DRILL HOLE LOG

BORING NO. 08-L1-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - L1, LINDON 200 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,394 E:572,984
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 50'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: 3.8' **AFTER 24 HOURS:** 3.9'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/8/08
DATE COMPLETED: 8/11/08
GROUND ELEVATION: 4532.0'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			■	18	5,12,15,(57)	CL	brown, dry, very stiff	Organics in top 12"								
4530								LEAN CLAY								
	5		⊠	14	Pushed *0.50*	CL (*A-6(19)*)	brown, moist, firm to stiff		103.1	22.1	35	19	0	1	99	UU DS
4525																
	10		■	16	7,5,12,(36)	SM (*A-4(0)*)	brown, wet, dense	SILTY SAND silt layers		24.3		NP	0	53	47	11% -0.005 mm
4520																
	15		■	18	5,18,52,(99+)	SP (*A-3(0)*)	brown, wet, very dense	SAND		18.3		NP	0	96	4	
4515																
	20		⊠	13	Pushed *0.65*	CL (*A-6(12)*)	brown, moist, stiff		100.0	24.8	31	13	0	3	97	CT CU
4510																
	25		■	18	2,3,5,,(12) *0.68*	CL	brown, moist, stiff	LEAN CLAY silt lenses								
4505																
	30		⊠	18	Pushed *0.62*	CL (*A-6(15)*)	brown, moist, stiff		94.4	31.3	34	15	0	1	99	CT UU
4500																
	35		■	18	3,3,5,(10) *0.85*	CL	gray, moist, stiff									
4495								LEAN CLAY occasional sand layers to 0.5" thick, silt lenses & layers to 2" thick								
	40		■	18	0,3,4 *0.45*	CL	gray, moist, firm attempted shelby first (disturbed blow count)									
4490																
	45					CL	gray, moist									
			■	18	8,12,15,(31)	SM (*A-2-4(0)*)	gray, wet, dense	SILTY SAND		22.4		NP	0	82	18	2% -0.005 mm
4485																
								LEAN CLAY W/SAND								

DH_LOGV1 08-L1.GPJ US EVAL.GDT 2/23/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED *0.45* ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-L1-B1

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CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,394 E:572,984
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 50'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: 3.8' **AFTER 24 HOURS:** 3.9'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/8/08
DATE COMPLETED: 8/11/08
GROUND ELEVATION: 4532.0'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
				15	Pushed 0.59	CL (A-6(7))	gray, moist, stiff LEAN CLAY W/SAND	96.7	25.1	27	11	0	15	85	UU
4480															
	55			18	2,1,2,(3) 0.50	SM CL	gray, wet SILTY SAND gray, moist, firm to stiff								
4475															
	60			14	Pushed 0.56	CL (A-6(21))	gray, moist, stiff LEAN CLAY numerous silt lenses to 0.5" apart	83.2	37.7	40	20	0	1	99	CT UC
4470															
	65			18	0/18",(0) 0.42	CL (A-6(8))	gray, moist, firm		37.0	30	11	0	14	86	
4465															
	70			14	0.40	CL (A-6(20))	gray, moist, firm	88.9	35.0	39	19	0	1	99	
4460				18	Pushed 3,3,7,(9) 0.35	SM (A-2-4(0))	gray, wet SILTY SAND		24.4		NP	0	70	30	
						CL	gray, moist, firm LEAN CLAY silt lenses & layers to 1" thick								
	75			18	1,1,3,(4) 0.60	CL	gray, moist, stiff								
4455															
	80			15	Pushed 0.70	CL (A-6(20))	gray, moist, stiff	83.4	38.8	39	19	0	2	98	CT UU
4450															
	85			18	0/18",(0) 0.40	CL	gray, moist, firm LEAN CLAY silt lenses at approximate 45° angle								
4445															
	90			17	Pushed 0.65	CL (A-7-6(26))	gray, moist, stiff	87.3	37.7	44	24	0	1	99	UC
4440															
	95			18	0,0,5,(4) 0.50	CL	gray to dk. gray, moist, firm to stiff								
4435															

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RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE: 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value
0.45 — Torvane (tsf)

UNDISTURBED SAMPLE: PUSHED
0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
CT = Consolidation
DS = Direct Shear
UU = Unconsolidated, Undrained
CU = Consolidated, Undrained
HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-L1-B1

PROJECT: I-15 UTAH COUNTY CORRIDOR - L1, LINDON 200 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,394 E:572,984
DRILLING METHOD: 08-CME-55 / N.W. CASING TO 50'
DRILLER: D. SAMPSON
DEPTH TO WATER - INITIAL: ▽ 3.8' **AFTER 24 HOURS:** ▼ 3.9'

PROJECT NUMBER: 200801.200
DATE STARTED: 8/8/08
DATE COMPLETED: 8/11/08
GROUND ELEVATION: 4532.0'
LOGGED BY: J. PRICE, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
			X	15	Pushed 0.55	CL (A-6(15))	dk. gray, moist, stiff LEAN CLAY silt lenses at approximate 45° angle	92.3	25.8	36	16	0	7	93	CT UC
4430															
	105														
4425			■	18	2,4,6,(8) 0.68	CL	dk. gray, moist, stiff LEAN CLAY								
	110				0.59	CL	dk. gray, moist, stiff								
			X	14	Pushed	ML (A-4(0))	gray, wet SANDY SILT sand layers to 2" thick	102.1	23.8	24	3	0	45	55	
4420															
	115		■	11	16,23,15,(29)	SM (A-2-4(0))	gray, wet, med. dense SILTY SAND		23.0		NP	0	86	14	
4415															
	120		X	18	Pushed 0.45	CL	gray, moist, firm LEAN CLAY								
4410															
							SAND (driller's observation)								
	125		■	15	4,5,12,(12) 1.13	CL (A-6(15))	dk. gray, moist, very stiff LEAN CLAY silt lenses		26.1	40	15	0	8	92	
4405															
	130				0.89	CL	dk. gray, moist, stiff								
			X	18	Pushed	SM (A-4(0))	gray, wet SILTY SAND	96.8	26.2		NP	0	64	36	
4400															
	135														
4395															
	140														
4390															
	145														
4385															

DH_LOGV1 08-L1.GPJ US EVAL.GDT 2/23/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) ← Blow Count per 6"; ← $(N_1)_{60}$ Value; 0.45 ← Torvane (tsf)

UNDISTURBED SAMPLE ☒ PUSHED; 0.45 ← Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
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HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-L1-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - L1, LINDON 200 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,524 E:573,107
DRILLING METHOD: CME-75 / N.W. CASING TO 24.5'
DRILLER: D. BEDKE
DEPTH TO WATER - INITIAL: ▽ 7.2' **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 200801.200
DATE STARTED: 8/19/08
DATE COMPLETED: 8/20/08
GROUND ELEVATION: 4535.7'
LOGGED BY: M. HANSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	Sample USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4535							ASPHALT									
							brown, moist	LEAN CLAY								
4530	5			9	6,68/6",(REF)	CL SP-SM	gray, wet, very dense									
								SAND W/SILT & GRAVEL slag								
4525	10			8	17,34,38,(99+)	SP-SM (A-1-a)	gray, wet, very dense			9.0		NP	44	47	9	
								SAND W/SILT								
4520	15			13	Pushed	SP-SM (A-2-4(0))	rusty-brown, wet			11.7		NP	0	89	11	DS
				16	3,9,13,(37)	SM (A-2-4(0))	brown, wet, dense	SILTY SAND clay layers		20.2		NP	0	82	18	
4515	20			17	5,5,6,(17) 0.70	SM,CL	brown, wet/moist, med. dense/stiff	INTERBEDDED SILTY SAND & LEAN CLAY LAYERS TO 6" THICK								
4510	25			18	Pushed 0.50	CL (A-6(12))	lt. brown, moist, firm to stiff		92.5	25.6	32	14	0	7	93	CT CU
4505	30			18	3,3,4,(9) 0.87	CL	lt. brown, moist, stiff									
4500	35			18	Pushed 0.88	CL (A-6(16))	lt. brown, moist, stiff	LEAN CLAY silt lenses	99.8	28.3	35	16	0	0	100	UC UU
4495	40			18	3,5,8,(16) 0.71	CL	lt. brown, moist, stiff									
4490	45			18	Pushed 1.25	CL (A-6(16))	lt. brown, moist, very stiff		94.1	28.3	36	16	0	4	96	CT UC

DH_LOGV1 08-L1.GPJ US EVAL.GDT 2/23/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE: 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value; 0.45 — Torvane (tsf)

UNDISTURBED SAMPLE: PUSHED 0.45 — Torvane (tsf)

OTHER TESTS
UC = Unconfined Compression
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DS = Direct Shear
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HYD = Hydrometer

DRILL HOLE LOG

BORING NO. 08-L1-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - L1, LINDON 200 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,524 E:573,107
DRILLING METHOD: CME-75 / N.W. CASING TO 24.5'
DRILLER: D. BEDKE
DEPTH TO WATER - INITIAL: ▽ 7.2' **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 200801.200
DATE STARTED: 8/19/08
DATE COMPLETED: 8/20/08
GROUND ELEVATION: 4535.7'
LOGGED BY: M. HANSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description		Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4485			■	18	0.62 2,6,27,(36)	CL SM	lt. brown, moist, stiff gray, wet, dense	SILTY SAND								
4480	55		⊠	18	Pushed 0.55	CL (A-6(16))	gray, moist, stiff	LEAN CLAY	91.2	28.4	37	18	0	9	91	UU
4475	60		■	18	4,5,4,(9) 0.41	CL	gray, moist, firm, 4" silty sand layer at 60.2'									
4470	65		⊠	18	Pushed 0.57	CL (A-6(21))	gray, moist, stiff	LEAN CLAY silt lenses	94.2	30.4	40	19	0	0	100	CT UC
4465	70		■	18	0.32 0,2,3,(5)	CL SM	gray-brown, moist, firm gray, very moist	SILTY SAND								
4460	75		⊠	18	Pushed 0.44	CL (A-7-6(28))	dk. gray, moist, firm	LEAN CLAY	87.9	32.2	48	25	0	0	100	UU
4455	80		■	18	0/12",5 0.39	CL	dk. gray, moist, firm, 2" silt layer									
4450	85		⊠	18	Pushed 0.55	CL (A-7-6(29))	brown-gray, moist, stiff	LEAN CLAY silt lenses, angled bedding	80.6	35.6	48	26	0	0	100	CT UC
4445	90		■	18	0,1,5,(5) 0.45	CL	brown-gray, moist, firm	LEAN CLAY high angle bedding, slight organic odor								
4440	95		⊠	15	Pushed 0.55	CL (A-7-6(24))	black to gray, moist, stiff	LEAN CLAY silt lenses		32.2	42	22	0	1	99	
								FAT CLAY silt lenses								

DH_LOGV1 08-L1.GPJ US EVAL.GDT 2/23/09

RB&G ENGINEERING, INC.

LEGEND:

DISTURBED SAMPLE ■ 2,3,2,(6) — Blow Count per 6"; $(N_1)_{60}$ Value
0.45 — Torvane (tsf)

UNDISTURBED SAMPLE ⊠ PUSHED
0.45 — Torvane (tsf)

OTHER TESTS
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DRILL HOLE LOG

BORING NO. 08-L1-B2

PROJECT: I-15 UTAH COUNTY CORRIDOR - L1, LINDON 200 SOUTH OVER I-15
CLIENT: UTAH DEPARTMENT OF TRANSPORTATION
LOCATION: N:292,524 E:573,107
DRILLING METHOD: CME-75 / N.W. CASING TO 24.5'
DRILLER: D. BEDKE
DEPTH TO WATER - INITIAL: ▽ 7.2' **AFTER 24 HOURS:** ▼ N.M.

PROJECT NUMBER: 200801.200
DATE STARTED: 8/19/08
DATE COMPLETED: 8/20/08
GROUND ELEVATION: 4535.7'
LOGGED BY: M. HANSEN, J. BOONE

Elev. (ft)	Depth (ft)	Lithology	Sample Type	Sample Rec. (in)	Sample See Legend	USCS (AASHTO)	Material Description	Dry Density (pcf)	Moisture Content (%)	Atter. Liquid Limit	Atter. Plast. Index	Gradation Gravel (%)	Gradation Sand (%)	Gradation Silt/Clay (%)	Other Tests
4435				18	0,1,5,(5) *0.45*	CH	dk. gray, moist, firm								
4430	105			18	Pushed *0.75*	CH (*A-7-6(42)*)	dk. gray, moist, stiff	78.6	44.8	60	37	0	0	100	CT UC
4425	110			18	0/12",5,(4) *0.65*	CH	dk. gray, moist, stiff — FAT CLAY silt lenses								
4420	115														
4415	120			12	Pushed	CL/CH	dk. gray, moist — LEAN TO FAT CLAY								
						SM	dk. gray, wet — SILTY SAND								
4410	125			18	*0.40* 0,2,7,(7)	CL (*A-7-6(30)*) CL-ML/ML	dk. gray, moist, firm — LEAN CLAY		42.8	49	27	0	1	99	
							dk. gray, moist — SILTY CLAY W/SAND TO SANDY SILT								
4405	130			14	12,7,10,(14) *0.77*	SM	dk. gray, moist, med. dense — SILTY SAND								
						CL	gray, moist, stiff — LEAN CLAY								
4400	135														
4395	140														
4390	145														

DH_LOGV1 08-L1.GPJ US EVAL.GDT 2/23/09

LEGEND:

DISTURBED SAMPLE — 2,3,2,(6) ← Blow Count per 6"; (N_1)$_{60}$ Value; *0.45* ← Torvane (tsf)

UNDISTURBED SAMPLE — PUSHED; *0.45* ← Torvane (tsf)

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