**	**56**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.5	3.7	3.7	4.7	3.4
Fines (%)	97.5	96.3	96.3	95.3	96.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5790B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/10/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1083	1084			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	118+92	118+93			
Offset	PS-4	FS-8			
Lift No	7	7			
Latitude (°N)	29.872409	29.872374			
Longitude (°W)	90.137435	90.137436			
Elevation (ft)	11.5	10.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	24			
Tare No	T-30	T-32			
Wet Soil + Tare Mass (g)	36.29	32.50			
Dry Soil + Tare Mass (g)	29.98	26.73			
Tare Mass (g)	20.24	17.65			
Moisture Content (%)	64.8	63.2			
Trial No 2 / Blow Count	25	25			
Tare No	T-43	T-92			
Wet Soil + Tare Mass (g)	31.43	42.36			
Dry Soil + Tare Mass (g)	26.35	35.81			
Tare Mass (g)	18.51	25.47			
Moisture Content (%)	64.8	63.3			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-126	T-74			
Wet Soil + Tare Mass (g)	25.99	26.92			
Dry Soil + Tare Mass (g)	24.31	25.60			
Tare Mass (g)	16.72	19.77			
Moisture Content (%)	22.1	22.6			
Trial No 2 / Tare No	T-51	T-1022			
Wet Soil + Tare Mass (g)	28.00	26.63			
Dry Soil + Tare Mass (g)	26.10	25.36			
Tare Mass (g)	17.50	19.76			
Moisture Content (%)	22.1	22.7			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	103.76	99.06			
Dry Soil Mass after Washing (g)	6.69	4.37			
Test Status					
Liquid Limit	**65**	**63**			
Plastic Limit	**22**	**23**			
Plasticity Index	**43**	**40**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	6.4	4.4			
Fines (%)	93.6	95.6			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5795
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/11/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1086	1087	1088	1089	1090
Retest of Test ID	5739C+982				
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	18+52	47+61	47+58	52+56	52+56
Offset	FS-57	CL	FS-71	CL	FS-76
Lift No	3	9	5	9	4
Latitude (°N)	29.888133	29.886687	29.886478	29.886429	29.886220
Longitude (°W)	90.150116	90.141085	90.141150	90.139559	90.139517
Elevation (ft)	6.0	12.5	5.8	12.6	5.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	27	25
Tare No	T-15	T-65	G-126	T-74	G-102
Wet Soil + Tare Mass (g)	23.95	31.17	30.66	32.85	35.79
Dry Soil + Tare Mass (g)	20.99	25.15	24.21	26.81	29.69
Tare Mass (g)	15.77	17.59	16.69	19.76	20.81
Moisture Content (%)	56.7	79.6	86.2	86.5	68.7
Trial No 2 / Blow Count	24	26	27	28	25
Tare No	T-33	T-9	T-92	T1021	T-63
Wet Soil + Tare Mass (g)	33.03	32.34	43.09	33.47	34.49
Dry Soil + Tare Mass (g)	26.46	26.74	34.97	27.14	28.31
Tare Mass (g)	14.92	19.66	25.45	19.71	19.33
Moisture Content (%)	56.7	79.5	86.1	86.4	68.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-51	T-97	T-107	T-72	T-7
Wet Soil + Tare Mass (g)	24.24	26.77	26.58	37.12	33.39
Dry Soil + Tare Mass (g)	23.04	24.67	24.10	34.41	31.10
Tare Mass (g)	17.47	15.39	13.77	23.31	19.73
Moisture Content (%)	21.5	22.6	24.0	24.4	20.1
Trial No 2 / Tare No	T-70	T-65	T-3	T-104	T-79
Wet Soil + Tare Mass (g)	28.29	31.66	32.02	32.56	30.34
Dry Soil + Tare Mass (g)	26.58	29.36	29.23	29.66	27.98
Tare Mass (g)	18.67	19.16	17.63	17.74	16.18
Moisture Content (%)	21.6	22.5	24.1	24.3	20.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	99.00	95.06	67.88	109.10	109.69
Dry Soil Mass after Washing (g)	2.95	3.31	3.08	4.83	4.22
Test Status					
Liquid Limit	**57**	**80**	**86**	**86**	**69**
Plastic Limit	**22**	**23**	**24**	**24**	**20**
Plasticity Index	**35**	**57**	**62**	**62**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.0	3.5	4.5	4.4	3.8
Fines (%)	97.0	96.5	95.5	95.6	96.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5803
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/13/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1091	1092			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	48+51	52+49			
Offset	PS-127	PS-118			
Lift No	5	4			
Latitude (°N)	29.886961	29.886743			
Longitude (°W)	90.140727	90.139653			
Elevation (ft)	3.5	3.5			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	24			
Tare No	T-38	G-129			
Wet Soil + Tare Mass (g)	32.94	33.35			
Dry Soil + Tare Mass (g)	26.50	27.18			
Tare Mass (g)	16.78	17.83			
Moisture Content (%)	66.6	65.7			
Trial No 2 / Blow Count	25	23			
Tare No	T-19	T47			
Wet Soil + Tare Mass (g)	38.83	35.39			
Dry Soil + Tare Mass (g)	30.42	27.98			
Tare Mass (g)	17.79	16.82			
Moisture Content (%)	66.6	65.7			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-37	T-44			
Wet Soil + Tare Mass (g)	26.89	22.97			
Dry Soil + Tare Mass (g)	25.50	21.76			
Tare Mass (g)	17.56	14.94			
Moisture Content (%)	17.5	17.7			
Trial No 2 / Tare No	T-84	T-16			
Wet Soil + Tare Mass (g)	33.32	28.47			
Dry Soil + Tare Mass (g)	31.64	27.18			
Tare Mass (g)	22.05	19.96			
Moisture Content (%)	17.5	17.9			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	110.36	106.85			
Dry Soil Mass after Washing (g)	0.55	3.14			
Test Status					
Liquid Limit	**67**	**66**			
Plastic Limit	**18**	**18**			
Plasticity Index	**49**	**48**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	0.4	2.9			
Fines (%)	99.6	97.1			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5815
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/13/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1093	1094	1095	1096	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	
Station	2+06	7+00	12+00	17+00	
Offset	CL	CL	CL	CL	
Lift No	11	11	11	11	
Latitude (°N)	29.889190	29.888932	29.888639	29.888373	
Longitude (°W)	90.155168	90.153642	90.152068	90.150559	
Elevation (ft)	13.6	13.6	13.6	13.6	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	N0	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	27	21	24	
Tare No	T-86	T-19	T-68	T-40	
Wet Soil + Tare Mass (g)	26.03	29.33	34.69	30.44	
Dry Soil + Tare Mass (g)	21.75	24.85	29.21	25.99	
Tare Mass (g)	16.68	17.78	20.74	19.29	
Moisture Content (%)	85.6	64.0	63.3	66.1	
Trial No 2 / Blow Count	28	28	21	25	
Tare No	T-79	T-32	T-30	T-31	
Wet Soil + Tare Mass (g)	27.99	30.98	34.42	34.04	
Dry Soil + Tare Mass (g)	22.58	25.81	28.87	28.26	
Tare Mass (g)	16.18	17.64	20.24	19.51	
Moisture Content (%)	85.7	64.2	63.0	66.1	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-421	T-33	T-34	T-21	
Wet Soil + Tare Mass (g)	29.37	27.35	26.49	28.34	
Dry Soil + Tare Mass (g)	27.45	25.23	24.87	26.14	
Tare Mass (g)	19.74	14.91	17.49	15.50	
Moisture Content (%)	24.9	20.5	22.0	20.7	
Trial No 2 / Tare No	T-70	T-35	T-82	G-116	
Wet Soil + Tare Mass (g)	27.98	26.55	27.76	28.15	
Dry Soil + Tare Mass (g)	26.09	24.66	26.06	26.13	
Tare Mass (g)	18.66	15.55	18.24	16.39	
Moisture Content (%)	25.4	20.7	21.7	20.7	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	128.03	106.08	113.45	107.23	
Dry Soil Mass after Washing (g)	1.26	2.43	1.56	2.12	
Test Status					
Liquid Limit	**86**	**64**	**63**	**66**	
Plastic Limit	**25**	**21**	**22**	**21**	
Plasticity Index	**61**	**43**	**41**	**45**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	1.0	2.3	1.4	2.0	
Fines (%)	99.0	97.7	98.6	98.0	
Group Symbol	CH	CH	CH	CH	
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5823A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/18/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS

Test No	1098	1099	1100	1101	1102
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	22+20	32+17	37+26	41+54	27+20
Offset	CL	CL	CL	CL	CL
Lift No	11	11	10	10	10
Latitude (°N)	29.888083	29.887525	29.887242	29.887009	29.887795
Longitude (°W)	90.148939	90.145862	90.144286	90.142966	90.147379
Elevation (ft)	13.5	13.6	13.6	13.1	13.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	27	28	25	25
Tare No	G-118	T-30	T-35	G-115	T-60
Wet Soil + Tare Mass (g)	32.51	34.21	29.12	31.92	30.14
Dry Soil + Tare Mass (g)	25.26	28.52	23.39	25.73	25.08
Tare Mass (g)	15.58	20.22	15.51	17.32	18.44
Moisture Content (%)	74.5	69.2	73.7	73.6	76.2
Trial No 2 / Blow Count	24	26	27	25	26
Tare No	T-11	T-421	T-80	T-69	T-31
Wet Soil + Tare Mass (g)	30.86	32.45	30.02	32.98	30.36
Dry Soil + Tare Mass (g)	24.12	27.26	24.34	27.32	25.68
Tare Mass (g)	15.13	19.71	16.56	19.55	19.50
Moisture Content (%)	74.6	69.1	73.7	72.8	76.1
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-94	T-97	G-128	T-46	T-77
Wet Soil + Tare Mass (g)	25.14	24.77	27.26	27.72	28.76
Dry Soil + Tare Mass (g)	23.63	23.26	25.64	26.43	27.59
Tare Mass (g)	15.62	15.35	17.85	19.86	21.69
Moisture Content (%)	18.9	19.1	20.8	19.6	19.8
Trial No 2 / Tare No	T-71	T-10	T-62	T-12	T-27
Wet Soil + Tare Mass (g)	28.91	26.03	28.10	26.94	28.57
Dry Soil + Tare Mass (g)	27.47	24.33	26.32	25.74	27.14
Tare Mass (g)	19.87	15.46	17.78	19.59	19.94
Moisture Content (%)	18.9	19.2	20.8	19.5	19.9
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.33	109.88	123.43	89.38	121.20
Dry Soil Mass after Washing (g)	5.87	6.21	8.36	6.08	3.96
Test Status					
Liquid Limit	**75**	**69**	**74**	**73**	**76**
Plastic Limit	**19**	**19**	**21**	**20**	**20**
Plasticity Index	**56**	**50**	**53**	**53**	**56**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.3	5.7	6.8	6.8	3.3
Fines (%)	94.7	94.3	93.2	93.2	96.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5823B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/18/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1103	1104			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	45+90	50+90			
Offset	CL	CL			
Lift No	10	10			
Latitude (°N)	29.886770	29.886485			
Longitude (°W)	90.141617	90.140074			
Elevation (ft)	13.1	13.1			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	28			
Tare No	T-73	G-102			
Wet Soil + Tare Mass (g)	30.10	41.76			
Dry Soil + Tare Mass (g)	24.55	33.32			
Tare Mass (g)	15.82	20.82			
Moisture Content (%)	63.3	68.5			
Trial No 2 / Blow Count	25	28			
Tare No	G-112	G-110			
Wet Soil + Tare Mass (g)	30.88	33.35			
Dry Soil + Tare Mass (g)	25.78	26.24			
Tare Mass (g)	17.72	15.68			
Moisture Content (%)	63.3	68.3			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-114	G-119			
Wet Soil + Tare Mass (g)	24.40	26.91			
Dry Soil + Tare Mass (g)	22.93	25.20			
Tare Mass (g)	16.14	16.44			
Moisture Content (%)	21.6	19.5			
Trial No 2 / Tare No	T-50	T-13			
Wet Soil + Tare Mass (g)	27.21	27.17			
Dry Soil + Tare Mass (g)	25.76	25.68			
Tare Mass (g)	19.10	18.03			
Moisture Content (%)	21.8	19.5			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	146.44	118.63			
Dry Soil Mass after Washing (g)	5.68	5.11			
Test Status					
Liquid Limit	**63**	**68**			
Plastic Limit	**22**	**19**			
Plasticity Index	**41**	**49**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.9	4.3			
Fines (%)	96.1	95.7			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5855
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/24/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1108	1109	1110		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.		
Station	42+17	47+15	52+00		
Offset	CL	CL	CL		
Lift No	11	11	11		
Latitude (°N)	29.886960	29.886692	29.886427		
Longitude (°W)	90.142771	90.141252	90.139751		
Elevation (ft)	13.6	13.6	13.6		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	N0	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	27	25		
Tare No	T-86	T-19	T-40		
Wet Soil + Tare Mass (g)	26.03	29.33	30.44		
Dry Soil + Tare Mass (g)	21.97	24.30	25.54		
Tare Mass (g)	16.68	17.78	19.29		
Moisture Content (%)	77.8	77.9	78.4		
Trial No 2 / Blow Count	28	28	25		
Tare No	T-79	T-32	T-31		
Wet Soil + Tare Mass (g)	27.99	30.98	34.04		
Dry Soil + Tare Mass (g)	22.86	25.18	27.66		
Tare Mass (g)	16.18	17.64	19.51		
Moisture Content (%)	77.9	78.0	78.3		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-421	T-33	T-21		
Wet Soil + Tare Mass (g)	29.37	27.35	28.34		
Dry Soil + Tare Mass (g)	27.42	24.96	26.05		
Tare Mass (g)	19.74	14.91	15.50		
Moisture Content (%)	25.4	23.8	21.7		
Trial No 2 / Tare No	T-70	T-35	G-116		
Wet Soil + Tare Mass (g)	27.98	26.55	28.15		
Dry Soil + Tare Mass (g)	26.09	24.45	26.04		
Tare Mass (g)	18.66	15.55	16.39		
Moisture Content (%)	25.4	23.6	21.9		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	112.04	108.52	105.40		
Dry Soil Mass after Washing (g)	5.39	3.50	4.86		
Test Status					
Liquid Limit	**78**	**78**	**78**		
Plastic Limit	**25**	**24**	**22**		
Plasticity Index	**53**	**54**	**56**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	4.8	3.2	4.6		
Fines (%)	95.2	96.8	95.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5870
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/25/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1111				
Retest of Test ID					
Material Source	Borrow Pit				
Feature	Levee Embankment				
Visual Description	G. BR. CL.				
Station	57+44				
Offset	FS-100				
Lift No	3				
Latitude (°N)	29.886249				
Longitude (°W)	90.138157				
Elevation (ft)	4.6				
Estimated Retained No 40 (%)	0.0				
Sample Air Dried	N0				
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28				
Tare No	T-30				
Wet Soil + Tare Mass (g)	36.29				
Dry Soil + Tare Mass (g)	28.89				
Tare Mass (g)	20.24				
Moisture Content (%)	86.7				
Trial No 2 / Blow Count	28				
Tare No	T-43				
Wet Soil + Tare Mass (g)	31.43				
Dry Soil + Tare Mass (g)	25.47				
Tare Mass (g)	18.51				
Moisture Content (%)	86.8				
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-126				
Wet Soil + Tare Mass (g)	25.99				
Dry Soil + Tare Mass (g)	24.10				
Tare Mass (g)	16.72				
Moisture Content (%)	25.6				
Trial No 2 / Tare No	T-51				
Wet Soil + Tare Mass (g)	28.10				
Dry Soil + Tare Mass (g)	25.93				
Tare Mass (g)	17.50				
Moisture Content (%)	25.7				
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	100.88				
Dry Soil Mass after Washing (g)	3.70				
Test Status					
Liquid Limit	**87**				
Plastic Limit	**26**				
Plasticity Index	**61**				
Gravel Content (%)	0.0				
Sand Content (%)	3.7				
Fines (%)	96.3				
Group Symbol	CH				
Group Name	FAT CLAY				
Test Result	**Pass**				
Remarks					
Version	**MVNQS06-100903**				

US Army Corps of Engineers

Unified Soil Classification System - ASTM D 2487 (Method B)

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5874
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/26/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1112	1113			
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit			
Feature	Levee Embankment	Levee Embankment			
Visual Description	G. BR. CL.	G. BR. CL.			
Station	64+48	58+88			
Offset	PS-92	PS-72			
Lift No	3	3			
Latitude (°N)	29.885887	29.886637			
Longitude (°W)	90.136109	90.137601			
Elevation (ft)	4.5	4.9			
Estimated Retained No 40 (%)	0.0	0.0			
Sample Air Dried	N0	NO			
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	25			
Tare No	T-91	G-118			
Wet Soil + Tare Mass (g)	35.52	29.77			
Dry Soil + Tare Mass (g)	29.33	23.71			
Tare Mass (g)	19.75	15.55			
Moisture Content (%)	64.9	74.3			
Trial No 2 / Blow Count	26	26			
Tare No	G-109	T-14			
Wet Soil + Tare Mass (g)	29.54	30.95			
Dry Soil + Tare Mass (g)	24.15	24.26			
Tare Mass (g)	15.80	15.24			
Moisture Content (%)	64.9	74.5			
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-125	T-82			
Wet Soil + Tare Mass (g)	34.82	29.93			
Dry Soil + Tare Mass (g)	32.26	27.55			
Tare Mass (g)	20.60	18.29			
Moisture Content (%)	22.0	25.7			
Trial No 2 / Tare No	T-63	G-116			
Wet Soil + Tare Mass (g)	30.12	28.77			
Dry Soil + Tare Mass (g)	28.17	26.23			
Tare Mass (g)	19.34	16.39			
Moisture Content (%)	22.1	25.8			
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	119.89	105.07			
Dry Soil Mass after Washing (g)	4.45	4.69			
Test Status					
Liquid Limit	**65**	**74**			
Plastic Limit	**22**	**26**			
Plasticity Index	**43**	**48**			
Gravel Content (%)	0.0	0.0			
Sand Content (%)	3.7	4.5			
Fines (%)	96.3	95.5			
Group Symbol	CH	CH			
Group Name	FAT CLAY	FAT CLAY			
Test Result	**Pass**	**Pass**			
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5896 C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1124	1125	1126	1127	1128
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	179+82	179+80	180+01	179+72	180+02
Offset	CL	CL	PS-186	CL	PS-181
Lift No	3	4	1	5	2
Latitude (°N)	29.870955	29.870963	29.871436	29.870963	29.871443
Longitude (°W)	90.118303	90.118307	90.118104	90.118333	90.118099
Elevation (ft)	12.5	13.1	0.6	13.6	11.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	27	26	26	26
Tare No	T-101	T-22	T-89	T-65	T-70
Wet Soil + Tare Mass (g)	30.31	30.91	32.64	25.69	29.34
Dry Soil + Tare Mass (g)	25.08	25.93	27.45	22.00	24.53
Tare Mass (g)	17.11	18.97	19.56	17.59	18.65
Moisture Content (%)	65.9	72.2	66.1	84.1	82.2
Trial No 2 / Blow Count	26	26	26	25	25
Tare No	T-13	T-23	T-39	T-68	G-111
Wet Soil + Tare Mass (g)	35.59	30.07	37.70	33.90	30.71
Dry Soil + Tare Mass (g)	28.63	23.44	30.97	27.87	24.07
Tare Mass (g)	18.02	14.23	20.77	20.71	15.99
Moisture Content (%)	65.9	72.3	66.3	84.2	82.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-119	T-93	G-107	T-106	T-66
Wet Soil + Tare Mass (g)	23.98	31.19	24.34	27.52	25.77
Dry Soil + Tare Mass (g)	22.70	28.82	22.40	24.99	23.64
Tare Mass (g)	16.43	19.33	13.78	15.83	15.23
Moisture Content (%)	20.4	25.0	22.5	27.6	25.3
Trial No 2 / Tare No	T-86	T-64	T-42	G-103	T-15
Wet Soil + Tare Mass (g)	23.28	28.32	27.13	29.62	26.35
Dry Soil + Tare Mass (g)	22.16	26.06	25.20	27.46	24.22
Tare Mass (g)	16.64	17.04	16.56	19.61	15.72
Moisture Content (%)	20.3	25.1	22.3	27.5	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	138.04	112.64	149.47	143.36	145.20
Dry Soil Mass after Washing (g)	6.14	3.82	7.76	3.93	4.04
Test Status					
Liquid Limit	**66**	**72**	**66**	**84**	**82**
Plastic Limit	**20**	**25**	**22**	**28**	**25**
Plasticity Index	**46**	**47**	**44**	**56**	**57**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.4	3.4	5.2	2.7	2.8
Fines (%)	95.6	96.6	94.8	97.3	97.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5896 D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1129	1130	1131	1132	1133
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	180+01	180+05	166+88	165+07	166+89
Offset	PS-188	PS-181	CL	PS-31	CL
Lift No	3	4	1	1	2
Latitude (°N)	29.871442	29.871429	29.871327	29.871454	29.871339
Longitude (°W)	90.118102	90.118092	90.122355	90.122917	90.122351
Elevation (ft)	2.6	3.1	10.5	7.0	11.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	27	26	25	25
Tare No	T-24	T-40	G-145	G-44	G-133
Wet Soil + Tare Mass (g)	23.58	29.27	27.95	28.20	25.88
Dry Soil + Tare Mass (g)	19.41	24.78	22.24	24.42	20.43
Tare Mass (g)	13.77	19.27	15.03	19.22	13.61
Moisture Content (%)	73.2	82.3	79.6	72.7	79.9
Trial No 2 / Blow Count	23	27	26	25	25
Tare No	T-85	T-29	G-28	G-65	G-62
Wet Soil + Tare Mass (g)	30.83	31.41	24.04	33.43	27.79
Dry Soil + Tare Mass (g)	25.15	25.44	20.57	27.45	22.69
Tare Mass (g)	17.47	18.11	16.18	19.24	16.29
Moisture Content (%)	73.2	82.2	79.4	72.8	79.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-28	T-5	G-18	G-26	G-32
Wet Soil + Tare Mass (g)	28.70	29.82	33.94	26.68	31.06
Dry Soil + Tare Mass (g)	26.50	27.58	31.05	24.66	28.85
Tare Mass (g)	17.81	19.23	19.94	16.98	20.49
Moisture Content (%)	25.3	26.8	26.0	26.3	26.4
Trial No 2 / Tare No	T-95	G-125	G-85	G-51	G40
Wet Soil + Tare Mass (g)	29.81	29.23	27.40	24.80	31.59
Dry Soil + Tare Mass (g)	27.92	27.40	25.08	22.82	28.77
Tare Mass (g)	20.43	20.58	16.16	15.25	18.05
Moisture Content (%)	25.2	26.8	26.0	26.2	26.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	111.05	96.76	114.71	107.00	118.37
Dry Soil Mass after Washing (g)	3.92	9.19	5.80	4.61	3.39
Test Status					
Liquid Limit	**73**	**82**	**79**	**73**	**80**
Plastic Limit	**25**	**27**	**26**	**26**	**26**
Plasticity Index	**48**	**55**	**53**	**47**	**54**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.5	9.5	5.1	4.3	2.9
Fines (%)	96.5	90.5	94.9	95.7	97.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5896 E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	10/31/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1134	1135	1136	1137	1138
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	165+02	165+07	166+89	166+91	166+88
Offset	PS-27	PS-27	CL	CL	CL
Lift No	2	3	3	4	5
Latitude (°N)	29.871442	29.871443	29.871315	29.871322	29.871336
Longitude (°W)	90.122933	90.122919	90.122350	90.122346	90.122355
Elevation (ft)	8.1	8.9	12.5	13.1	13.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	26	27	25
Tare No	G-143	G-95	G-47	G-139	G-108
Wet Soil + Tare Mass (g)	30.72	26.69	29.85	27.02	31.82
Dry Soil + Tare Mass (g)	24.44	21.21	25.36	22.70	26.88
Tare Mass (g)	16.95	14.92	20.23	16.70	19.34
Moisture Content (%)	84.2	87.5	87.9	72.7	65.5
Trial No 2 / Blow Count	26	25	27	28	24
Tare No	G-35	G136	G-79	T-18	G-126
Wet Soil + Tare Mass (g)	28.50	32.90	27.79	28.71	29.20
Dry Soil + Tare Mass (g)	22.85	27.10	23.00	23.95	24.23
Tare Mass (g)	16.10	20.49	17.50	17.29	16.69
Moisture Content (%)	84.1	87.7	87.9	72.5	65.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-20	G-58	G-15	G-127	T-105
Wet Soil + Tare Mass (g)	28.43	28.64	25.73	26.60	23.73
Dry Soil + Tare Mass (g)	26.17	26.84	24.48	25.28	22.35
Tare Mass (g)	17.48	20.01	18.69	18.98	15.63
Moisture Content (%)	26.0	26.4	21.6	21.0	20.5
Trial No 2 / Tare No	G-70	G-60	G-122	T-91	T-74
Wet Soil + Tare Mass (g)	29.22	24.51	23.74	27.98	28.55
Dry Soil + Tare Mass (g)	27.05	22.78	22.40	26.55	27.06
Tare Mass (g)	18.71	16.24	16.16	19.73	19.75
Moisture Content (%)	26.0	26.5	21.5	21.0	20.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	85.97	99.94	107.74	113.00	107.48
Dry Soil Mass after Washing (g)	2.91	2.51	2.86	3.55	5.43
Test Status					
Liquid Limit	**84**	**88**	**88**	**73**	**66**
Plastic Limit	**26**	**26**	**22**	**21**	**20**
Plasticity Index	**58**	**62**	**66**	**52**	**46**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	2.5	2.7	3.1	5.1
Fines (%)	96.6	97.5	97.3	96.9	94.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5910 A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1139	1140	1141	1142	1143
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	136+08	136+09	136+06	136+06	136+08
Offset	CL	CL	CL	CL	CL
Lift No	1	2	3	4	5
Latitude (°N)	29.871992	29.871993	29.871991	29.872004	29.871989
Longitude (°W)	90.132042	90.132040	90.132049	90.132049	90.132043
Elevation (ft)	10.0	11.0	12.0	12.6	13.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	27	27	27
Tare No	T-84	T-44	T-11	T-94	G-136
Wet Soil + Tare Mass (g)	32.96	23.46	24.04	29.33	34.52
Dry Soil + Tare Mass (g)	28.62	20.10	20.52	23.88	28.74
Tare Mass (g)	22.07	14.92	15.13	15.59	20.47
Moisture Content (%)	66.6	65.2	65.9	66.4	70.5
Trial No 2 / Blow Count	26	26	27	28	26
Tare No	T-37	T-47	G-118	T82	G-95
Wet Soil + Tare Mass (g)	31.87	29.02	28.10	28.63	25.39
Dry Soil + Tare Mass (g)	26.18	24.22	23.16	24.52	21.04
Tare Mass (g)	17.57	16.82	15.58	18.24	14.88
Moisture Content (%)	66.4	65.2	65.8	66.3	71.0
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-19	T-63	T-27	T-60	G-15
Wet Soil + Tare Mass (g)	25.91	25.63	26.73	30.89	27.13
Dry Soil + Tare Mass (g)	24.27	24.31	25.33	28.78	25.64
Tare Mass (g)	17.79	19.32	19.93	18.47	18.69
Moisture Content (%)	25.3	26.5	25.9	20.5	21.4
Trial No 2 / Tare No	G-129	T-21	T-31	T-61	G-20
Wet Soil + Tare Mass (g)	24.22	22.90	27.55	26.24	25.40
Dry Soil + Tare Mass (g)	22.93	21.34	25.90	24.46	23.99
Tare Mass (g)	17.81	15.46	19.51	15.71	17.47
Moisture Content (%)	25.2	26.5	25.8	20.3	21.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	142.06	136.01	165.74	160.70	149.29
Dry Soil Mass after Washing (g)	4.79	4.59	5.48	5.92	5.69
Test Status					
Liquid Limit	**66**	**65**	**66**	**66**	**71**
Plastic Limit	**25**	**26**	**26**	**20**	**22**
Plasticity Index	**41**	**39**	**40**	**46**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	3.4	3.3	3.7	3.8
Fines (%)	96.6	96.6	96.7	963.0	96.2
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5910 B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1144	1145	1146	1147	1148
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	136+02	141+46	141+49	141+50	120+36
Offset	CL	PS-115	PS-114	PS-117	PS-62
Lift No	6	1	2	3	1
Latitude (°N)	29.871721	29.872185	29.872181	29.872191	29.872535
Longitude (°W)	90.132065	90.130320	90.130311	90.130308	90.136967
Elevation (ft)	13.6	3.1	4.1	5.1	3.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	23	28	27	23	28
Tare No	T-64	G-40	T-5	G-143	T-40
Wet Soil + Tare Mass (g)	31.80	32.67	39.84	35.52	36.27
Dry Soil + Tare Mass (g)	25.58	25.94	30.91	28.31	29.40
Tare Mass (g)	17.03	18.04	19.27	16.96	19.28
Moisture Content (%)	72.0	86.4	77.4	62.9	68.8
Trial No 2 / Blow Count	23	29	28	23	28
Tare No	T-5	G-104	T64	G-35	T-67
Wet Soil + Tare Mass (g)	33.97	26.85	34.97	35.51	42.64
Dry Soil + Tare Mass (g)	27.73	21.90	27.19	27.97	33.05
Tare Mass (g)	19.21	16.06	17.04	16.09	18.91
Moisture Content (%)	72.5	86.3	77.7	62.8	68.8
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-13	G-103	T13	G-15	G-136
Wet Soil + Tare Mass (g)	25.80	28.16	26.98	26.38	29.62
Dry Soil + Tare Mass (g)	24.28	26.23	25.38	25.18	28.11
Tare Mass (g)	18.01	19.59	18.02	18.70	20.50
Moisture Content (%)	24.2	29.1	21.7	18.5	19.8
Trial No 2 / Tare No	G-60	G-51	G-60	G-20	G-95
Wet Soil + Tare Mass (g)	27.84	23.78	25.01	26.94	22.80
Dry Soil + Tare Mass (g)	25.58	21.86	23.45	25.45	21.51
Tare Mass (g)	16.22	15.25	16.23	17.47	14.91
Moisture Content (%)	24.1	29.1	21.6	18.7	19.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	137.32	130.00	177.78	187.50	154.69
Dry Soil Mass after Washing (g)	4.22	4.55	3.78	6.29	3.76
Test Status					
Liquid Limit	**72**	**86**	**78**	**63**	**69**
Plastic Limit	**24**	**29**	**22**	**19**	**20**
Plasticity Index	**48**	**57**	**56**	**44**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.1	3.5	2.1	3.4	2.4
Fines (%)	96.9	96.5	97.9	96.6	97.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5910 C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1149	1150	1151	1152	1153
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	120+41	120+39	120+43	120+37	121+47
Offset	PS-64	PS-68	PS-62	PS-91	PS-18
Lift No	2	3	4	1	1
Latitude (°N)	29.872537	29.872549	29.872531	29.872612	29.872387
Longitude (°W)	90.136952	90.136957	90.136946	90.136959	90.136631
Elevation (ft)	4.6	5.6	6.6	5.8	7.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	N0	N0	N0	N0
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	25	23	23	23
Tare No	G-29	G-87	G-48	G-59	G-34
Wet Soil + Tare Mass (g)	44.15	42.47	32.38	33.56	34.54
Dry Soil + Tare Mass (g)	33.96	33.20	24.79	26.79	26.32
Tare Mass (g)	20.92	18.25	14.91	15.98	15.10
Moisture Content (%)	79.2	62.0	76.1	62.0	72.5
Trial No 2 / Blow Count	28	25	23	23	23
Tare No	G57	G4	G-91	G-97	G-83
Wet Soil + Tare Mass (g)	39.58	40.22	35.74	37.09	37.41
Dry Soil + Tare Mass (g)	30.62	32.21	28.04	30.34	28.53
Tare Mass (g)	19.20	19.41	18.02	19.57	16.44
Moisture Content (%)	79.5	62.6	76.1	62.0	72.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T29	G-145	T-39	G-70	T-106
Wet Soil + Tare Mass (g)	25.04	23.84	28.13	27.14	24.21
Dry Soil + Tare Mass (g)	23.84	22.35	26.52	25.87	22.57
Tare Mass (g)	18.14	15.01	20.77	18.69	15.82
Moisture Content (%)	21.1	20.3	28.0	17.7	24.3
Trial No 2 / Tare No	T74	T-89	G-79	G-58	G-85
Wet Soil + Tare Mass (g)	26.42	27.26	25.12	28.22	24.48
Dry Soil + Tare Mass (g)	25.26	25.97	23.46	26.97	22.85
Tare Mass (g)	19.73	19.59	17.51	20.00	16.14
Moisture Content (%)	21.0	20.2	27.9	17.9	24.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	143.30	186.37	116.60	118.21	105.34
Dry Soil Mass after Washing (g)	3.28	8.20	3.86	6.47	2.62
Test Status					
Liquid Limit	**79**	**62**	**76**	**62**	**73**
Plastic Limit	**21**	**20**	**28**	**18**	**24**
Plasticity Index	**58**	**42**	**48**	**44**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.3	4.4	3.3	5.5	2.5
Fines (%)	97.7	95.6	96.7	94.5	97.5
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5910 D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1154	1155	1156	1157	1158
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	121+46	121+84	121+44	66+89	66+88
Offset	PS-15	PS-15	PS-12	CL	CL
Lift No	2	3	4	1	2
Latitude (°N)	29.872379	29.872379	29.872373	29.885417	29.885419
Longitude (°W)	90.136634	90.136628	90.136641	90.135498	90.135503
Elevation (ft)	8.8	9.8	11.3	11.6	12.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	24	23	20	21	23
Tare No	G-93	G-120	G-98	G-49	G-88
Wet Soil + Tare Mass (g)	35.04	39.68	35.79	36.03	36.09
Dry Soil + Tare Mass (g)	28.48	30.10	28.36	28.02	28.19
Tare Mass (g)	18.42	17.08	17.06	16.75	17.75
Moisture Content (%)	64.9	72.8	64.0	69.6	74.9
Trial No 2 / Blow Count	24	23	20	21	23
Tare No	G-25	G-36	G-140	G-94	G-6
Wet Soil + Tare Mass (g)	36.75	33.02	35.49	34.75	39.20
Dry Soil + Tare Mass (g)	29.26	25.45	28.91	27.79	29.52
Tare Mass (g)	17.81	15.13	18.95	18.03	16.67
Moisture Content (%)	65.1	72.6	64.3	69.8	74.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-45	T-93	T-91	T-23	G-18
Wet Soil + Tare Mass (g)	28.75	27.89	30.58	22.01	28.70
Dry Soil + Tare Mass (g)	27.31	26.24	28.76	20.70	27.02
Tare Mass (g)	19.16	19.33	19.70	14.21	19.93
Moisture Content (%)	17.7	23.9	20.1	20.2	23.7
Trial No 2 / Tare No	G-44	G-26	G-127	G-126	G-65
Wet Soil + Tare Mass (g)	27.24	26.86	30.76	25.24	28.08
Dry Soil + Tare Mass (g)	26.07	24.97	28.75	23.82	26.38
Tare Mass (g)	19.21	17.00	18.95	16.66	19.22
Moisture Content (%)	17.1	23.7	20.5	19.8	23.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	104.69	108.76	114.40	134.47	122.43
Dry Soil Mass after Washing (g)	5.57	3.16	5.39	4.46	3.55
Test Status					
Liquid Limit	**65**	**73**	**64**	**70**	**75**
Plastic Limit	**17**	**24**	**20**	**20**	**24**
Plasticity Index	**48**	**49**	**44**	**50**	**51**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.3	2.9	4.7	3.3	2.9
Fines (%)	94.7	97.1	95.3	96.7	97.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5910 E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1159	1160	1161	1162	1163
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.	G. BR. CL.
Station	66+87	66+93	70+02	69+99	70+02
Offset	CL	CL	CL	CL	CL
Lift No	3	4	1	2	3
Latitude (°N)	29.885421	29.568441	29.884980	29.884989	29.884978
Longitude (°W)	90.135504	90.135485	90.134727	90.134733	90.134732
Elevation (ft)	13.1	13.6	11.5	12.5	13.1
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	23	29	25	25
Tare No	G-73	G-134	G-14	G-80	G-31
Wet Soil + Tare Mass (g)	39.42	34.67	29.58	39.55	37.15
Dry Soil + Tare Mass (g)	30.45	27.66	23.71	30.99	31.51
Tare Mass (g)	17.54	18.83	15.75	17.03	22.22
Moisture Content (%)	70.4	78.6	75.1	61.3	60.7
Trial No 2 / Blow Count	28	23	29	25	24
Tare No	G-56	G-5	G-54	G-92	G-11
Wet Soil + Tare Mass (g)	38.49	32.80	34.83	36.00	33.34
Dry Soil + Tare Mass (g)	30.73	25.56	27.93	28.86	26.99
Tare Mass (g)	19.58	16.41	18.58	17.17	16.67
Moisture Content (%)	70.6	78.3	75.1	61.1	61.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-105	T-70	G-107	T-65	T-42
Wet Soil + Tare Mass (g)	24.95	29.33	20.80	28.69	23.56
Dry Soil + Tare Mass (g)	23.45	27.21	19.60	26.92	22.42
Tare Mass (g)	15.58	18.62	13.77	17.58	16.54
Moisture Content (%)	19.1	24.7	20.6	19.0	19.4
Trial No 2 / Tare No	G-108	G-111	G-32	T-66	G-47
Wet Soil + Tare Mass (g)	26.59	25.75	27.79	27.36	27.68
Dry Soil + Tare Mass (g)	25.40	23.83	26.53	25.42	26.46
Tare Mass (g)	19.32	15.97	20.49	15.24	20.22
Moisture Content (%)	19.6	24.4	20.9	19.1	19.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	134.16	103.14	99.14	145.99	138.56
Dry Soil Mass after Washing (g)	3.81	8.84	2.90	12.91	11.27
Test Status					
Liquid Limit	**70**	**78**	**75**	**61**	**61**
Plastic Limit	**19**	**25**	**21**	**19**	**19**
Plasticity Index	**51**	**53**	**54**	**42**	**42**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	2.8	8.6	2.9	8.8	8.1
Fines (%)	97.2	91.4	97.1	91.2	91.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5931 A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/1/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1169	1170	1171	1172	1173
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.BR.CL	G.BR.CL	G.BR.CL	G.BR.CL	G.BR.CL
Station	108+13	108+16	104+48	104+47	104+47
Offset	PS-62	PS-59	PS-148	PS-150	PS-152
Lift No	2	3	2	3	4
Latitude (°N)	29.874864	29.874794	29.875779	29.875780	29.875779
Longitude (°W)	90.137850	90.137864	90.137303	90.137295	90.137292
Elevation (ft)	4.0	5.1	0.7	1.6	1.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	28	27	24	23
Tare No	G-48	T-89	G-4	T-29	G-29
Wet Soil + Tare Mass (g)	23.78	26.88	26.57	31.77	35.13
Dry Soil + Tare Mass (g)	19.91	23.78	21.48	26.15	28.77
Tare Mass (g)	14.92	19.58	14.42	18.14	20.94
Moisture Content (%)	78.3	74.8	72.8	69.8	80.4
Trial No 2 / Blow Count	26	28	27	24	23
Tare No	G-91	G-145	G-87	T-74	G-57
Wet Soil + Tare Mass (g)	31.03	26.01	29.72	27.62	29.54
Dry Soil + Tare Mass (g)	25.33	21.34	24.94	24.36	24.92
Tare Mass (g)	18.02	15.02	18.27	19.73	19.23
Moisture Content (%)	78.3	74.9	72.3	70.1	80.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-27	T-95	T-21	T-24	T-86
Wet Soil + Tare Mass (g)	27.55	28.10	23.26	20.60	23.44
Dry Soil + Tare Mass (g)	26.06	26.68	21.94	19.52	22.29
Tare Mass (g)	19.94	20.73	15.45	13.77	16.66
Moisture Content (%)	24.3	23.9	20.3	18.8	20.4
Trial No 2 / Tare No	T-31	T-85	T-63	T-22	G-119
Wet Soil + Tare Mass (g)	26.99	25.84	27.48	27.20	24.70
Dry Soil + Tare Mass (g)	25.50	24.32	26.12	25.90	23.28
Tare Mass (g)	19.49	17.89	19.31	18.96	16.42
Moisture Content (%)	24.8	23.6	20.0	18.7	20.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.71	107.51	74.96	109.40	135.37
Dry Soil Mass after Washing (g)	3.76	5.95	3.74	5.55	11.18
Test Status					
Liquid Limit	**78**	**75**	**73**	**70**	**80**
Plastic Limit	**25**	**24**	**20**	**19**	**21**
Plasticity Index	**53**	**51**	**53**	**51**	**59**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.2	5.5	5.0	5.1	8.3
Fines (%)	95.8	94.5	95.0	94.9	91.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5931 B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1174	1175	1176	1177	1178
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.BR.CL	G.BR.CL	G.BR.CL	G.BR.CL	G.BR.CL
Station	97+00	96+97	97+00	40+34	4-+50
Offset	CL	CL	CL	PS-39	PS-41
Lift No	3	4	5	1	1
Latitude (°N)	29.877866	29.877876	29.877868	29.886967	29.886952
Longitude (°W)	90.137147	90.137153	90.137150	90.143362	90.143312
Elevation (ft)	12.4	12.9	13.5	6.4	2.9
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	22	24	23	24	27
Tare No	G-36	T-40	G-15	G-143	G-60
Wet Soil + Tare Mass (g)	30.25	37.78	26.57	29.58	34.54
Dry Soil + Tare Mass (g)	26.02	29.57	23.39	24.29	26.53
Tare Mass (g)	20.50	19.28	18.70	17.03	16.23
Moisture Content (%)	75.5	79.4	67.1	72.5	78.5
Trial No 2 / Blow Count	21	25	23	24	27
Tare No	G-95	T-67	G-20	G-35	T-13
Wet Soil + Tare Mass (g)	31.39	29.46	31.91	30.81	33.14
Dry Soil + Tare Mass (g)	24.21	24.80	26.07	24.63	26.52
Tare Mass (g)	14.91	18.90	17.49	16.12	18.01
Moisture Content (%)	75.6	79.0	67.4	72.3	78.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T-93	G-82	G-25	T-106	G-34
Wet Soil + Tare Mass (g)	28.25	25.91	24.41	22.21	22.88
Dry Soil + Tare Mass (g)	26.65	24.65	23.34	21.11	21.60
Tare Mass (g)	19.33	18.76	17.87	15.85	15.13
Moisture Content (%)	21.9	21.4	19.6	20.9	19.8
Trial No 2 / Tare No	G-46	G-124	G-93	G-85	G-83
Wet Soil + Tare Mass (g)	27.92	28.35	25.31	23.76	23.38
Dry Soil + Tare Mass (g)	26.29	27.11	24.20	22.48	22.26
Tare Mass (g)	18.79	21.37	18.45	16.17	16.51
Moisture Content (%)	21.7	21.6	19.3	20.3	19.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	132.79	143.86	133.47	91.47	113.44
Dry Soil Mass after Washing (g)	17.35	5.38	6.40	4.29	6.03
Test Status					
Liquid Limit	**76**	**79**	**67**	**72**	**79**
Plastic Limit	**22**	**21**	**19**	**21**	**20**
Plasticity Index	**54**	**58**	**48**	**51**	**59**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	13.0	3.7	4.8	2.5	5.3
Fines (%)	87.0	96.3	95.2	97.5	94.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5931 C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/2/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1179	1180	1181		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.BR.CL	G.BR.CL	G.BR.CL		
Station	40+50	40+49	40+58		
Offset	PS-42	PS-39	FS-40		
Lift No	2	3	4		
Latitude (°N)	29.886950	29.886958	29.886949		
Longitude (°W)	90.143314	90.143315	90.143288		
Elevation (ft)	3.9	5.0	6.3		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	N0	N0	N0		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	28	26	27		
Tare No	T-86	T-95	T-31		
Wet Soil + Tare Mass (g)	34.03	44.25	34.55		
Dry Soil + Tare Mass (g)	26.83	34.73	28.10		
Tare Mass (g)	16.65	20.42	19.49		
Moisture Content (%)	71.7	66.8	75.6		
Trial No 2 / Blow Count	29	26	27		
Tare No	T-22	T-21	T-63		
Wet Soil + Tare Mass (g)	32.65	31.38	31.25		
Dry Soil + Tare Mass (g)	27.02	25.03	26.15		
Tare Mass (g)	18.96	15.46	19.32		
Moisture Content (%)	71.1	66.7	75.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	G-70	G-97	T-39		
Wet Soil + Tare Mass (g)	25.20	27.17	28.66		
Dry Soil + Tare Mass (g)	24.17	25.94	27.22		
Tare Mass (g)	18.69	19.56	20.77		
Moisture Content (%)	18.8	19.3	22.3		
Trial No 2 / Tare No	G-58	G-59	G-79		
Wet Soil + Tare Mass (g)	27.25	22.78	24.88		
Dry Soil + Tare Mass (g)	26.10	21.68	23.52		
Tare Mass (g)	20.00	15.97	17.50		
Moisture Content (%)	18.9	19.3	22.6		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	78.13	178.66	160.04		
Dry Soil Mass after Washing (g)	14.78	10.44	5.78		
Test Status					
Liquid Limit	**71**	**67**	**75**		
Plastic Limit	**19**	**19**	**22**		
Plasticity Index	**52**	**48**	**53**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	18.9	5.8	3.6		
Fines (%)	81.1	94.2	96.4		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5932 A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1182	1183	1184	1185	1186
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	37+24	27+32	37+24	37+20	39+90
Offset	PS-141	PS-142	PS-138	PS-141	FS-121
Lift No	1	2	3	4	1
Latitude (°N)	29.887624	29.887630	29.887617	29.887630	29.886771
Longitude (°W)	90.144204	90.144208	90.144206	90.144215	90.143549
Elevation (ft)	0.3	1.3	2.3	3.1	1.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	27	25	25	25
Tare No	A-37	RR	B-1	B-1	TM-2
Wet Soil + Tare Mass (g)	45.32	31.25	34.07	36.04	38.19
Dry Soil + Tare Mass (g)	38.60	25.02	24.98	29.21	28.69
Tare Mass (g)	28.28	16.29	14.06	19.06	17.47
Moisture Content (%)	65.7	72.0	83.2	67.3	84.7
Trial No 2 / Blow Count	25	27	27	25	27
Tare No	A-44	A-54	H-21	HA-1	TT
Wet Soil + Tare Mass (g)	45.06	41.47	32.72	35.83	29.51
Dry Soil + Tare Mass (g)	37.82	35.09	25.25	27.90	24.28
Tare Mass (g)	26.77	26.15	16.17	16.16	18.06
Moisture Content (%)	65.5	72.0	83.0	67.5	84.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-28	I-43	I-48	I-20	I-39
Wet Soil + Tare Mass (g)	14.60	13.88	13.97	13.37	15.19
Dry Soil + Tare Mass (g)	13.20	12.74	12.73	12.21	13.68
Tare Mass (g)	7.04	6.96	7.05	7.12	7.01
Moisture Content (%)	22.7	19.7	21.8	22.8	22.6
Trial No 2 / Tare No	I-06	I-39	I-37	I-48	I-43
Wet Soil + Tare Mass (g)	13.54	13.50	13.52	13.60	13.79
Dry Soil + Tare Mass (g)	12.37	12.40	12.36	12.40	12.44
Tare Mass (g)	7.02	7.04	6.97	7.06	6.42
Moisture Content (%)	21.9	20.5	21.5	22.5	22.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	96.49	104.69	69.46	126.56	112.76
Dry Soil Mass after Washing (g)	5.44	4.38	4.10	7.85	6.14
Test Status					
Liquid Limit	**66**	**72**	**83**	**67**	**85**
Plastic Limit	**22**	**20**	**22**	**23**	**23**
Plasticity Index	**44**	**52**	**61**	**44**	**62**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	5.6	4.2	5.9	6.2	5.4
Fines (%)	94.4	95.8	94.1	93.8	94.6
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5932 B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1187	1188	1189	1190	1191
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL.
Station	39+88	39+86	32+24	32+27	32+24
Offset	FS-119	FS-116	FS-111	FS-108	FS-112
Lift No	2	3	1	2	3
Latitude (°N)	29.886776	29.886786	29.887224	29.887231	29.887221
Longitude (°W)	90.143554	90.143560	90.145910	90.145900	90.145909
Elevation (ft)	2.5	13.8	1.4	2.5	3.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27	25	26	25
Tare No	MT-1	D-38	HA-1	A62	O-18
Wet Soil + Tare Mass (g)	41.39	29.75	31.15	43.14	29.86
Dry Soil + Tare Mass (g)	35.02	22.57	25.26	36.47	22.74
Tare Mass (g)	26.10	12.38	16.20	27.25	12.52
Moisture Content (%)	71.4	71.1	65.0	72.7	69.7
Trial No 2 / Blow Count	27	26	26	27	27
Tare No	A-8	O-10	B-1	A-14	O-46
Wet Soil + Tare Mass (g)	39.60	28.79	35.37	44.63	28.80
Dry Soil + Tare Mass (g)	33.04	22.15	28.13	36.92	21.98
Tare Mass (g)	23.79	12.75	17.08	26.23	12.07
Moisture Content (%)	71.6	71.0	65.8	72.8	69.5
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-37	I-10	I-20	I-20	I-30
Wet Soil + Tare Mass (g)	13.43	15.36	13.20	14.10	15.41
Dry Soil + Tare Mass (g)	12.18	13.78	11.99	12.89	13.98
Tare Mass (g)	6.96	7.06	7.18	7.12	7.02
Moisture Content (%)	23.9	23.5	25.2	21.0	20.5
Trial No 2 / Tare No	I-28	I-17	I-28	I37	I-26
Wet Soil + Tare Mass (g)	13.87	15.55	14.00	14.14	15.46
Dry Soil + Tare Mass (g)	12.55	13.94	12.58	12.78	14.05
Tare Mass (g)	7.04	7.06	7.05	6.48	7.10
Moisture Content (%)	24.0	23.4	25.7	21.6	20.3
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	116.75	119.47	121.83	140.36	106.08
Dry Soil Mass after Washing (g)	5.55	9.37	8.28	6.43	6.26
Test Status					
Liquid Limit	**71**	**71**	**65**	**73**	**70**
Plastic Limit	**24**	**23**	**25**	**21**	**20**
Plasticity Index	**47**	**48**	**40**	**52**	**50**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.8	7.8	6.8	4.6	5.9
Fines (%)	95.2	92.2	93.2	95.4	94.1
Group Symbol	CH	CH	CH	CH	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5932 C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/3/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1192	1193	1194		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL		
Station	32+26	29.53	29+49		
Offset	FS-116	FS-17	FS-17		
Lift No	4	1	2		
Latitude (°N)	29.887220	29.887628	29.887631		
Longitude (°W)	90.145909	90.146688	90.146699		
Elevation (ft)	4.3	6.8	7.7		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	N0	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	24		
Tare No	O-32	TT	X-54		
Wet Soil + Tare Mass (g)	29.81	34.76	40.69		
Dry Soil + Tare Mass (g)	22.57	27.64	33.11		
Tare Mass (g)	11.99	18.12	22.59		
Moisture Content (%)	68.4	75.1	71.7		
Trial No 2 / Blow Count	25	26	25		
Tare No	O-15	TM-2	X-51		
Wet Soil + Tare Mass (g)	29.31	32.49	41.27		
Dry Soil + Tare Mass (g)	22.34	26.05	34.91		
Tare Mass (g)	12.20	17.50	26.05		
Moisture Content (%)	68.7	75.7	71.8		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-29	I-11	I39		
Wet Soil + Tare Mass (g)	15.49	13.62	13.79		
Dry Soil + Tare Mass (g)	14.08	12.33	12.53		
Tare Mass (g)	7.12	7.05	7.04		
Moisture Content (%)	20.3	24.4	23.0		
Trial No 2 / Tare No	I-33	I-37	I-43		
Wet Soil + Tare Mass (g)	15.40	13.62	13.77		
Dry Soil + Tare Mass (g)	14.00	12.30	12.48		
Tare Mass (g)	7.12	6.96	7.00		
Moisture Content (%)	20.3	24.7	23.5		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	89.37	123.28	142.43		
Dry Soil Mass after Washing (g)	5.14	5.61	6.69		
Test Status					
Liquid Limit	**69**	**75**	**72**		
Plastic Limit	**20**	**25**	**23**		
Plasticity Index	**49**	**50**	**49**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.8	4.6	4.7		
Fines (%)	94.2	95.4	95.3		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 A
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1195	1196	1197	1198	1199
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.BR.CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	162+69	162+49	154+50	162+71	162+46
Offset	CL	CL	FS-15	CL	CL
Lift No	1	1	1	2	2
Latitude (°N)	29.871419	29.871422	29.871549	29.871417	29.871406
Longitude (°W)	90.123673	90.123736	90.126254	90.123668	90.123748
Elevation (ft)	10.1	9.7	7.6	11.6	10.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	25	25	25
Tare No	PP	A-8	D-22	0-04	A-1
Wet Soil + Tare Mass (g)	40.77	41.88	30.45	32.45	42.31
Dry Soil + Tare Mass (g)	34.36	34.25	23.29	24.41	34.87
Tare Mass (g)	25.88	23.82	12.72	12.79	25.39
Moisture Content (%)	75.6	73.2	67.7	69.2	78.5
Trial No 2 / Blow Count	26	26	25	25	26
Tare No	X-55	MT-1	D-17	O-34	X-52
Wet Soil + Tare Mass (g)	33.10	48.15	29.37	31.70	40.55
Dry Soil + Tare Mass (g)	24.26	38.86	22.70	23.87	33.48
Tare Mass (g)	12.49	26.09	12.79	12.58	24.48
Moisture Content (%)	75.5	73.1	67.3	69.4	78.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-48	I-28	I-12	I-15	I-19
Wet Soil + Tare Mass (g)	13.22	13.54	15.53	15.31	14.24
Dry Soil + Tare Mass (g)	11.96	12.45	14.16	13.89	12.90
Tare Mass (g)	7.06	7.21	7.15	7.05	7.27
Moisture Content (%)	25.7	20.8	19.5	20.8	23.8
Trial No 2 / Tare No	I-06	I-23	I-34	I-24	I-35
Wet Soil + Tare Mass (g)	13.79	14.02	15.38	15.32	13.97
Dry Soil + Tare Mass (g)	12.41	12.83	14.04	13.90	12.66
Tare Mass (g)	7.02	7.13	7.12	7.09	7.08
Moisture Content (%)	25.6	20.9	19.4	20.9	23.5
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	98.70	105.69	90.29	137.79	131.22
Dry Soil Mass after Washing (g)	3.90	6.74	5.42	6.24	14.71
Test Status					
Liquid Limit	**76**	**73**	**68**	**69**	**79**
Plastic Limit	**26**	**21**	**19**	**21**	**24**
Plasticity Index	**50**	**52**	**49**	**48**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.0	6.4	1.1	4.5	11.2
Fines (%)	96.0	93.1	98.9	95.5	88.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 B
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1200	1201	1202	1203	1204
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.BR.CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	154+54	162+71	162+51	154+51	162+52
Offset	FS-14	CL	CL	FS-17	CL
Lift No	2	3	3	3	4
Latitude (°N)	29.871550	29.871530	29.871421	29.871543	29.871427
Longitude (°W)	90.126242	90.123665	90.123729	90.126249	90.123727
Elevation (ft)	8.5	12.6	11.6	9.3	12.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	27	25	24	24
Tare No	O-43	A-37	A-7	A-8	PP
Wet Soil + Tare Mass (g)	32.59	42.80	40.83	40.09	42.00
Dry Soil + Tare Mass (g)	24.85	37.06	34.96	34.33	35.88
Tare Mass (g)	12.87	28.40	25.98	24.86	25.87
Moisture Content (%)	64.6	66.9	65.4	60.5	60.8
Trial No 2 / Blow Count	26	27	27	25	27
Tare No	0-01	A-44	5.24	MT-1	5.5X
Wet Soil + Tare Mass (g)	31.81	38.07	42.64	47.06	44.66
Dry Soil + Tare Mass (g)	24.11	33.60	35.90	39.67	36.97
Tare Mass (g)	12.04	26.75	25.43	27.35	24.17
Moisture Content (%)	64.1	65.9	65.0	60.0	60.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-32	I-06	I-37	I-06	I-19
Wet Soil + Tare Mass (g)	15.61	13.29	13.63	13.43	13.34
Dry Soil + Tare Mass (g)	14.42	12.20	12.57	12.41	12.32
Tare Mass (g)	7.15	7.02	6.97	7.05	7.26
Moisture Content (%)	16.4	21.0	18.9	19.0	20.2
Trial No 2 / Tare No	I-27	I-28	I-11	I-23	I-35
Wet Soil + Tare Mass (g)	15.74	13.01	13.43	15.26	14.59
Dry Soil + Tare Mass (g)	14.53	11.05	11.85	13.95	13.32
Tare Mass (g)	7.06	2.05	3.05	7.13	7.08
Moisture Content (%)	16.2	21.8	18.0	19.2	20.4
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	131.76	126.59	137.53	168.45	146.39
Dry Soil Mass after Washing (g)	11.35	11.69	8.23	11.85	8.89
Test Status					
Liquid Limit	**64**	**66**	**65**	**60**	**61**
Plastic Limit	**16**	**21**	**18**	**19**	**20**
Plasticity Index	**48**	**45**	**47**	**41**	**41**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	8.6	9.2	6.0	7.0	6.1
Fines (%)	91.4	90.8	94.0	93.0	93.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 C
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1205	1206	1207	1208	1209
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	162+75	154+47	162+71	162+42	154+50
Offset	CL	FS-14	CL	CL	FS-11
Lift No	4	4	5	5	5
Latitude (°N)	29.871419	29.871552	29.871425	29.871433	29.871547
Longitude (°W)	90.123654	90.126263	90.123665	90.123756	90.126251
Elevation (ft)	13.0	9.9	13.6	13.0	10.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	26	26
Tare No	AB	PP	A7	O-42	O-20
Wet Soil + Tare Mass (g)	41.21	43.99	41.31	30.14	32.74
Dry Soil + Tare Mass (g)	34.15	37.28	35.10	24.85	24.53
Tare Mass (g)	22.84	25.87	25.46	16.90	12.40
Moisture Content (%)	62.4	58.8	64.7	66.9	68.0
Trial No 2 / Blow Count	27	27	27	27	27
Tare No	55X	MT-1	52.1	0.09	0.06
Wet Soil + Tare Mass (g)	40.50	44.16	40.49	30.03	31.46
Dry Soil + Tare Mass (g)	34.24	37.52	34.32	23.02	23.75
Tare Mass (g)	24.18	26.13	24.59	12.38	12.45
Moisture Content (%)	62.8	58.8	64.0	66.5	68.9
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-35	I-06	I-19	I-13	I-31
Wet Soil + Tare Mass (g)	13.78	13.50	14.00	15.50	15.34
Dry Soil + Tare Mass (g)	12.69	12.49	12.95	14.10	14.02
Tare Mass (g)	7.08	7.03	7.25	6.99	7.09
Moisture Content (%)	19.4	18.5	18.4	19.7	19.0
Trial No 2 / Tare No	I-23	I-11	I-37	I-38	I-47
Wet Soil + Tare Mass (g)	13.36	13.47	13.44	15.54	15.32
Dry Soil + Tare Mass (g)	12.33	12.55	12.39	14.13	13.98
Tare Mass (g)	7.12	7.61	6.84	7.04	7.13
Moisture Content (%)	19.8	18.6	18.9	19.9	19.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	148.06	155.37	125.25	208.10	129.98
Dry Soil Mass after Washing (g)	6.30	10.69	5.64	6.19	8.10
Test Status					
Liquid Limit	**63**	**59**	**64**	**67**	**68**
Plastic Limit	**20**	**19**	**19**	**20**	**19**
Plasticity Index	**43**	**40**	**45**	**47**	**49**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.3	6.9	4.5	3.0	6.2
Fines (%)	95.7	93.1	95.5	97.0	93.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 D
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1210	1211	1212	1213	1214
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	162+44	154+51	29+49	27+25	27+46
Offset	CL	FS-14	FS-17	FS-80	FS-79
Lift No	6	6	1	1	1
Latitude (°N)	29.871413	29.871552	29.887628	29.887587	29.887577
Longitude (°W)	90.123751	90.126251	90.146698	90.147431	90.147370
Elevation (ft)	13.6	11.0	8.2	2.5	3.5
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	26	26	25	25	23
Tare No	0.23	A.51	O.27	0.3	0.41
Wet Soil + Tare Mass (g)	32.05	47.34	30.74	22.59	30.05
Dry Soil + Tare Mass (g)	24.19	40.06	23.49	17.54	22.24
Tare Mass (g)	12.29	28.93	12.87	11.34	12.87
Moisture Content (%)	66.4	65.7	68.3	81.5	82.5
Trial No 2 / Blow Count	27	26	27	25	23
Tare No	0.12	A.16	0.07	0.19	0.11
Wet Soil + Tare Mass (g)	30.40	43.33	30.78	32.53	32.55
Dry Soil + Tare Mass (g)	23.10	36.52	23.52	23.64	23.40
Tare Mass (g)	12.04	26.14	12.79	12.65	12.45
Moisture Content (%)	66.6	65.9	68.3	80.9	82.7
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-18	I-11	I-16	I-42	I-14
Wet Soil + Tare Mass (g)	15.31	13.12	15.30	14.21	14.16
Dry Soil + Tare Mass (g)	14.03	12.05	14.00	12.88	12.62
Tare Mass (g)	7.14	7.06	7.08	7.11	7.05
Moisture Content (%)	18.6	21.4	18.8	23.1	27.6
Trial No 2 / Tare No	i-03	I-48	I-04	I-25	I-05
Wet Soil + Tare Mass (g)	15.40	13.37	15.37	15.35	14.69
Dry Soil + Tare Mass (g)	14.09	12.27	14.04	13.80	12.98
Tare Mass (g)	7.07	7.06	7.05	7.09	7.01
Moisture Content (%)	18.7	21.1	19.0	23.1	28.6
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	119.95	127.36	134.59	142.54	130.40
Dry Soil Mass after Washing (g)	5.88	8.47	6.07	15.60	4.02
Test Status					
Liquid Limit	**66**	**66**	**68**	**81**	**83**
Plastic Limit	**19**	**21**	**19**	**23**	**28**
Plasticity Index	**47**	**45**	**49**	**58**	**55**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	4.9	6.7	4.5	10.9	3.1
Fines (%)	95.1	93.3	95.5	89.1	96.9
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 E
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1215	1216	1217	1218	1219
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	21+92	9+79	4+41	1+43	29+54
Offset	CL	FS-48	PS-34	FS-27	FS-15
Lift No	1	1	1	1	2
Latitude (°N)	29.888095	29.888640	29.889161	29.889159	29.887633
Longitude (°W)	90.149029	90.152807	90.154419	90.155380	90.146684
Elevation (ft)	9.0	3.7	4.6	5.8	9.2
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	25	27	26	26
Tare No	0.35	0.14	0.03	0.27	0.18
Wet Soil + Tare Mass (g)	28.91	32.43	29.31	31.02	30.70
Dry Soil + Tare Mass (g)	21.81	24.11	21.80	23.53	22.20
Tare Mass (g)	12.74	12.03	12.61	12.86	12.53
Moisture Content (%)	79.0	68.9	82.5	70.5	88.3
Trial No 2 / Blow Count	28	27	27	27	27
Tare No	O.33	O.48	0.17	0.09	0.32
Wet Soil + Tare Mass (g)	30.99	32.54	28.68	30.79	32.22
Dry Soil + Tare Mass (g)	23.09	24.41	21.34	23.24	22.80
Tare Mass (g)	12.90	12.41	12.29	12.38	12.02
Moisture Content (%)	78.6	68.4	81.9	70.2	88.2
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-40	I-36	I-41	I-47	I-03
Wet Soil + Tare Mass (g)	14.06	15.58	15.09	15.40	15.26
Dry Soil + Tare Mass (g)	12.68	14.11	13.49	13.98	13.64
Tare Mass (g)	7.03	7.03	7.01	7.12	7.06
Moisture Content (%)	24.4	20.8	24.7	20.7	24.6
Trial No 2 / Tare No	I-46	I-22	I-45	I-04	I-14
Wet Soil + Tare Mass (g)	14.98	15.62	14.35	15.30	15.16
Dry Soil + Tare Mass (g)	13.44	14.19	12.91	13.89	13.56
Tare Mass (g)	7.04	7.30	7.03	7.03	7.07
Moisture Content (%)	24.1	20.8	24.5	20.6	24.7
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	176.64	153.12	129.32	123.51	130.21
Dry Soil Mass after Washing (g)	6.93	10.91	4.58	5.57	6.81
Test Status					
Liquid Limit	**79**	**69**	**82**	**70**	**88**
Plastic Limit	**24**	**21**	**25**	**21**	**25**
Plasticity Index	**55**	**48**	**57**	**49**	**63**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.9	7.1	3.5	4.5	5.2
Fines (%)	96.1	92.9	96.5	95.5	94.8
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 F
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1220	1221	1222	1223	1224
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	G.BR.CL
Station	29+05	27+47	27+24	21+94	9+79
Offset	FS-17	FS-81	FS-79	CL	FS-50
Lift No	1	2	2	2	2
Latitude (°N)	29.887654	29.887570	29.887588	29.888099	29.888636
Longitude (°W)	90.146837	90.147364	90.147434	90.149022	90.152810
Elevation (ft)	10.5	4.3	3.5	10.6	3.6
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	N0	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	25	25
Tare No	0.11	0.46	0.34	0.13	0.48
Wet Soil + Tare Mass (g)	31.83	30.72	29.86	35.75	35.65
Dry Soil + Tare Mass (g)	23.11	22.54	22.27	26.07	25.82
Tare Mass (g)	12.46	12.09	12.61	12.35	12.49
Moisture Content (%)	81.9	78.3	78.9	70.6	73.7
Trial No 2 / Blow Count	27	27	27	25	26
Tare No	0.2	0.04	0.07	0.4	0.14
Wet Soil + Tare Mass (g)	31.91	30.64	28.67	36.29	36.38
Dry Soil + Tare Mass (g)	23.18	22.86	21.70	26.21	26.08
Tare Mass (g)	12.41	12.82	12.79	11.82	12.01
Moisture Content (%)	81.8	78.2	79.0	70.0	73.6
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-25	I-40	I-41	I-22	I-45
Wet Soil + Tare Mass (g)	15.39	15.44	15.50	15.15	15.53
Dry Soil + Tare Mass (g)	13.80	13.90	13.96	13.83	14.12
Tare Mass (g)	7.09	7.07	7.01	7.29	7.04
Moisture Content (%)	23.7	22.5	22.2	20.2	19.9
Trial No 2 / Tare No	I-18	I-36	I-16	I-36	I-41
Wet Soil + Tare Mass (g)	15.38	15.48	15.27	15.11	16.07
Dry Soil + Tare Mass (g)	13.80	13.91	13.77	13.74	14.56
Tare Mass (g)	7.14	7.05	7.07	7.03	7.00
Moisture Content (%)	23.7	22.9	22.4	20.4	20.0
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	123.54	104.65	115.35	131.05	132.21
Dry Soil Mass after Washing (g)	4.84	4.47	8.52	4.72	5.72
Test Status					
Liquid Limit	**82**	**78**	**79**	**70**	**74**
Plastic Limit	**24**	**23**	**22**	**20**	**20**
Plasticity Index	**58**	**55**	**57**	**50**	**54**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.9	4.3	7.4	3.6	4.3
Fines (%)	96.1	95.7	92.6	96.4	95.7
Group Symbol	CH	CH	CH	CH	CH
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	Fat Clay
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	5954 G
USACE Contract No	W912P8-09-D-0046-0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	11/7/2011
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	RODNEY FISHER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	1225	1226	1227	1228	
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	
Visual Description	G. BR. CL.	G. BR. CL.	G.BR.CL	G.BR.CL.	
Station	4+42	1+43	29+53	29+05	
Offset	PS-35	FS-26	FS-14	FS-11	
Lift No	2	2	3	2	
Latitude (°N)	29.889163	29.889164	29.887635	29.887671	
Longitude (°W)	90.154414	90.155379	90.146686	90.146832	
Elevation (ft)	5.9	7.5	10.5	12.0	
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	
Sample Air Dried	N0	NO	NO	NO	
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	25	26	26	
Tare No	0.41	0.43	0.48	0.23	
Wet Soil + Tare Mass (g)	32.32	30.39	31.25	30.56	
Dry Soil + Tare Mass (g)	24.10	22.86	23.24	22.78	
Tare Mass (g)	12.88	12.92	12.43	12.30	
Moisture Content (%)	73.3	75.8	74.5	74.6	
Trial No 2 / Blow Count	27	27	27	26	
Tare No	0.15	0.4	0.12	0.13	
Wet Soil + Tare Mass (g)	32.85	30.47	36.13	31.14	
Dry Soil + Tare Mass (g)	24.11	22.47	26.15	23.16	
Tare Mass (g)	12.18	11.85	12.66	12.44	
Moisture Content (%)	73.9	76.0	74.7	74.8	
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	I-13	I-27	I-32	I-34	
Wet Soil + Tare Mass (g)	15.17	15.31	15.30	15.32	
Dry Soil + Tare Mass (g)	13.74	13.88	13.83	13.75	
Tare Mass (g)	6.98	7.06	7.15	7.10	
Moisture Content (%)	21.2	21.0	22.0	23.6	
Trial No 2 / Tare No	I-42	I-15	I-38	I-31	
Wet Soil + Tare Mass (g)	15.51	15.26	15.25	15.32	
Dry Soil + Tare Mass (g)	14.02	13.83	13.78	13.76	
Tare Mass (g)	7.11	7.05	7.05	7.10	
Moisture Content (%)	21.6	21.1	21.8	23.4	
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	150.80	127.54	127.22	150.10	
Dry Soil Mass after Washing (g)	16.56	9.07	5.53	6.84	
Test Status					
Liquid Limit	**74**	**76**	**75**	**75**	
Plastic Limit	**21**	**21**	**22**	**24**	
Plasticity Index	**53**	**55**	**53**	**51**	
Gravel Content (%)	0.0	0.0	0.0	0.0	
Sand Content (%)	11.0	7.1	4.3	4.6	
Fines (%)	89.0	92.9	95.7	95.4	
Group Symbol	CH	CH	CH	CH	
Group Name	Fat Clay	Fat Clay	Fat Clay	Fat Clay	
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2970
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/20/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	Bryan Landers	**Reviewed By**	G. Lecoq	**Submitted By**	G. Lecoq

Test No	66	67	68	69	70
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit	Borrow Pit
Feature	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment	Levee Embankment
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay
Station	119+47	119+42	120+97	128+75	110+84
Offset	C/L +3.7'	P.S. -104	F.S. +20.5'	UNCOMPACTED FILL	P.S. -6'
Lift No	9	2	2		7
Latitude (°N)	29.940320	29.940615	29.940224		29.942158
Longitude (°W)	86.090660	86.090634	86.090195		86.091555
Elevation (ft)	13.5	3.7	5.6		9.8
Estimated Retained No 40 (%)	0.0	0.0	0.0	0.0	0.0
Sample Air Dried	NO	NO	NO	NO	NO
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	20	22	27	22	27
Tare No	T51	T34	T18	T41	ML04
Wet Soil + Tare Mass (g)	41.45	36.20	33.25	41.78	254.33
Dry Soil + Tare Mass (g)	31.85	28.51	26.93	34.53	245.81
Tare Mass (g)	17.51	17.48	17.31	19.36	233.10
Moisture Content (%)	65.2	68.6	66.3	47.1	67.7
Trial No 2 / Blow Count	20	23	25	24	26
Tare No	T24	T10	T33	T16	ML06
Wet Soil + Tare Mass (g)	34.22	33.77	31.09	39.58	280.06
Dry Soil + Tare Mass (g)	26.05	26.26	24.67	33.22	271.11
Tare Mass (g)	13.80	15.48	14.92	20.00	257.97
Moisture Content (%)	64.9	69.0	65.8	47.9	68.4
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T37	T14	T5	T9	ML103
Wet Soil + Tare Mass (g)	25.71	25.80	26.20	29.09	289.74
Dry Soil + Tare Mass (g)	24.23	23.85	24.91	27.43	286.86
Tare Mass (g)	17.60	15.26	19.25	19.70	275.31
Moisture Content (%)	22.3	22.7	22.8	21.5	24.9
Trial No 2 / Tare No	T35	T46	T19	ML102	ML03
Wet Soil + Tare Mass (g)	24.62	27.86	24.34	265.94	267.34
Dry Soil + Tare Mass (g)	23.15	26.38	23.13	264.00	264.21
Tare Mass (g)	16.59	19.89	17.78	255.07	251.76
Moisture Content (%)	22.4	22.8	22.6	21.7	25.1
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	367.45	378.17	364.94	368.86	394.20
Dry Soil Mass after Washing (g)	280.45	273.40	283.84	270.65	284.30
Test Status					
Liquid Limit	**65**	**69**	**66**	**47**	**68**
Plastic Limit	**22**	**23**	**23**	**22**	**25**
Plasticity Index	**43**	**46**	**43**	**25**	**43**
Gravel Content (%)	0.0	0.0	0.0	0.0	0.0
Sand Content (%)	3.4	4.3	4.3	5.1	4.7
Fines (%)	96.6	95.7	95.7	94.9	95.3
Group Symbol	CH	CH	CH	CL	CH
Group Name	FAT CLAY	FAT CLAY	FAT CLAY	LEAN CLAY	FAT CLAY
Test Result	**Pass**	**Pass**	**Pass**	**Pass**	**Pass**
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	2987
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/22/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	TREVOR MCCLAIN	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	76	77	78		
Retest of Test ID					
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	125+02	129+99	110+95		
Offset	F.S. +43.0'	F.S. +28'	C/L +4.5'		
Lift No	2	2	10		
Latitude (°N)	29.940029	29.939903	29.942135		
Longitude (°W)	86.088935	86.087373	86.091598		
Elevation (ft)	4.6	5.2	13.0		
Estimated Retained No 40 (%)					
Sample Air Dried					
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	27	29	28		
Tare No	T51	T24	T20		
Wet Soil + Tare Mass (g)	29.63	24.51	32.40		
Dry Soil + Tare Mass (g)	24.87	20.21	26.74		
Tare Mass (g)	17.50	13.81	17.85		
Moisture Content (%)	65.2	68.4	64.5		
Trial No 2 / Blow Count	26	28	28		
Tare No	T38	T13	T50		
Wet Soil + Tare Mass (g)	32.44	31.82	35.75		
Dry Soil + Tare Mass (g)	26.28	26.27	29.30		
Tare Mass (g)	16.79	18.03	19.14		
Moisture Content (%)	65.2	68.3	64.4		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T8	T15	T25		
Wet Soil + Tare Mass (g)	34.49	32.19	29.51		
Dry Soil + Tare Mass (g)	31.93	28.98	27.31		
Tare Mass (g)	20.21	15.75	16.54		
Moisture Content (%)	21.8	24.3	20.4		
Trial No 2 / Tare No	T26	T23	T12		
Wet Soil + Tare Mass (g)	31.24	27.36	32.54		
Dry Soil + Tare Mass (g)	29.04	24.80	30.37		
Tare Mass (g)	18.92	14.25	19.63		
Moisture Content (%)	21.7	24.3	20.2		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	390.78	363.86	391.23		
Dry Soil Mass after Washing (g)	278.97	262.30	284.00		
Test Status					
Liquid Limit	**65**	**68**	**64**		
Plastic Limit	**22**	**24**	**20**		
Plasticity Index	**43**	**44**	**44**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	5.3	4.5	4.3		
Fines (%)	94.7	95.5	95.7		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				

Unified Soil Classification System - ASTM D 2487 (Method B)

US Army Corps of Engineers

Laboratory	Tolunay-Wong Engineers, Inc.	**Lab Type**	QC	**Report No**	3002
USACE Contract No	W912P8-09-D-0046 0008	**Contractor**	Phylway, Inc.	**Revision**	
Project	WBV-14c.2 Phase 2, First Lift			**Sample Date**	9/23/2010
Min Plasticity Index	10	**Max Fines (%) Retained**	35.0		
Lab Tested By	CHANDLER	**Reviewed By**	B. LANDERS	**Submitted By**	B. LANDERS
Test No	84	85	86		
Retest of Test ID			80		
Material Source	Borrow Pit	Borrow Pit	Borrow Pit		
Feature	Levee Embankment	Levee Embankment	Levee Embankment		
Visual Description	G.-Br. Clay	G.-Br. Clay	G.-Br. Clay		
Station	110+94	110+93	107+05		
Offset	F.S. +89'	F.S. +4.6	F.S. +8.8'		
Lift No	3	12	1		
Latitude (°N)	29.942206	29.942142	29.943171		
Longitude (°W)	86.091851	86.091595	86.091263		
Elevation (ft)	4.9	14.0	5.0		
Estimated Retained No 40 (%)	0.0	0.0	0.0		
Sample Air Dried	NO	NO	NO		
Liquid Limit (ASTM D 4318 Method B)					
Trial No 1 / Blow Count	25	26	23		
Tare No	T18	T47	T31		
Wet Soil + Tare Mass (g)	36.60	39.19	48.33		
Dry Soil + Tare Mass (g)	29.21	30.55	35.30		
Tare Mass (g)	17.32	16.86	19.53		
Moisture Content (%)	62.2	63.4	81.8		
Trial No 2 / Blow Count	26	26	24		
Tare No	T45	T421	T46		
Wet Soil + Tare Mass (g)	46.57	46.53	44.18		
Dry Soil + Tare Mass (g)	36.08	36.21	33.19		
Tare Mass (g)	19.22	19.75	19.88		
Moisture Content (%)	62.5	63.0	82.2		
Plastic Limit (ASTM D 4318)					
Trial No 1 / Tare No	T28	T10	T14		
Wet Soil + Tare Mass (g)	27.16	25.72	25.85		
Dry Soil + Tare Mass (g)	25.46	23.89	23.60		
Tare Mass (g)	17.89	15.49	15.26		
Moisture Content (%)	22.5	21.8	27.0		
Trial No 2 / Tare No	T34	T33	T35		
Wet Soil + Tare Mass (g)	27.47	25.43	25.86		
Dry Soil + Tare Mass (g)	25.63	23.56	23.63		
Tare Mass (g)	17.50	14.92	15.59		
Moisture Content (%)	22.6	21.6	27.7		
Materials Finer than No 200 Sieve (ASTM D 1140)					
Initial Dry Soil Mass (g)	355.67	381.06	362.64		
Dry Soil Mass after Washing (g)	261.03	273.17	267.66		
Test Status					
Liquid Limit	**62**	**63**	**82**		
Plastic Limit	**23**	**22**	**27**		
Plasticity Index	**39**	**41**	**55**		
Gravel Content (%)	0.0	0.0	0.0		
Sand Content (%)	3.6	3.9	2.8		
Fines (%)	96.4	96.1	97.2		
Group Symbol	CH	CH	CH		
Group Name	FAT CLAY	FAT CLAY	FAT CLAY		
Test Result	**Pass**	**Pass**	**Pass**		
Remarks					
Version	**MVNQS06-100903**				