



LAW ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
3301 ATLANTIC AVENUE  
RALEIGH, NC 27604

N.C.D.O.T./AASHTO CLASSIFICATIONS

REPORT ON SAMPLES OF: SOILS FOR QUALITY

Law Project Name and Number: Clayton Bypass Over Austin Pond (30725-1-4791)  
Project: 8.T 311002 (R-2552AB) County: Johnston Owner: N.C.D.O.T.  
Date Sampled: July to August 01 Received: 8/21/01 Reported: 8/27/01  
Sampled from: B1-BRL, B2-BRL, B3-ARL, B4-ARL By: LAW ENGINEERING  
Submitted by: Law Engineering and Environmental Services, Inc. 1992 Standard Specifications

TEST RESULTS

Lab Sample No.		SS-10	SS-11	SS-12	SS-13	SS-14	SS-15
Retained 4.75 mm Sieve (%)		1.5	0.0	0.1	0.0	33.6	0.0
Passing 2.00 mm Sieve (%)		97.8	98.0	95.5	96.0	56.3	99.9
Passing 425 µm Sieve (%)		91.7	28.8	58.9	60.8	28.5	92.9
Passing 75 µm Sieve (%)		39.4	3.9	18.8	24.6	4.4	36.0

MINUS 2.00mm FRACTION

SOIL MORTAR - 100%							
Coarse Sand Ret - 250 µm (%)		17.3	87.6	56.2	51.7	84.0	23.6
Fine Sand Ret - 53 µm (%)		49.9	9.1	29.1	28.5	12.7	45.0
Silt 0.05 - 0.005 mm (%)		19.8	1.1	10.9	14.1	1.5	13.4
Clay < 0.005 mm (%)		13.0	2.2	3.8	5.7	1.8	18.0

Moisture Content (%)		ND	ND	23.5	ND	ND	ND
Liquid Limit, L.L.		20	21	33	32	21	22
Plasticity Index, P.I.		NP	NP	NP	NP	NP	NP
AASHTO Classification		A-4(0)	A-1-b	A-2-4(0)	A-2-4(0)	A-1-b	A-4(0)
Organic Content (%)		ND	ND	ND	ND	ND	ND

Boring No.		B1-BRL	B2-BRL	B2-BRL	B2-BRL	B3-ARL	B4-ARL
Station		40+25.9	40+51.1	40+51.1	40+51.1	40+68.9	40+94.0
Offset		21.9m RT	21.9m RT	21.9m RT	21.9m RT	8.8m RT	8.8m RT
Alignment		-L-	-L-	-L-	-L-	-L-	-L-
Depth (m)	From	1.23	1.32	4.43	7.34	2.70	1.45
	to	1.68	1.77	4.88	7.79	3.15	1.90

REMARKS: ND=Not Determined

Reviewed by: Michael B. L.



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Date Sampled: July to August 01 Received: 8/21/01 Reported: 8/27/01  
Sampled from: B4-BRL, B6-BRL By: LAW ENGINEERING  
Submitted by: Law Engineering and Environmental Services, Inc. 1992 Standard Specifications

TEST RESULTS

Lab Sample No.		SS-16	SS-17	SS-18	SS-19	SS-20	SS-21
Retained 4.75 mm Sieve (%)		0.0	0.0	17.1	3.0	24.3	
Passing 2.00 mm Sieve (%)		100.0	100.0	67.0	90.8	61.3	
Passing 425 µm Sieve (%)		99.2	97.6	21.0	58.9	34.3	
Passing 75 µm Sieve (%)		86.2	94.0	3.7	28.5	15.2	

SOIL MORTAR - 100%							
Coarse Sand Ret - 250 µm (%)		1.9	3.4	88.0	51.3	72.7	
Fine Sand Ret - 53 µm (%)		16.2	3.3	8.8	25.1	14.3	
Silt 0.05 - 0.005 mm (%)		33.0	31.1	2.0	16.8	8.6	
Clay < 0.005 mm (%)		48.9	62.2	1.2	6.8	4.4	

Moisture Content (%)		34.6	63.2	ND	ND	ND	86.4
Liquid Limit, L.L.		39	66	21	33	30	
Plasticity Index, P.I.		16	32	NP	NP	NP	
AASHTO Classification		A-6(14)	A-7-5(37)	A-1-b	A-2-4(0)	A-1-b	
Organic Content (%)		3.5	ND	ND	ND	ND	7.6

Boring No.		B4-BRL	B6-BRL	B6-BRL	B6-BRL	B6-BRL	B6-BRL
Station		41+01.6	41+52.0	41+52.0	41+52.0	41+52.0	41+52.0
Offset		21.8m RT	21.6m RT	21.6m RT	21.6m RT	21.6m RT	21.6m RT
Alignment		-L-	-L-	-L-	-L-	-L-	-L-
Depth (m)	From	0.00	1.45	3.06	4.79	6.07	0.00
	to	0.45	1.90	3.51	5.21	6.52	0.45

REMARKS: ND=Not Determined

Reviewed by: Michael B. L.