

VT Trans		STATE OF VERMONT AGENCY OF TRANSPORTATION MATERIALS & RESEARCH SECTION SUBSURFACE INFORMATION		BORING NUMBER: B-2 SHEET 1 of 4 DATE STARTED: 3/07/14 DATE COMPLETED: 3/12/14				
PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -		BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X				
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		Top of Well Elevation: 507.38 ft 0.0 ft - 5.5 ft, Advanced to 8' with air hammer. Rock encountered to 5.5'.						
		S1: 6.0 ft - 10.0 ft, A-4, Olive brown, moist, loose, SILT, some sand, little gravel, trace clay, (SM), (FILL), Rec. = 0.6 ft		3-3-3 (7)	21.1	25.3	25.2	49.5
		S2: 10.0 ft - 12.0 ft, A-4, Olive brown, wet, loose, SILT, some sand, trace gravel, trace clay, (SM), (FILL), Rec. = 0.5 ft		4-3-3-4 (6)				
		S3: 12.0 ft - 14.0 ft, A-4, Olive brown, moist, loose, sandy SILT, trace gravel, (ML), (FILL), Rec. = 0.8 ft		3-3-3 (7)	22.6	12.6	26.6	60.8
		S4: 14.0 ft - 16.0 ft, A-4, Olive brown, wet, very loose, sandy SILT, trace clay, (ML), (FILL), PP = 0.0, 0.0, 0.0 tsf, Tv = 0.9 ft		3-2-2 (4)				
		S5: 16.0 ft - 18.0 ft, A-4, Olive brown, moist, loose, sandy SILT with layers of medium plastic clayey silt, (ML), (FILL), PP = 0.0, 0.3, 0.5 tsf, Tv = 1.0 tsf, Rec. = 0.8 ft		2-3-3-4 (6)	21.3	15.0	29.8	55.2
		S6: 18.0 ft - 20.0 ft, A-4, Olive brown, moist, very loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), PP = 0.4, 0.4, 0.3 tsf, Rec. = 1.1 ft		2-2-2-3 (4)	26.0	7.2	12.4	80.4

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PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -		BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X				
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DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		20.0 ft - 21.0 ft, V1 at 21.0 ft = 24 lb (3772 psf) V2 at 22.0 ft = 42 lb (6602, 3772 psf)		2-3-3-4 (6)				
		S7: 21.0 ft - 23.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace clay, (ML), (FILL), PP = 0.0, 0.0 tsf, Tv = 0.5, 0.6 tsf, Rec. = 1.1 ft		4-3-5-5 (8)				
		S8: 23.0 ft - 25.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), Rec. = 1.6 ft		4-4-4-4 (8)				
		S9: 25.0 ft - 27.0 ft, A-4, Olive brown, moist, loose, SILT, little sand, trace gravel, trace clay, (ML), (FILL), Rec. = 0.7 ft		6-7-6-6 (13)				
		S10: 27.0 ft - 29.0 ft, A-4, Olive brown, wet, medium dense, sandy SILT, suspected wash, (ML), (FILL), Rec. = 0.1 ft		1-3-4-6 (7)	23.1	12.5	18.1	69.4
		S11: 29.0 ft - 31.0 ft, A-4, Olive brown with layers of rust brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 0.9 ft		6-5-5-7 (10)				
		S12: 31.0 ft - 33.0 ft, A-4, Olive brown with layers of rust brown, moist, loose, SILT, little sand, trace gravel, (ML), (FILL), Rec. = 1.0 ft		4-4-6-7 (10)				
		S13: 33.0 ft - 35.0 ft, A-4, Olive brown mixed with rust brown, wet, loose, SILT, little sand, trace gravel, suspected wash, (ML), (FILL), Rec. = 0.7 ft		8-9-6-6 (14)				
		S14: 35.0 ft - 37.0 ft, A-4, Olive brown mixed with rust brown, moist, medium dense, SILT, little sand, little gravel, (ML), (FILL), Rec. = 1.1 ft		6-6-7-7 (13)				
		S15: 37.0 ft - 39.0 ft, A-4, Olive brown mixed with rust brown, moist, medium dense, SILT, little sand, little gravel, trace organics (twg), (ML), (FILL), Rec. = 0.9 ft		8-9-9-10 (18)				
		S16: 39.0 ft - 41.0 ft, Medium dense, no recovery, Rec. = 0.0 ft						

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PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -		BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X				
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	BLOWS PER 6 IN N VALUE	M.C. (%)	AASHTO GRAVEL (%)	AASHTO SAND (%)	AASHTO FINES (%)
		S17: 41.0 ft - 43.0 ft, Medium dense, no recovery, possibly pushing cobble (FILL), Rec. = 0.0 ft		15-12-0-10 (21)				
		S18: 43.0 ft - 45.0 ft, A-2-4, Olive brown with rust brown staining, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.9 ft		5-5-6-5 (11)				
		S19: 45.0 ft - 47.0 ft, A-2-4, Olive brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, little gravel, (SM), (FILL), Rec. = 0.7 ft		9-7-11-12 (18)	11.2	23.3	46.4	30.3
		S20: 47.0 ft - 49.0 ft, A-2-4, Olive brown, moist, wet, medium dense, fine to medium SAND, some silt, little coarse sand, some gravel, (SM), (FILL), Rec. = 0.2 ft		9-9-7-9 (16)				
		S21: 49.0 ft - 51.0 ft, Loose, no recovery, Rec. = 0.0 ft		6-5-3-8 (8)				
		S22: 51.0 ft - 53.0 ft, Medium dense, no recovery, possibly pushing cobble, (FILL), Rec. = 0.0 ft		29-17-10-8 (27)				
		S23: 53.0 ft - 55.0 ft, Wood, Rec. = 0.6 ft		9-11-11-17 (22)				
		S24: 55.0 ft - 57.0 ft, Top 0.2': Wood Middle 0.6': Weathered phyllite cobble. Bottom 0.2': Brown, moist, medium SAND (ALLUVIUM), Rec. = 1.0 ft		13-33-31-19 (64)				
		S25: 57.0 ft - 59.0 ft, A-2-4, Layered brown and gray with dark brown staining, moist, medium dense, fine to medium SAND, little silt, (SP-SM), (ALLUVIUM), Rec. = 1.0 ft		5-5-9-7 (14)	22.3	0.8	87.5	11.7
		S26: 59.0 ft - 59.2 ft, Weathered bedrock in spoon sp, Rec. = 0.0 ft		50/0.2 (R)				

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PROJECT NAME: Middlesex IM 089-2(49) SITE NAME: Middlesex NECR Culvert STATION: - OFFSET: - VTSPG: N 661099.11 ft E 1588233.14 ft		PROJECT NUMBER: GAI 130-3003 SITE NUMBER: - GROUND ELEVATION: 504.78 ft GROUNDWATER DEPTH: 49.4 ft 3/11/14 PROJECT PIN NUMBER: -		BORING CREW: Atlantic Testing Laboratories DRILLER: Mark Childs LOGGER: Noah Chinburg BORING RIG: CME-850 X				
BORING TYPE: WASH BORE SAMPLE TYPE: Split Spoon HAMMER TYPE: Automatic CHECKED BY:								
DEPTH (ft)	SYMBOL	CLASSIFICATION OF MATERIALS (Description)	WELL DIAGRAM	RUN	REC (%)	ROD (%)	CH Rate (min/ft)	UCS (psi)
		59.2 ft - 75.0 ft, Dark gray (N3), medium dark gray (N4), and white (N9), very fine to fine grained, fresh to slightly weathered, weak (R2) to medium weak (R3), strongly foliated, non-calcareous to slightly calcareous, quartz-cerite-chlorite PHYLLITE, discontinuities close to very widely spaced, parallel with foliation, dipping 75-90 degrees, with quartz veins parallel with foliation 0.1 to 4 cm wide. (STOWE FORMATION) R1: NX, Rec. = 4.8 ft		R1	96	50		
		R2: NX, Rec. = 5.1 ft		R2	102	100		
		R3: NX, Rec. = 4.8 ft		R3	96	96		
		Hole stopped @ 75.0 ft						
		Notes: - Inclinometer installed to 65.5 ft upon completion of boring. - Reported groundwater depth measured with bottom of casing at 53 ft after stabilizing overnight.						

LOC OF BORING & WELL: WEB NECR CULVERT (ZP) 17, NOT ZOST. 8/13/14

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