

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7737					
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6818659m E454420m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK				
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100								
								ORGANICS, moss, leaves	
								SILT, sandy -Grey, moist, soft, cold -Possible partial frozen gravel -Very smooth drilling	1
								-Damp	2
									3
					87	ML			4
								END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7739	
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104	
Small Rig		Coordinates: Z09N N6818782m E454166m		ELEVATION: m	
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED		<input type="checkbox"/> DCPT	
		<input type="checkbox"/> AUGER		<input type="checkbox"/> BULK	
		<input checked="" type="checkbox"/> SPT		<input type="checkbox"/> CORE	
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #
		◆ Percent Sand ◆			
		■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm
<b>SOIL DESCRIPTION</b>					
				99	GW-GM
					ORGANICS, moss, leaves GRAVEL, well graded with silt and sand -Brown, damp, loose -Lots of grinding -moved hole back 2m due to rock @ 0.2m
					END of HOLE -Refusal on rock
					1
					2
					3
					4
				LOGGED BY: D.Lorenzi	
				COMPILED BY: R.Stilwell	
				REVIEWED BY: D.Lorenzi	
				Termination Depth: 1m	
				Complete: 9/13/2017 1:00:00 PM	
				Pit #: _____ Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7741				
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6818615m E454401m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC      M.C      LIQUID 0      20      40      60      80      100							
							ORGANICS, moss, leaves	
					88	SM	SAND, silty with gravel -Dark brown, damp, loose -Some grinding	1
							-Grey/brown, moist	2
					89	SM		
							-Grinding at 3m	3
							-Wet -Possibly frozen	4
							END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7744				
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6818700m E454248m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC      M.C      LIQUID 0      20      40      60      80      100							
							ORGANICS, moss, leaves	
							GRAVEL, silty with sand -Grey, damp, loose -Grinding near surface	
				96	GM			1
							-Grinding	
				97	GM			2
				98	GW-GM		GRAVEL, well graded with silt and sand -Grey, damp, loose	3
							-Heavy grinding on rocks/cobbles	
							END of HOLE -Refusal	4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7746				
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6818693m E454370m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input checked="" type="checkbox"/> DCPT		<input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE				
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
			█				ORGANICS, moss, leaves	
			█	91	SM		SAND, silty with gravel -Light brown, damp, loose -Grinding on gravels near surface	1
			█	92	GP-GM		GRAVEL, poorly graded with silt and sand -Grey, damp, compact -Lots of grinding	2
			█	93	GP-GM		END of HOLE -Refusal	3
			█					4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7749				
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6811133m E462764m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC      M.C      LIQUID 0      20      40      60      80      100							
							ORGANICS, moss, leaves	
							SAND, silty with gravel -Brown, damp, loose	
				47	SM		-Fairly smooth drilling  -Some grinding	1
							SILT, sandy -Grey, damp, soft	2
				48	ML			3
							SAND, silty -Grey, damp, loose	4
				49	SM			
							END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi			Termination Depth: 4.5m			
		COMPILED BY: R.Stilwell			Complete: 9/11/2017 10:55:00 AM			
		REVIEWED BY: D.Lorenzi			Pit #: Page 1 of 1			

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7750						
Gateway Drilling		Small Rig Testing, km 170 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6809913m E463935m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
						16	SM		Some organics on surface SAND, silty with gravel -Brown, damp, loose  -Some grinding	1
						17	ML		SILT with sand -Brown, damp, soft	2
										3
										4
									END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7751					
Gateway Drilling		Small Rig Testing, km 175 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6810569m E463624m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE		
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		◆ Percent Sand ◆							
					24	SM		ORGANICS, moss, roots	1
					25	SM		SAND, silty with gravel -Light brown, damp, loose  -Grinding, mostly silt in cuttings	2
								END of HOLE -Refusal, grinding on rock or cobbles	3
									4
				LOGGED BY: D.Lorenzi		Termination Depth: 2.5m			
				COMPILED BY: R.Stilwell		Complete: 9/10/2017 10:30:00 AM			
				REVIEWED BY: D.Lorenzi		Pit #: _____ Page 1 of 1			

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7752					
Gateway Drilling		Small Rig Testing, km 175 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6810790m E463165m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		0      20      40      60      80      100							
					30	SM		ORGANICS, moss, leaves, roots  SAND, silty with gravel, trace cobbles -Light brown, damp, loose  -Grinding on cobbles	1
					31	GM		GRAVEL, silty with sand, trace cobbles -Light brown, damp, loose -Grinding	2
								END of HOLE -Refusal due to cobbles	3
									4
		LOGGED BY: D.Lorenzi				Termination Depth: 3m			
		COMPILED BY: R.Stilwell				Complete: 9/10/2017 12:55:00 PM			
		REVIEWED BY: D.Lorenzi				Pit #: _____ Page 1 of 1			

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7753						
Gateway Drilling		Small Rig Testing, km 174 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6809999m E463957m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
						18	SM		SAND, silty with gravel -Brown, damp, loose  -Some grinding  -Overall fairly smooth	1
						19	SM		-Poor quality material	2
										3
										4
									END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi			Termination Depth: 4.5m					
		COMPILED BY: R.Stilwell			Complete: 9/9/2017 4:55:00 PM					
		REVIEWED BY: D.Lorenzi			Pit #: _____ Page 1 of 1					

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7754					
Gateway Drilling		Small Rig Testing, km 174 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6810543m E463642m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK				
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
								ORGANICS, moss, roots	
					22	SM		SAND, silty with gravel -Brown, damp, loose -Sample from auger and cuttings	1
								-Moist	2
					23	SM		-Very soft silty material	3
								-Wet	4
								END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi			Termination Depth: 4.5m				
		COMPILED BY: R.Stilwell			Complete: 9/10/2017 9:55:00 AM				
		REVIEWED BY: D.Lorenzi			Pit #: _____ Page 1 of 1				



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway	SOURCE/TP#: 920-7756
Gateway Drilling		Small Rig Testing, km 175 RHS	PROJECT NO: 552-202104
Small Rig		Coordinates: Z09N N6810083m E463192m	ELEVATION: m

SAMPLE TYPE     UNDISTURBED     DCPT     AUGER     BULK     SPT     CORE

ELEV. (m)	PLASTICITY INDEX (PI) CHART		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC (0-100)	LIQUID (0-100)						
	M.C. (Liquid Limit) at approximately 50% on the Liquid Limit axis.						ORGANICS SAND, silty with gravel -Light brown, damp, loose, some cobbles ~100mm -Grinding on granular material	1
				26	SM		END of HOLE -Refusal at 1.5m due to cobbles -Refusal after moving forward at same depth -Lots of cobbles and occasional boulders visual from surface, 100-150mm	2
								3
								4



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7758					
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6811194m E462766m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100								
								Some moss	
					42	SM		SAND, silty with gravel, trace cobbles -Brown, damp, loose	1
								-Grinding a bit	
								-Smooth drilling	2
					43	SM		-Sampled from cuttings	
									3
								SILT, sandy with gravel -Grey, damp, soft -Sampled from auger and cuttings	
					44	ML			4
								END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7759						
Gateway Drilling		Small Rig Testing, km 174 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6810102m E463885m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100		0      20      40      60      80      100							
	●		■ ★ ◆		[Wavy line]	20	SM		ORGANICS, moss, roots	1
	●		■ ★ ◆			21	GM		SAND, silty -Grey, moist, loose -Very smooth drilling	2
	●		■ ★ ◆		[Wavy line]				GRAVEL, silty with gravel -Grey, damp, loose -Grinding	3
	●		■ ★ ◆						END of HOLE -Target depth reached	4



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7761						
Gateway Drilling		Small Rig Testing, km 175 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6810706m E463201m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
									ORGANICS	
						35	SM		SAND, silty with gravel -Brown, damp, loose	1
						36	SM		-Some grinding END of HOLE -Refusal twice at same depth	2
										3
										4
		LOGGED BY: D.Lorenzi			Termination Depth: 1.6m					
		COMPILED BY: R.Stilwell			Complete: 9/10/2017 2:45:00 PM					
		REVIEWED BY: D.Lorenzi			Pit #: _____ Page 1 of 1					

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7762				
Gateway Drilling		Small Rig Testing, km 170 RHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6807204m E465517m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC      M.C      LIQUID 0      20      40      60      80      100							
							Grass, moss, silt	
							SAND, silty with gravel -Grey, damp, loose -Fairly smooth drilling -Sample from auger stem	1
							GRAVEL, silty with sand, trace clay -Grey, damp, loose	2
							SAND, silty with gravel -Light grey, damp, loose -Sample from auger and cuttings	3
								4
							END of HOLE -Target depth reached -Burial site found nearby after hole complete -DO NOT DEVELOPE	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7763				
Gateway Drilling		Small Rig Testing, km 175 RHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6810708m E463262m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0	20	40	60				
							ORGANICS, moss, roots	
					37	SM	SAND, silty -Brown, damp, loose -Very smooth drilling	1
							-Some gravel, sample from cuttings -Some grinding	2
					38	SM		
							END of HOLE -Refusal	3
								4
		LOGGED BY: D.Lorenzi			Termination Depth: 3m			
		COMPILED BY: R.Stilwell			Complete: 9/10/2017 3:25:00 PM			
		REVIEWED BY: D.Lorenzi			Pit #: <span style="float: right;">Page 1 of 1</span>			

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7764				
Gateway Drilling		Small Rig Testing, km 175 RHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6810653m E463218m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0	20	40	60				
					39	SM	ORGANICS, moss, roots SAND, silty -Brown, damp, loose	1
								2
							GRAVEL, silty with sand -Brown, damp, loose -Some grinding	3
					40	GM		4
							END of HOLE -Target depth	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7765		
Gateway Drilling		Small Rig Testing, km 170 RHS		PROJECT NO: 552-202104		
Small Rig		Coordinates: Z09N N6807429m E465820m		ELEVATION: m		
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE				
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL DESCRIPTION	Depth (m)
	0 20 40 60 80 100		0 20 40 60 80 100			
					ORGANICS, moss and roots	
					GRAVEL, poorly graded with silt and sand -Brown, damp, loose, subrounded	
				1	GP-GM	1
					-Well graded	
				2	GW-GM	2
					-Poorly graded	
				3	GP-GM	3
						4
					END of HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7767						
Gateway Drilling		Small Rig Testing, km 170 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6807407m E465952m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0 20 40 60 80 100		0 20 40 60 80 100							
									ORGANICS, moss, roots, leaves	
						6	SW-SM		SILT -Brown, damp	
									SAND, well graded with silt and gravel -Grey, damp, loose	1
						7	GW		GRAVEL, well graded with sand -grey, damp, loose -Some fines falling into hole, sample is most likely coarser than native material	2
						8	GW			3
									END of HOLE -Refusal on cobbles -Very coarse material in cuttings, grinding and pulverizing cobbles	4
						LOGGED BY: D.Lorenzi		Termination Depth: 3.5m		
						COMPILED BY: R.Stilwell		Complete: 9/9/2017 11:40:00 AM		
						REVIEWED BY: D.Lorenzi		Pit #: _____ Page 1 of 1		



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7769					
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6816256m E458768m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
					66	GP-GM		ORGANICS, moss, leaves GRAVEL, poorly graded with silt and sand, some cobbles -Grey, loose, damp -Grinding on cobbles	1
					67	GM		-Silty, trace cobbles -Smoother drilling	2
								SAND, silty with gravel, trace cobbles -Grey, loose, damp	3
					68	SM			4
								END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi COMPILED BY: R.Stilwell REVIEWED BY: D.Lorenzi		Termination Depth: 4.5m Complete: 9/12/2017 9:10:00 AM Pit #:					
				Page 1 of 1					

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7770				
Gateway Drilling		Small Rig Testing, km 185 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6817543m E457377m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input checked="" type="checkbox"/> DCPT		<input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE				
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	Sample Type	Sample #	0	20				
					82	SM	ORGANICS, moss, leaves SAND, silty -Brown, damp, loose -Some fractured rock  -Some grinding	1
					83	SM	-Grey, compact  -Auger breaking up rock coming up as gravel	2
							-Refusal	3
							END of HOLE -Refusal	4
						LOGGED BY: D.Lorenzi	Termination Depth: 3.2m	
						COMPILED BY: R.Stilwell	Complete: 9/12/2017 4:15:00 PM	
						REVIEWED BY: D.Lorenzi	Pit #: Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7771					
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6811156m E462711m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK				
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
					45	SM		ORGANICS, moss, leaves SAND, silty with gravel -Brown, damp, loose -Sampled from auger and cuttings  -Light grinding but smooth drilling	1
									2
								SILT, sandy with gravel -Grey, damp, soft	3
					46	SM			4
								END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi		Termination Depth: 4.5m					
		COMPILED BY: R.Stilwell		Complete: 9/11/2017 9:25:00 AM					
		REVIEWED BY: D.Lorenzi		Pit #: <span style="float: right;">Page 1 of 1</span>					

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7772					
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6811293m E462707m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK				
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		◆ Percent Sand ◆							
					41	SM		SAND, silty with gravel, trace cobbles -Grey, loose, damp  -Grinding          -Grinding	1
								END of HOLE -Refusal, hit cobble -Some cobbles boulders visual from surface 50mm to 350mm	2
									3
									4
		LOGGED BY: D.Lorenzi			Termination Depth: 2m				
		COMPILED BY: R.Stilwell			Complete: 9/10/2017 4:55:00 PM				
		REVIEWED BY: D.Lorenzi			Pit #: _____ Page 1 of 1				

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7773						
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6814876m E459985m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100		0      20      40      60      80      100							
						62	SM		ORGANICS, muskeg -Heavy muskeg SAND, silty -Brown and black, damp, loose -Smooth drilling  -Cuttings are cold, likely permafrost	1
									END of HOLE -Refusal, grinding on ice	2
										3
										4



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7775					
Gateway Drilling		Small Rig Testing, km 176 LHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6814701m E459948m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK				
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
					53	SM		ORGANICS, moss SAND, silty -Black, damp, very loose  -Very smooth drilling	1
									2
								-Some gravel	3
					54	SM			4
								END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7776						
Gateway Drilling		Small Rig Testing, km 176 RHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6814869m E459936m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
						60	SM		ORGANICS, moss, leaves SAND, silty with gravel -Brown, damp, loose -Some grinding	1
						61	SM			2
									END of HOLE -Refusal, grinding on rock/cobble	3
										4
		LOGGED BY: D.Lorenzi			Termination Depth: 2m					
		COMPILED BY: R.Stilwell			Complete: 9/11/2017 3:15:00 PM					
		REVIEWED BY: D.Lorenzi			Pit #: _____ Page 1 of 1					

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7777				
Gateway Drilling		Small Rig Testing, km 181 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6811167m E462799m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input checked="" type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
			█				ORGANICS, moss, leaves	
			█	50	SM		SAND, silty with gravel -Brown, damp, loose	1
			█				-Trace gravel -Sampled from auger and cuttings. -First refusal	2
			█	51	SM			
			█					
			█	52	GM		GRAVEL, silty with sand -Grey, damp, loose END of HOLE -Refusal on cobble/rock	3
			█					4



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7778				
Gateway Drilling		Small Rig Testing, km 170 RHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6807351m E465878m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE						
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
0 20 40 60 80 100 PLASTIC M.C. LIQUID	0 20 40 60 80 100							
			█	11	SM		ORGANICS, moss, roots, and silt  SAND, silty with gravel -Brown, damp, loose -Sample off auger & cuttings	1
			█	12	GW-GM		GRAVEL, well graded with silt and sand -Grey, damp, compact -Grinding at 1m	2
							END of HOLE -Refusal due to cobble	2
								3
								4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7779						
Gateway Drilling		Small Rig Testing, km 185 LHS		PROJECT NO: 552-202104						
Small Rig		Coordinates: Z09N N6817441m E457436m		ELEVATION: m						
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK					
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0      20      40      60      80      100		0      20      40      60      80      100							
						77	ML		ORGANICS, moss, leaves SILT, sandy -Brown, damp, very loose	1
									-Pour material	2
									-Grey/brown -Very smooth drilling	3
						78	SM		-Dark brown -Poor material	4
									END of HOLE -Target depth reached	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7780			
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104			
Small Rig		Coordinates: Z09N N6816203m E458772m		ELEVATION: m			
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED		<input type="checkbox"/> DCPT			
		<input type="checkbox"/> AUGER		<input type="checkbox"/> BULK			
		<input checked="" type="checkbox"/> SPT		<input type="checkbox"/> CORE			
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #		
		◆ Percent Sand ◆					
		■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm		
						SOIL DESCRIPTION	Depth (m)
				65	GM		
						END of HOLE -Refusal due to cobble -Lots of cobbles/boulders in area, 100-400mm	1
							2
							3
							4
				LOGGED BY: D.Lorenzi		Termination Depth: 1m	
				COMPILED BY: R.Stilwell		Complete: 9/12/2017 8:40:00 AM	
				REVIEWED BY: D.Lorenzi		Pit #: _____ Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway	SOURCE/TP#: 920-7781
Gateway Drilling		Small Rig Testing, km 185 LHS	PROJECT NO: 552-202104
Small Rig		Coordinates: Z09N N6817428m E457359m	ELEVATION: m

SAMPLE TYPE     UNDISTURBED     DCPT     AUGER     BULK     SPT     CORE

ELEV. (m)	PLASTICITY INDEX		PERCENT FINES		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PL	LI	★	◆						
1.0	15	55	45	55	SM	79		ORGANICS, moose, leave SAND, silty with gravel, trace rock/shale -Brown, damp, loose	0.5 - 1.5	
1.5								-Grinding END of HOLE -Refusal due to fractured rock/shale	1.5 - 1.8	



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7783				
Gateway Drilling		Small Rig Testing, km 185 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6817404m E457363m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0	20	40	60				
							ORGANICS, moss, leaves	
							SAND, silty -Light brown, damp, loose	1
					80	SM		
							GRAVEL, silty with gravel -Fractured shale, some silt -Grinding	
					81	GM		
							END of HOLE -Refusal due to rock	2
								3
								4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7784					
Gateway Drilling		Small Rig Testing, km 181 LHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6814761m E459940m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input type="checkbox"/> DCPT <input type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE							
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
					55	SM		ORGANICS, moss, leaves SAND, silty -Brown, damp, very loose	1
					56	SM		-Grey, loose -Occasional grinding	2
					57	SM		-Some gravel -Sampled from cuttings	3
								END of HOLE -Target depth reached	4
		LOGGED BY: D.Lorenzi COMPILED BY: R.Stilwell REVIEWED BY: D.Lorenzi		Termination Depth: 4.5m Complete: 9/11/2017 2:30:00 PM Pit #:		Page 1 of 1			

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7785				
Gateway Drilling		Small Rig Testing, km 189 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6818728m E454282m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	PLASTICITY INDEX (PI) CHART		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0 20 40 60 80 100	0 20 40 60 80 100						
	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■							
	PLASTIC M.C. LIQUID 0 20 40 60 80 100							
				94	SM		ORGANICS, moss SAND, silty with gravel -Brown, damp, loose	1
				95	GP-GM		GRAVEL, poorly graded with silt and sand -Brown, damp, compact -Grinding	2
							END of HOLE -Refusal	4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7786				
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6816264m E458904m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED <input checked="" type="checkbox"/> DCPT		<input checked="" type="checkbox"/> AUGER <input type="checkbox"/> BULK <input checked="" type="checkbox"/> SPT <input type="checkbox"/> CORE				
ELEV. (m)	★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC      M.C      LIQUID 0      20      40      60      80      100							
				70	GM		ORGANICS, moss  GRAVEL, silty with sand -Dark brown, damp, very loose	1
				71	GM		-Brown, loose	2
							END of HOLE -Refusal on granular -Cuttings look moist	3
								4

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7787					
Gateway Drilling		Small Rig Testing, km 181 LHS		PROJECT NO: 552-202104					
Small Rig		Coordinates: Z09N N6814815m E459936m		ELEVATION: m					
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK	<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE		
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		◆ Percent Sand ◆							
								ORGANICS, moss, leaves	
					58	SM		SAND, silty -Brown, damp, loose -Grinding near surface, then smooth	1
								-Some silt -Smooth drilling	2
								-Silty with gravel -Grey	3
					59	SM			4
								END of HOLE -Target depth reached	
				LOGGED BY: D.Lorenzi		Termination Depth: 4.5m			
				COMPILED BY: R.Stilwell		Complete: 9/11/2017 2:55:00 PM			
				REVIEWED BY: D.Lorenzi		Pit #:		Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7788				
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104				
Small Rig		Coordinates: Z09N N6816311m E458859m		ELEVATION: m				
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK			
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE					
ELEV. (m)	PLASTIC      M.C      LIQUID 0      20      40      60      80      100		★ Percent Fines ★ ◆ Percent Sand ◆ ■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	0	20	40	60				
							ORGANICS, moss, leaves	
							SAND, silty with gravel -Light brown, damp, loose	
							-Grinding	1
							-Brown -Grinding	2
								3
								4
							END of HOLE -Target depth reached	
		LOGGED BY: D.Lorenzi		Termination Depth: 4.5m				
		COMPILED BY: R.Stilwell		Complete: 9/12/2017 12:10:00 PM				
		REVIEWED BY: D.Lorenzi		Pit #: <span style="float: right;">Page 1 of 1</span>				

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7793	
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104	
Small Rig		Coordinates: Z09N N6816310m E458751m		ELEVATION: m	
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK
		<input checked="" type="checkbox"/> SPT	<input type="checkbox"/> CORE		
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #
		◆ Percent Sand ◆			
		■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm
<b>SOIL DESCRIPTION</b>					
					Depth (m)
					1
					2
					3
					4
				LOGGED BY: D.Lorenzi	
				COMPILED BY: R.Stilwell	
				REVIEWED BY: D.Lorenzi	
				Termination Depth: 2m	
				Complete: 9/12/2017 9:50:00 AM	
				Pit #: _____	
				Page 1 of 1	

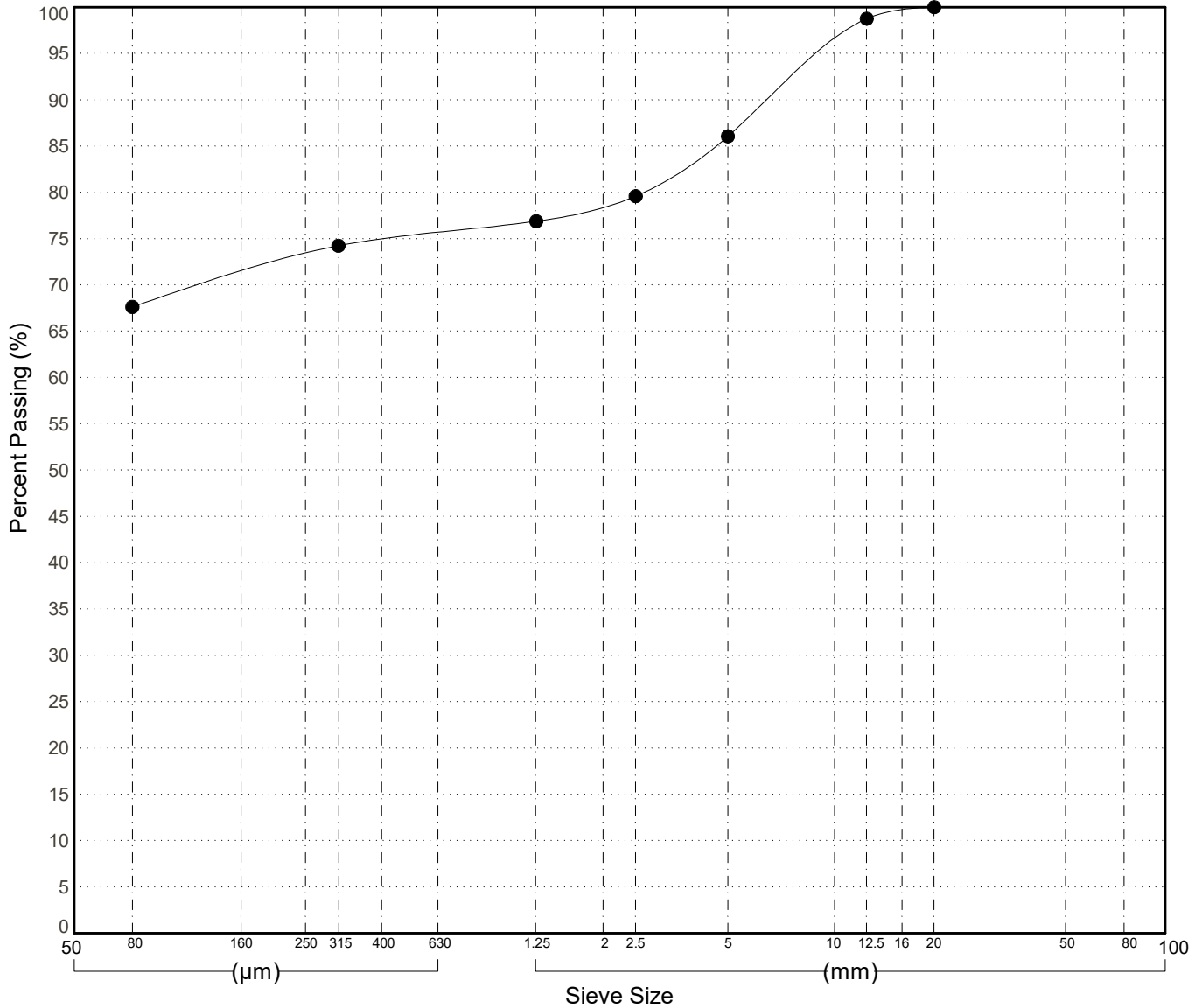
SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 920-7794	
Gateway Drilling		Small Rig Testing, km 183 LHS		PROJECT NO: 552-202104	
Small Rig		Coordinates: Z09N N6816200m E458848m		ELEVATION: m	
SAMPLE TYPE		<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER	<input type="checkbox"/> BULK
		<input type="checkbox"/> SPT	<input type="checkbox"/> CORE		
ELEV. (m)		★ Percent Fines ★		Sample Type	Sample #
		◆ Percent Sand ◆			
		■ Percent Gravel ■		SOIL SYMBOL	DCPT/SPT Blows/30cm
				Depth (m)	
				63 GW-GM	
				GRAVEL, well graded with silt and sand, some cobbles and boulders -Grey, compact, damp	
				END of HOLE -Refusal on cobbles -Lots of cobbles/boulders visible on surface, max size 400mm -Good potential crushing material	
				1	
				2	
				3	
				4	
				LOGGED BY: D.Lorenzi	
				COMPILED BY: R.Stilwell	
				REVIEWED BY: D.Lorenzi	
				Termination Depth: 1m	
				Complete: 9/11/2017 5:00:00 PM	
				Pit #: _____ Page 1 of 1	

GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7737
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818659m E454420m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 87	1218	3.1 to 4.5	SANDY SILT(ML)													20.4	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 87	1218	100.0	100.0	100.0	100.0	100.0	98.8	95.8	86.1	78.7	76.1	74.8	73.2	71.1	67.6	Gravel	Sand	Silt	Clay			
																13.9	18.4		67.6			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

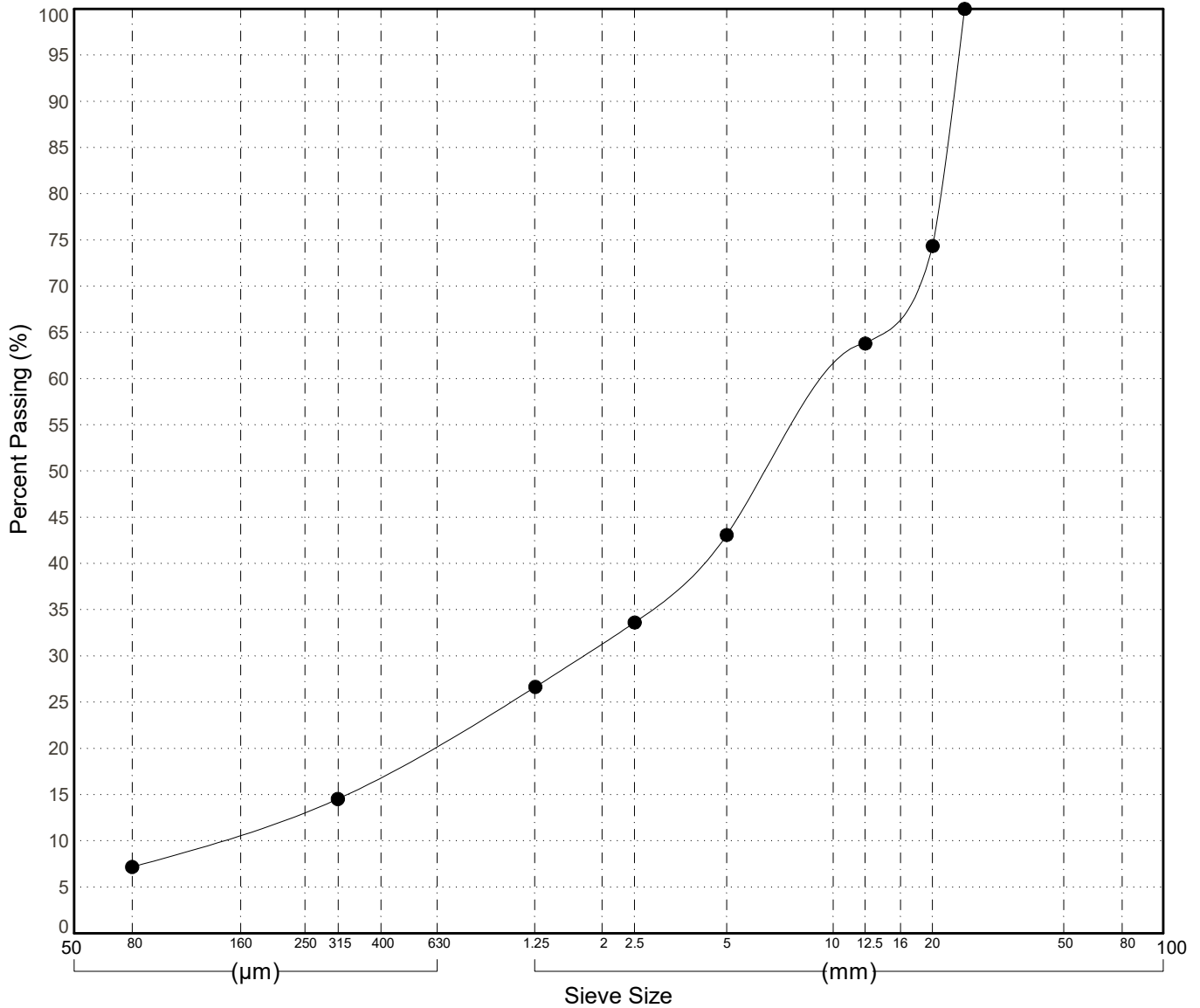


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7739
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818782m E454166m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 99	1228	0.0 to 1.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.6	NP	NP	NP	2.2	80.4	0.13										
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 99	1228	100.0	100.0	100.0	100.0	74.4	63.8	59.0	43.1	31.4	23.3	17.2	13.3	11.1	7.2	Gravel	Sand	Silt	Clay	
																56.9	35.9		7.2	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

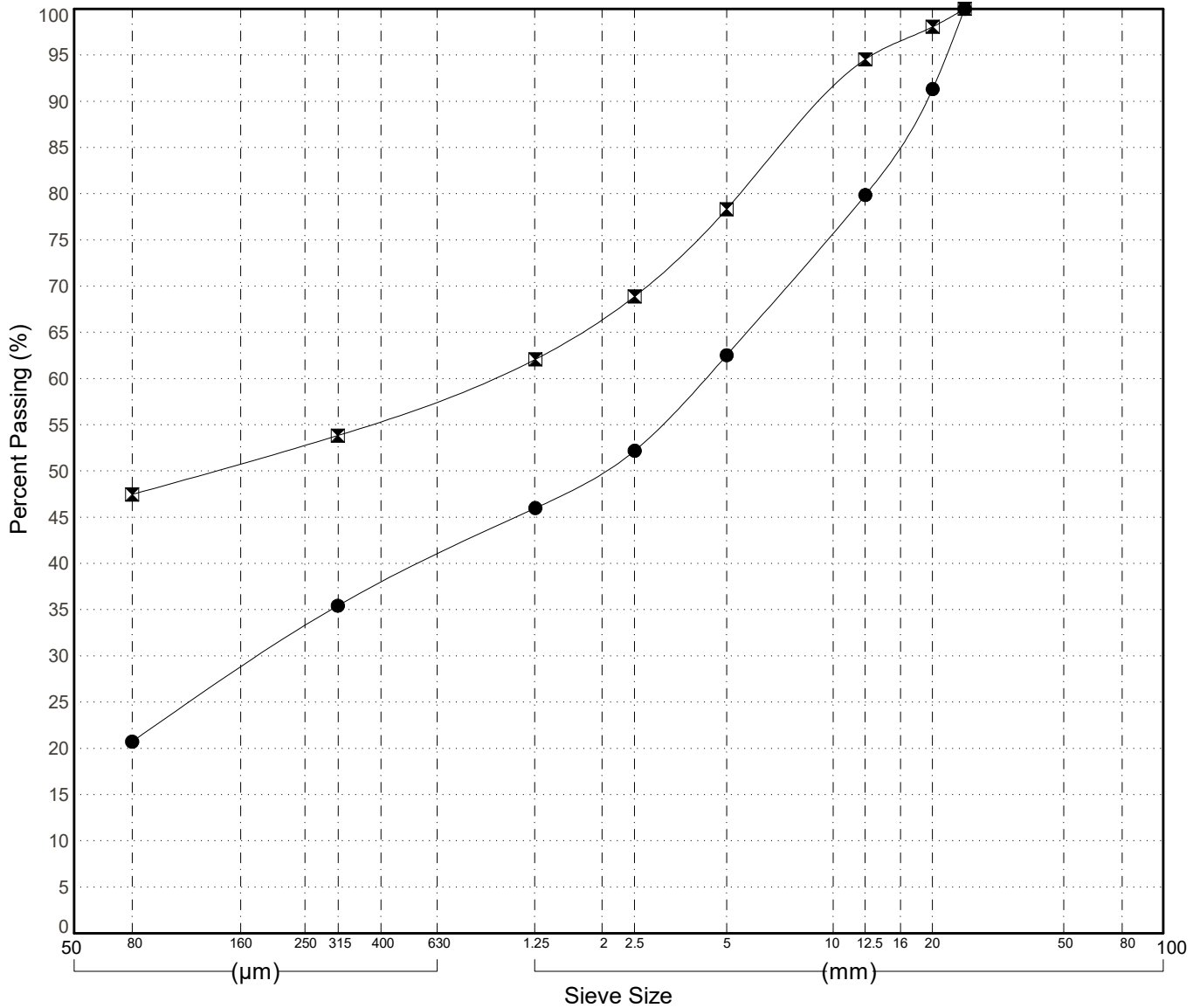


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7741
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818615m E454401m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 88	1219	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													24.2	NP	NP	NP			
☒ 89	1220	1.5 to 3.0	SILTY SAND with GRAVEL(SM)													12.1	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
● 88	1219	100.0	100.0	100.0	100.0	91.3	79.9	75.9	62.5	50.2	43.0	37.7	33.1	28.5	20.7		37.5	41.8	20.7			
☒ 89	1220	100.0	100.0	100.0	100.0	98.1	94.5	90.8	78.3	66.7	59.8	55.6	52.8	50.8	47.5		21.7	30.9	47.5			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7744
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818700m E454248m	ELEVATION: m

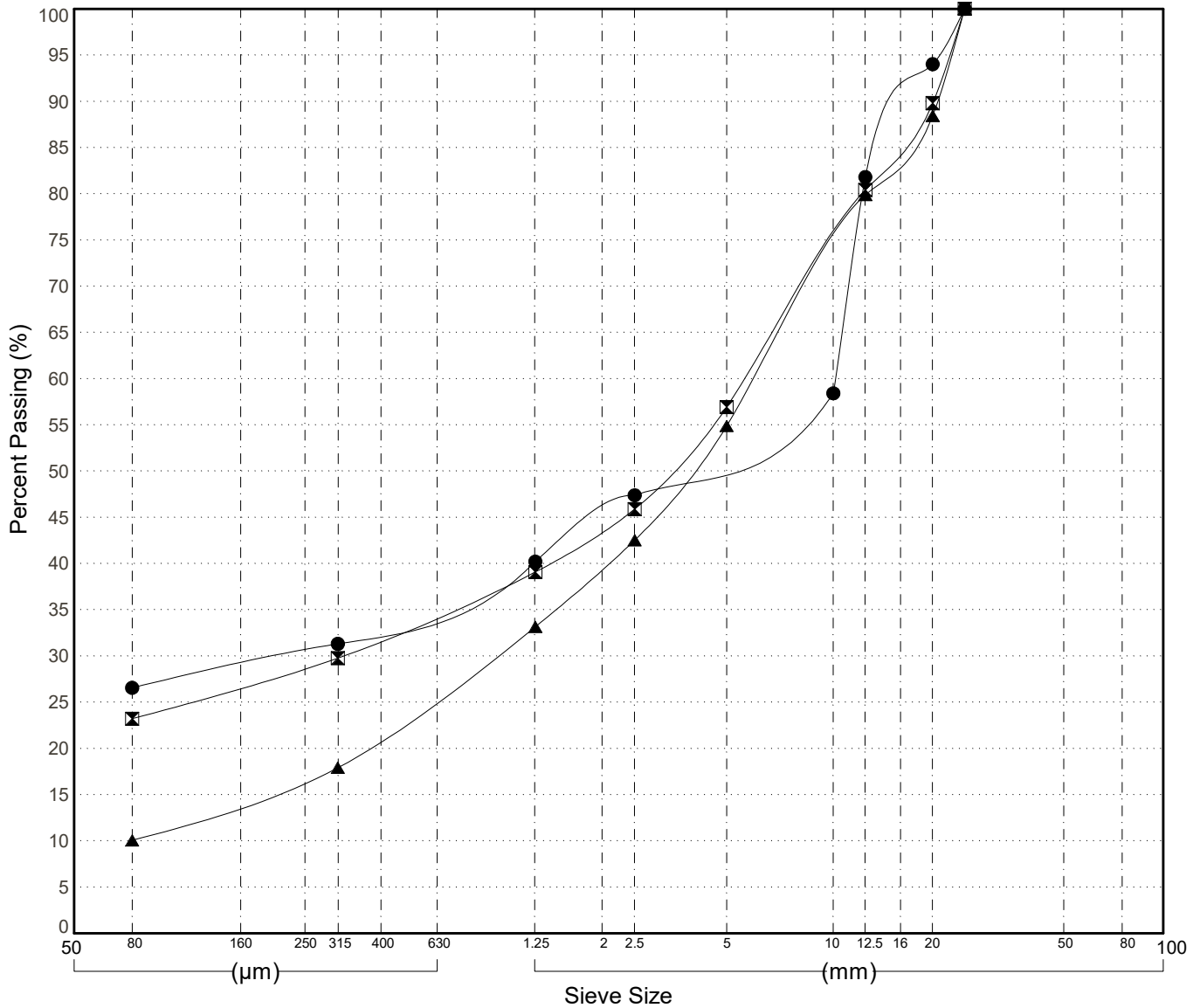
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 96	1226	0.0 to 1.5	SILTY GRAVEL with SAND(GM)	9.0	NP	NP	NP			
☒ 97	1227	1.5 to 3.0	SILTY GRAVEL with SAND(GM)	6.8	NP	NP	NP			
▲ 98	12275	3.0 to 3.5	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	4.5	NP	NP	NP	2.1	78.0	

Field #	Lab #	%PASSING															% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
●	96	1226	100.0	100.0	100.0	100.0	94.0	81.8	58.4	52.5	45.1	37.7	33.2	30.5	29.1	26.6	47.5	25.9	26.6	
☒	97	1227	100.0	100.0	100.0	100.0	89.8	80.4	75.0	56.9	43.7	36.5	31.8	28.7	26.7	23.2	43.1	33.7	23.2	
▲	98	12275	100.0	100.0	100.0	100.0	88.4	79.9	74.1	54.9	39.5	28.9	21.2	16.6	14.2	10.1	45.1	44.8	10.1	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7746
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818693m E454370m	ELEVATION: m

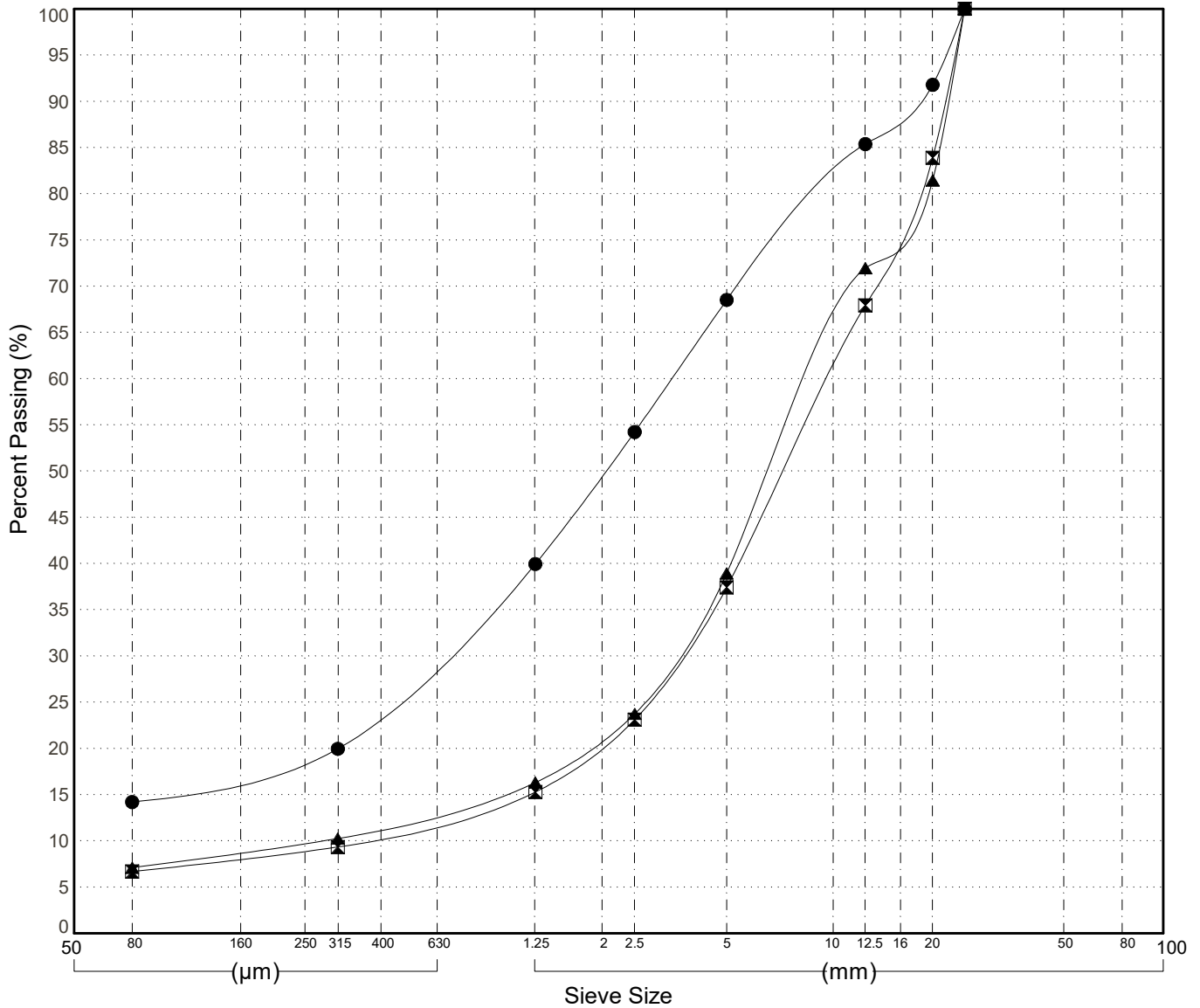
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 91	1221	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	3.4	NP	NP	NP			
☒ 92	1222	1.5 to 3.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	1.5	NP	NP	NP	3.2	26.5	0.37
▲ 93	1223	3.0 to 3.1	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.0	NP	NP	NP	4.3	31.3	0.28

Field #	Lab #	% PASSING															% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
● 91	1221	100.0	100.0	100.0	100.0	100.0	91.8	85.4	81.5	68.5	49.6	34.4	24.3	19.0	17.2	14.2	31.5	54.3	14.2	
☒ 92	1222	100.0	100.0	100.0	100.0	83.9	67.9	60.9	37.4	20.6	13.6	10.6	8.9	8.1	6.7	6.7	62.6	30.7	6.7	
▲ 93	1223	100.0	100.0	100.0	100.0	81.5	71.9	64.3	38.9	21.3	14.6	11.6	9.7	8.8	7.1	7.1	61.1	31.8	7.1	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7749
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6811133m E462764m	ELEVATION: m

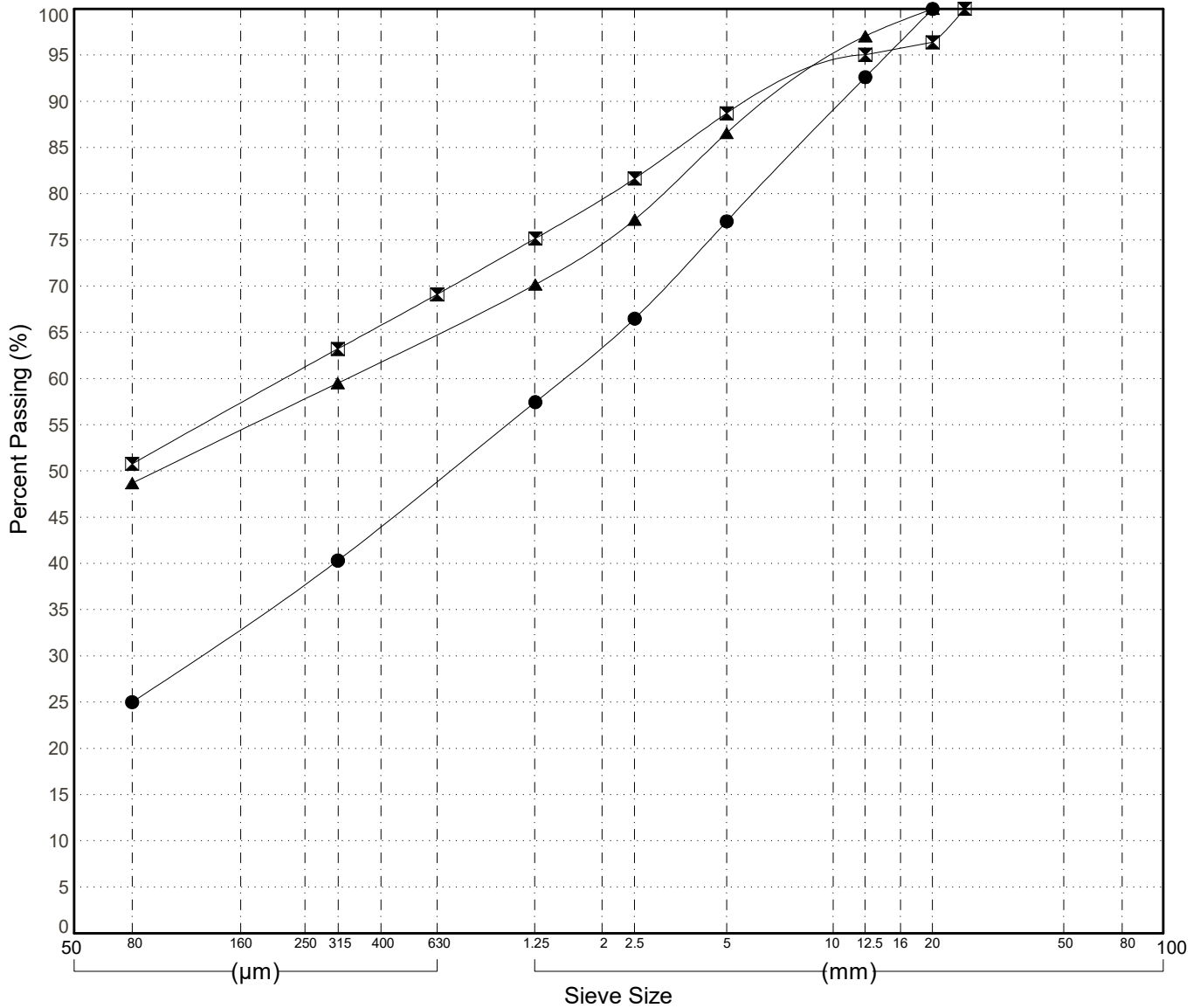
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 47	1179	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	6.4	NP	NP	NP			
☒ 48	1180	1.5 to 3.0	SANDY SILT(ML)	11.8	NP	NP	NP			
▲ 49	1181	3.0 to 4.5	SILTY SAND(SM)	8.8	NP	NP	NP			

Field #	Lab #	% PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt
● 47	1179	100.0	100.0	100.0	100.0	100.0	92.6	89.0	77.0	63.6	52.7	44.0	37.9	33.1	25.0	23.0	52.0	25.0	
☒ 48	1180	100.0	100.0	100.0	100.0	96.4	95.0	93.6	88.7	79.6	71.8	65.8	61.2	57.3	50.8	11.3	37.9	50.8	
▲ 49	1181	100.0	100.0	100.0	100.0	100.0	97.1	94.6	86.6	74.9	67.2	61.8	57.8	54.4	48.7	13.4	37.9	48.7	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

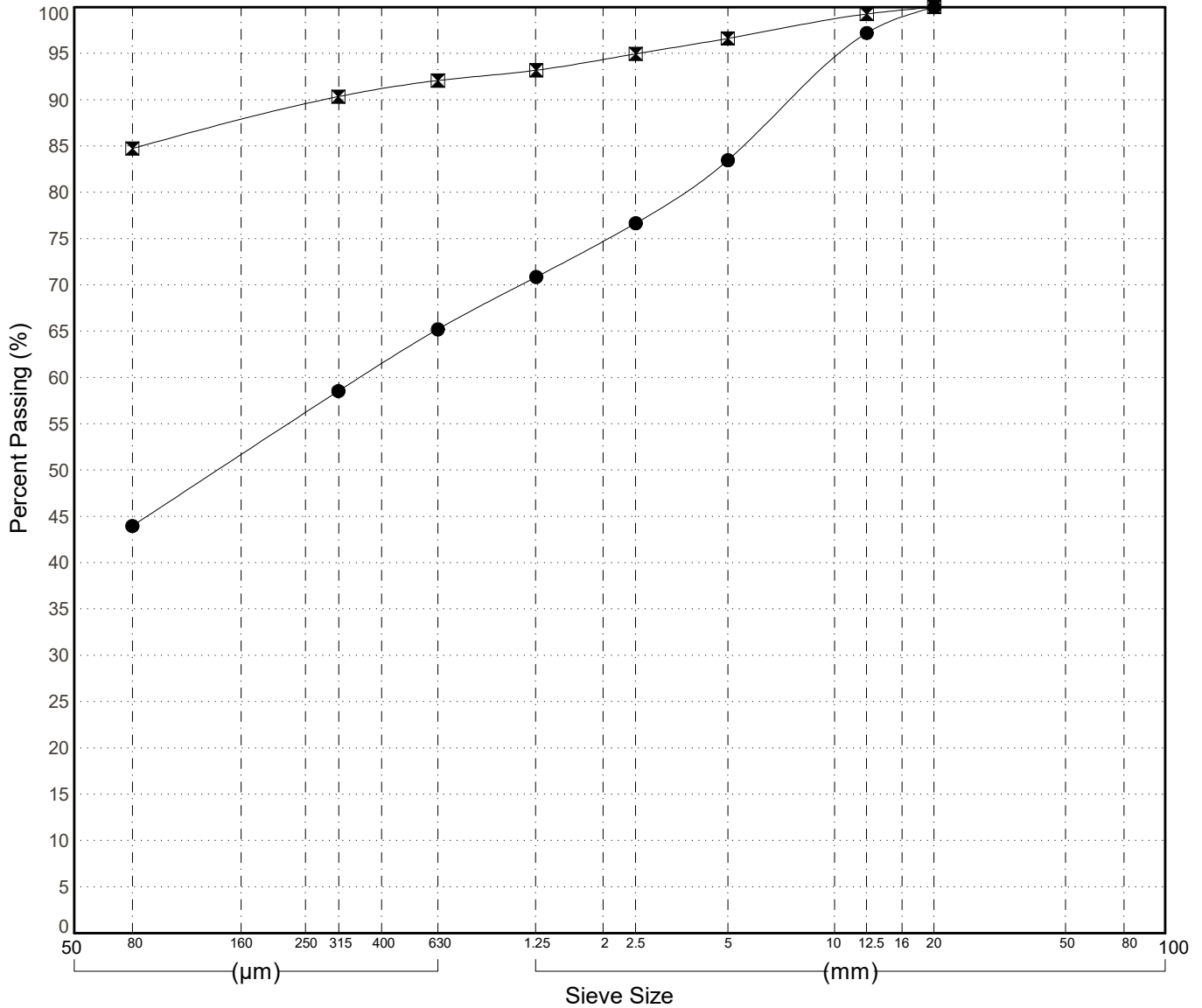


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7750
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6809913m E463935m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 16	1149	0.0 to 1.0	SILTY SAND with GRAVEL(SM)	7.2	NP	NP	NP													
☒ 17	1150	1.5 to 4.5	SILT with SAND(ML)	12.8	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 16	1149	100.0	100.0	100.0	100.0	100.0	97.2	94.0	83.5	74.8	67.7	61.4	56.2	51.7	44.0	Gravel	Sand	Silt	Clay	
☒ 17	1150	100.0	100.0	100.0	100.0	100.0	99.3	98.7	96.6	94.4	92.6	91.1	89.4	87.7	84.7	3.4	11.9		44.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

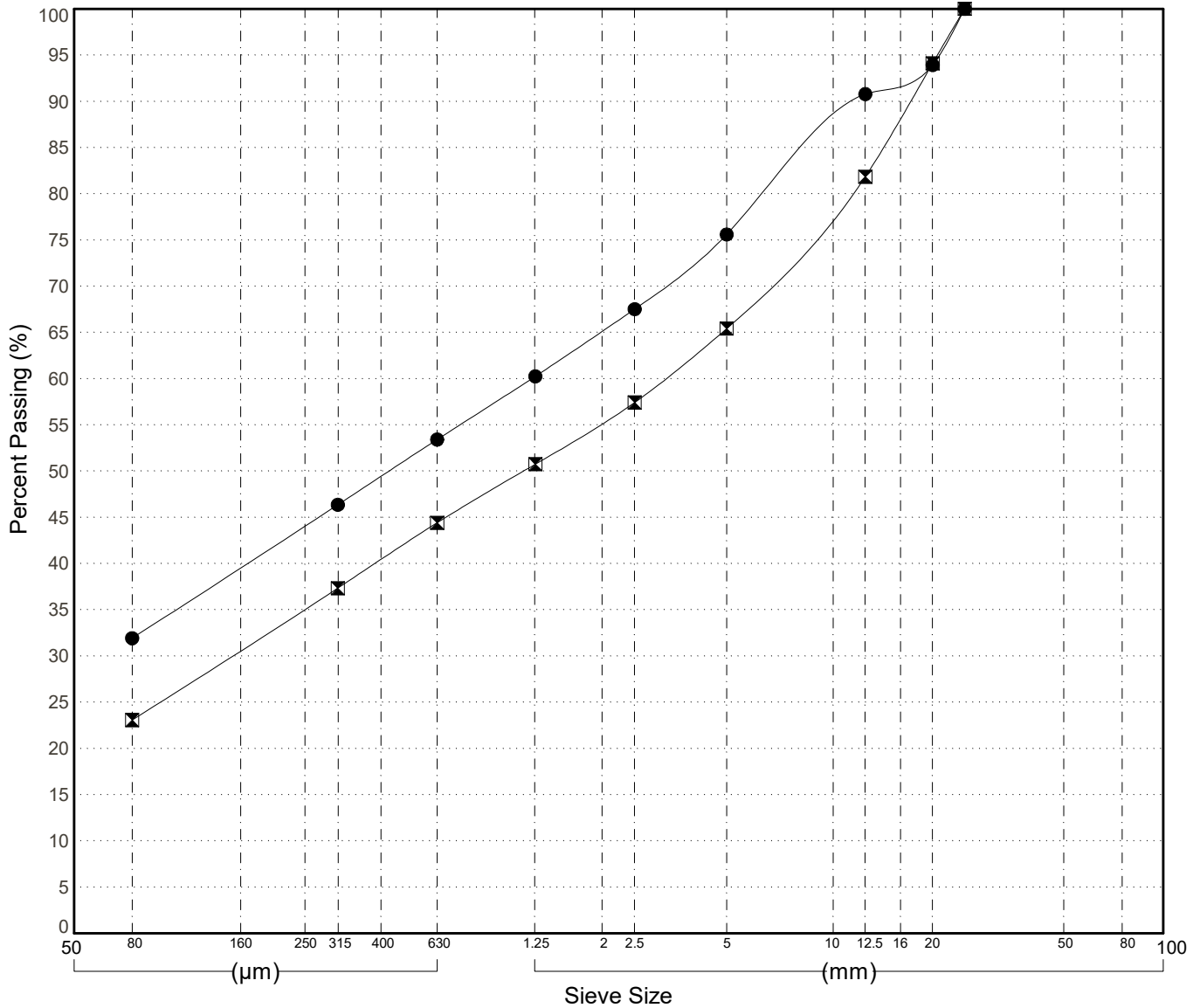


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7751
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810569m E463624m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 24	1157	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													7.1	NP	NP	NP			
☒ 25	1158	1.5 to 2.5	SILTY SAND with GRAVEL(SM)													5.4	NP	NP	NP			
Field #		Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
																	Gravel	Sand	Silt	Clay		
● 24	1157	% PASSING	100.0	100.0	100.0	100.0	93.9	90.8	87.3	75.6	65.2	56.4	49.4	44.0	39.5	31.9	24.4	43.7	31.9			
☒ 25	1158		100.0	100.0	100.0	100.0	94.1	81.8	78.1	65.4	55.3	47.2	40.4	35.0	30.6	23.1	34.6	42.3	23.1			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

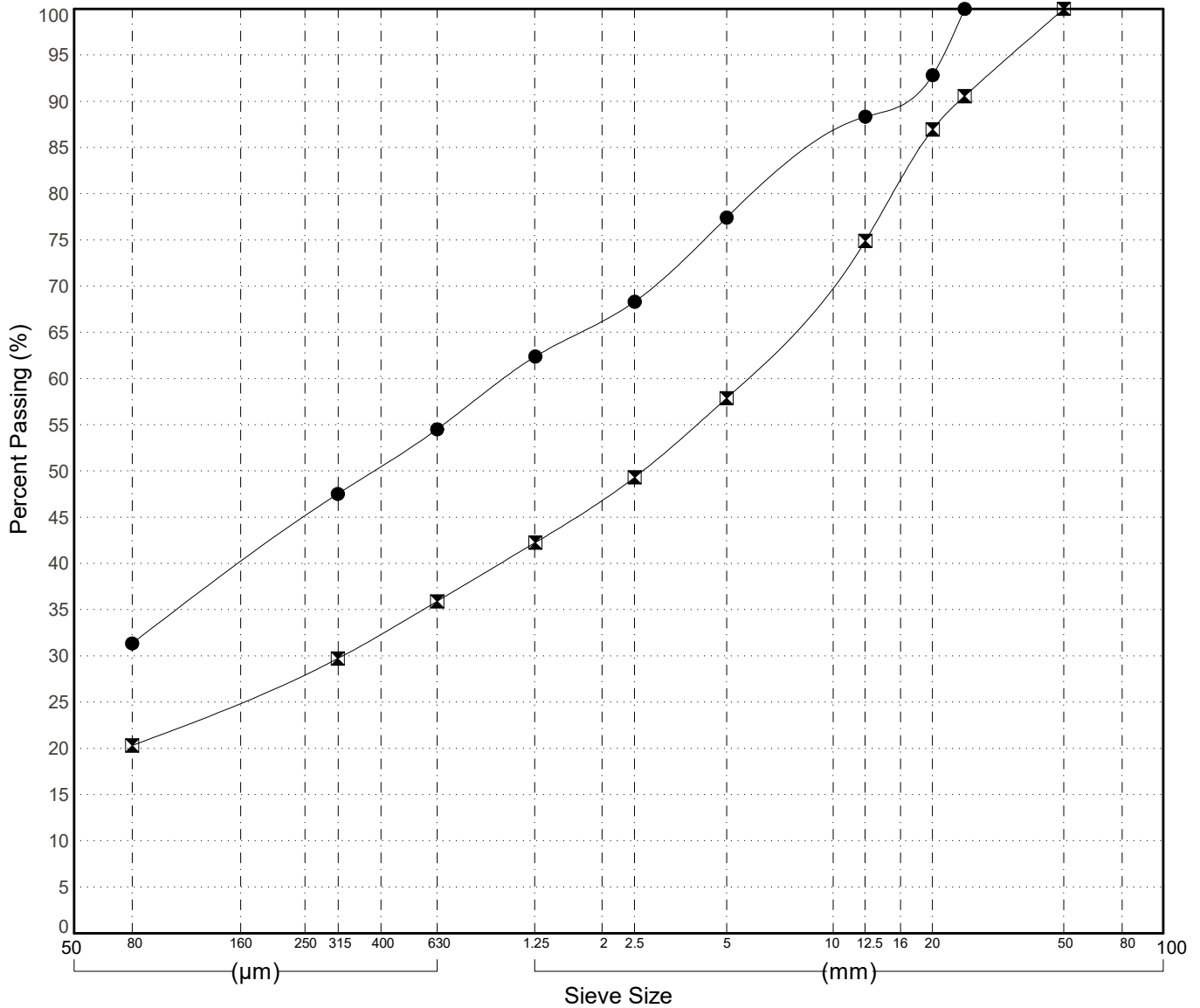


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7752
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810790m E463165m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 30	1163	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	10.1	NP	NP	NP													
☒ 31	11625	2.0 to 3.0	SILTY GRAVEL with SAND(GM)	6.1	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 30	1163	100.0	100.0	100.0	100.0	92.8	88.3	85.8	77.4	66.4	58.0	50.6	44.9	39.9	31.4	Gravel	Sand	Silt	Clay	
☒ 31	11625	100.0	100.0	100.0	90.6	87.0	74.9	71.0	57.9	47.1	38.7	32.4	28.2	25.3	20.3	42.1	37.6	20.3		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

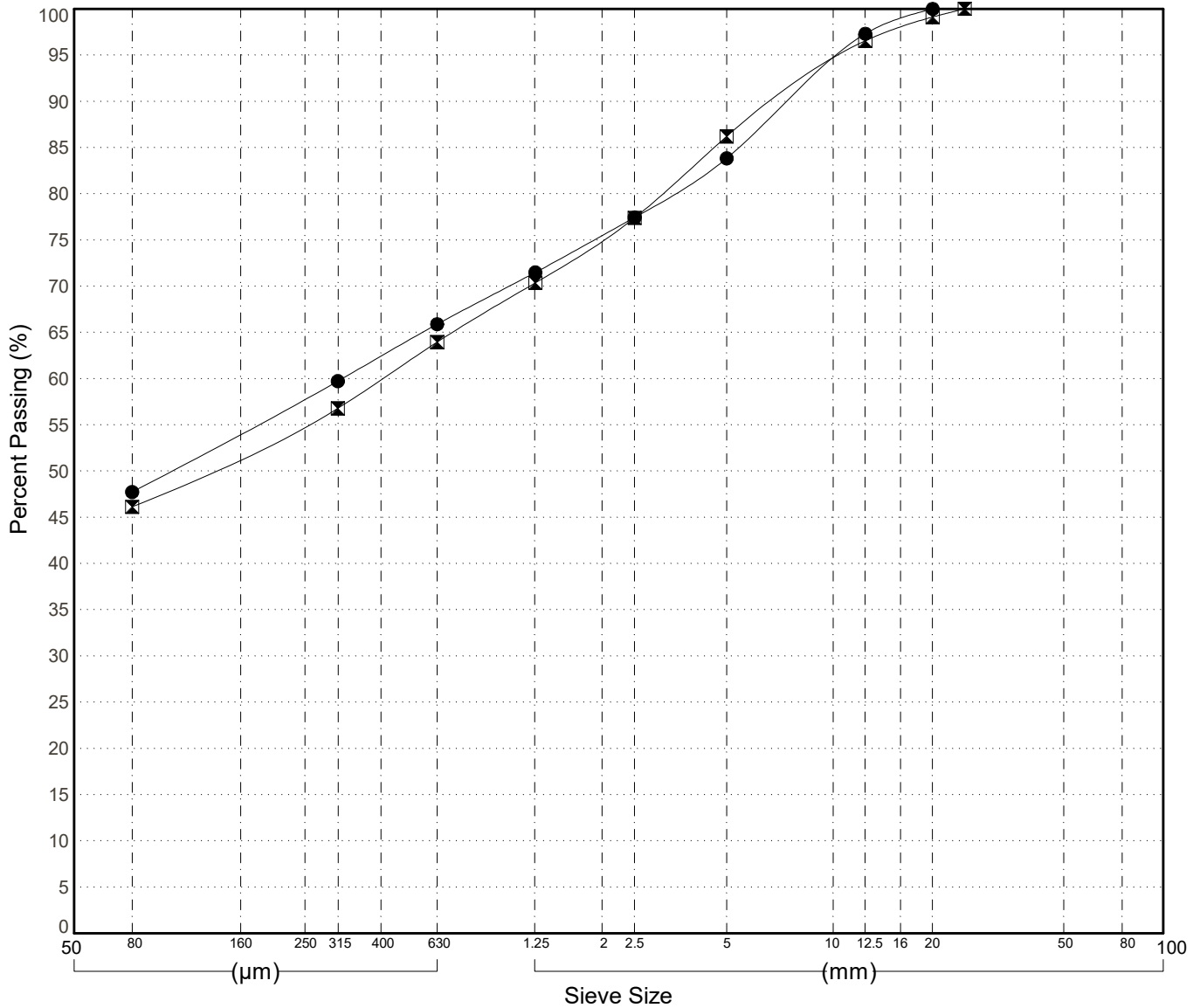


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7753
Gateway Drilling	km 174 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6809999m E463957m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 18	1151	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													8.6	NP	NP	NP			
☒ 19	1152	1.5 to 3.0	SILTY SAND(SM)													8.6	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 18	1151	100.0	100.0	100.0	100.0	100.0	97.3	94.2	83.8	75.5	68.3	62.4	57.8	54.1	47.7	Gravel	Sand	Silt	Clay			
☒ 19	1152	100.0	100.0	100.0	100.0	99.1	96.6	94.2	86.2	75.1	66.8	59.9	55.1	51.8	46.1	16.2	36.1	47.7				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

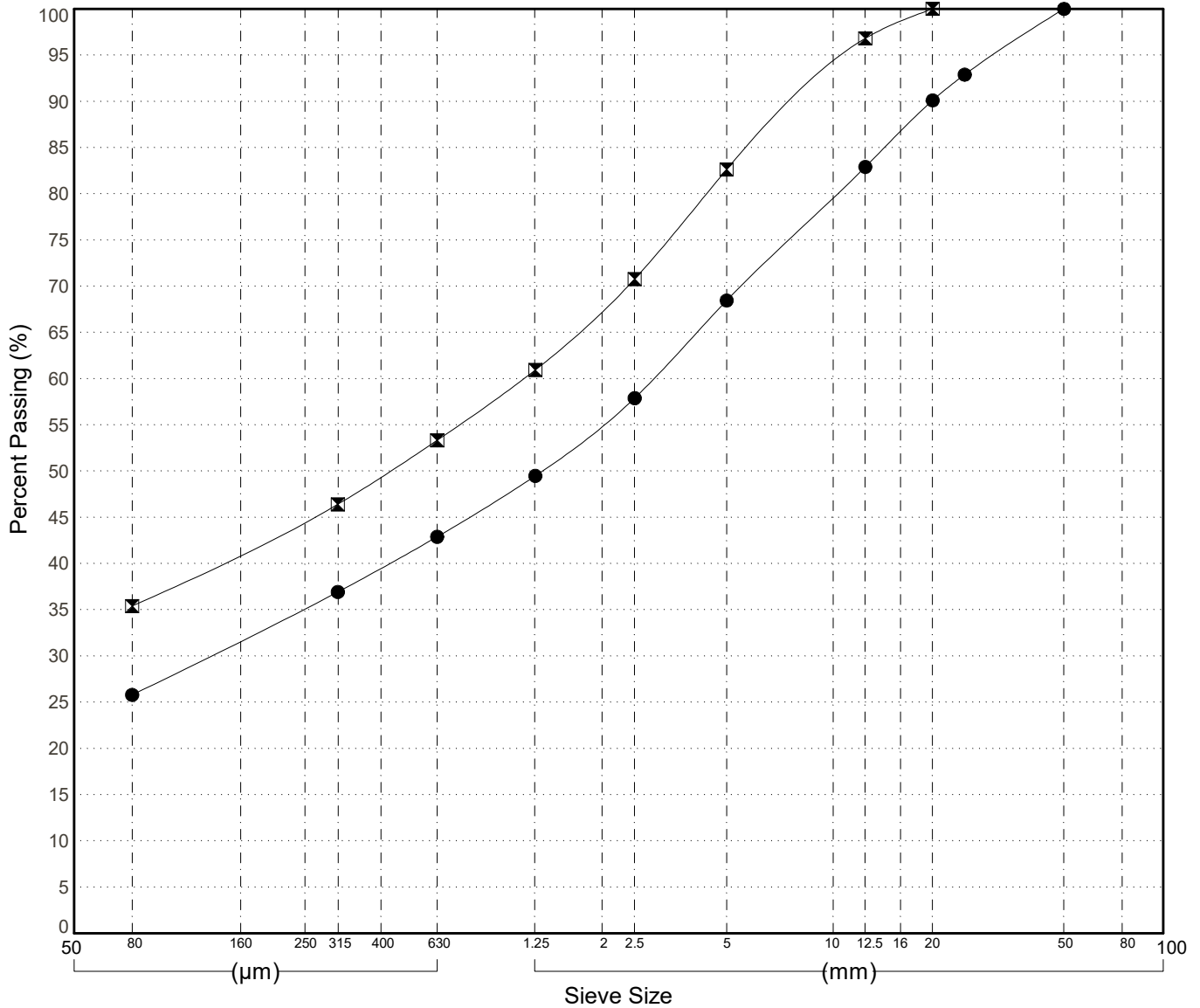


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7754
Gateway Drilling	km 174 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810543m E463642m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 22	1155	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													7.0	NP	NP	NP			
☒ 23	1156	1.5 to 3.0	SILTY SAND with GRAVEL(SM)													10.0	NP	NP	NP			
Field #	Lab #	%PASSING													% Breakdown							
● 22	1155	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay			
☒ 23	1156	100.0	100.0	100.0	100.0	100.0	96.8	93.5	82.6	67.6	56.7	49.4	44.6	41.2	35.4	17.4	47.2	25.8	25.8			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7755
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810765m E463202m	ELEVATION: m

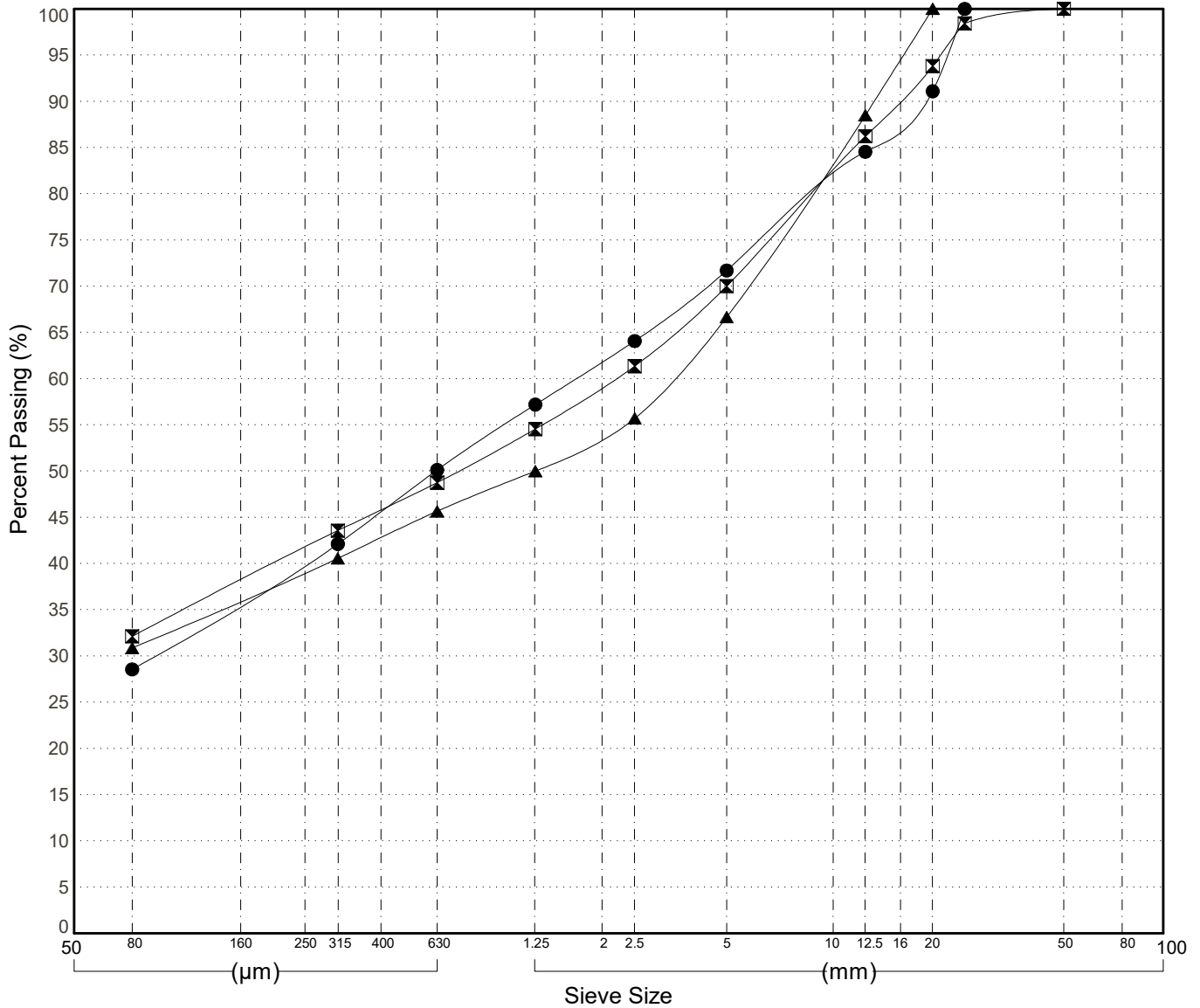
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 32	1164	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	7.4	NP	NP	NP			
☒ 33	1165	1.5 to 3.0	SILTY SAND with GRAVEL(SM)	6.3	NP	NP	NP			
▲ 34	1166	3.0 to 4.0	SILTY SAND with GRAVEL(SM)	6.1	NP	NP	NP			

Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
		% PASSING														Gravel	Sand	Silt	Clay
● 32	1164	100.0	100.0	100.0	100.0	91.1	84.5	81.6	71.7	61.9	53.2	45.6	39.9	35.7	28.5	28.3	43.1	28.5	
☒ 33	1165	100.0	100.0	100.0	98.4	93.8	86.2	82.5	70.0	59.2	51.3	45.8	41.7	38.2	32.1	30.0	37.9	32.1	
▲ 34	1166	100.0	100.0	100.0	100.0	100.0	88.5	83.4	66.6	53.9	47.6	42.8	39.0	36.0	30.9	33.4	35.8	30.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

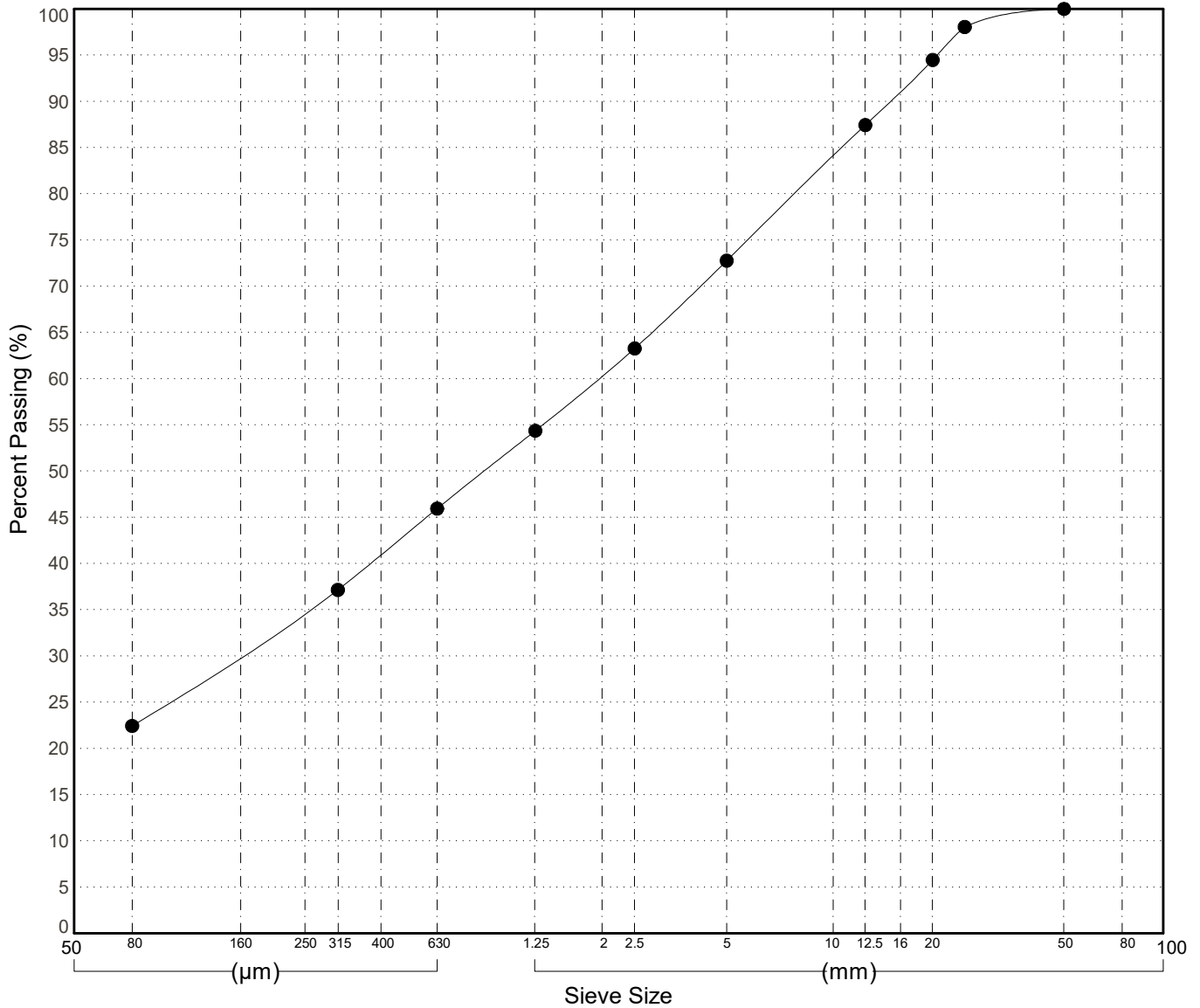


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7756
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810083m E463192m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 26	1159	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													4.2	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 26	1159	100.0	100.0	100.0	98.0	94.5	87.4	84.1	72.8	60.4	49.6	40.9	34.8	30.2	22.4	Gravel	Sand	Silt	Clay			
																27.2	50.3		22.4			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7757
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810735m E463159m	ELEVATION: m

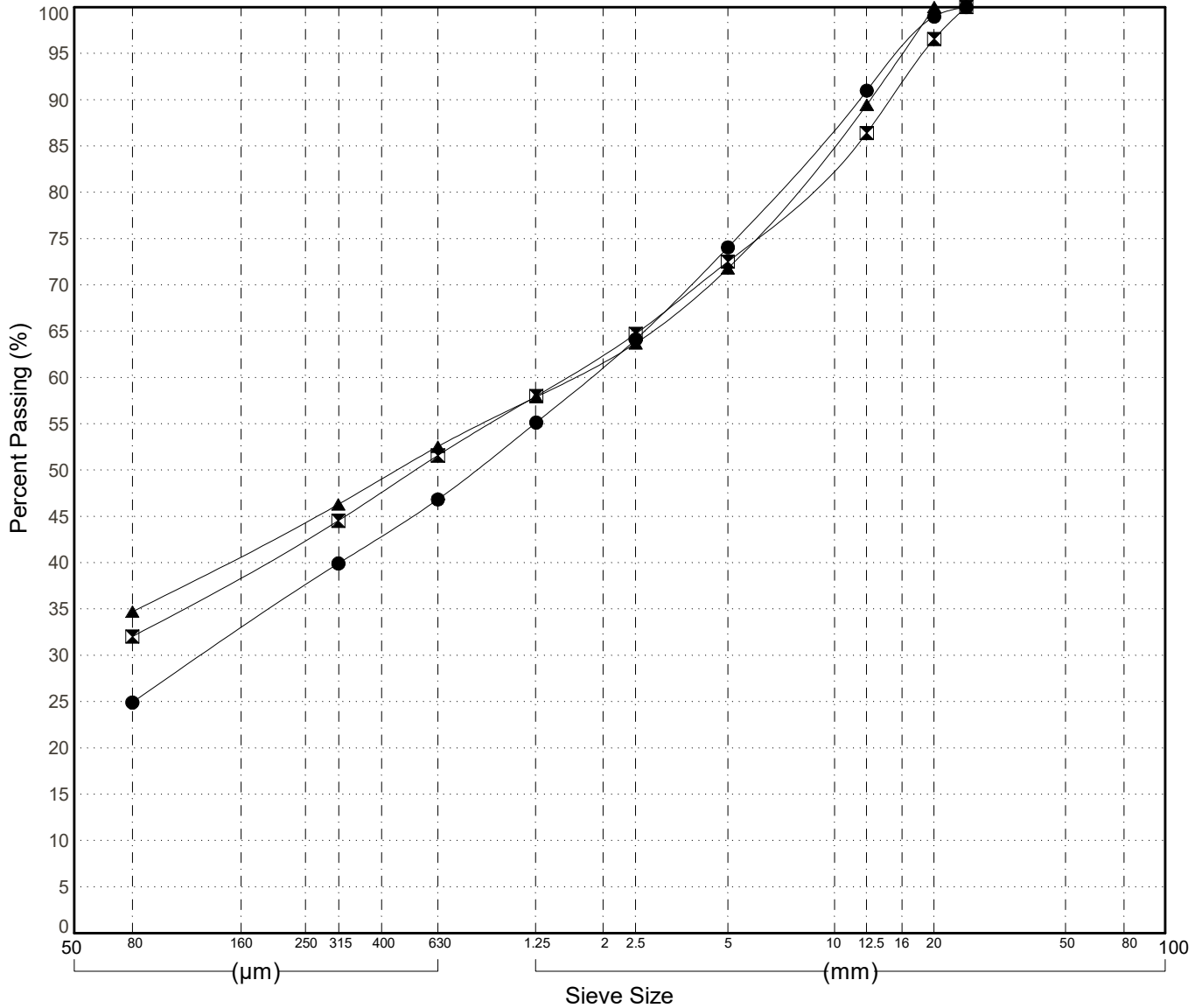
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 27	1160	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	6.5	NP	NP	NP			
☒ 28	1161	1.5 to 3.0	SILTY SAND with GRAVEL(SM)	7.8	NP	NP	NP			
▲ 29	1162	3.0 to 4.0	SILTY SAND with GRAVEL(SM)	7.2	NP	NP	NP			

Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
		% PASSING														Gravel	Sand	Silt	Clay
● 27	1160	100.0	100.0	100.0	100.0	99.0	91.0	87.1	74.1	61.2	50.5	42.9	37.5	32.8	24.9	25.9	49.2	24.9	
☒ 28	1161	100.0	100.0	100.0	100.0	96.6	86.4	83.2	72.5	62.6	54.4	47.6	42.5	38.6	32.0	27.5	40.5	32.0	
▲ 29	1162	100.0	100.0	100.0	100.0	100.0	89.5	85.4	71.8	61.8	54.9	49.0	44.4	40.8	34.7	28.2	37.1	34.7	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7758
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6811194m E462766m	ELEVATION: m

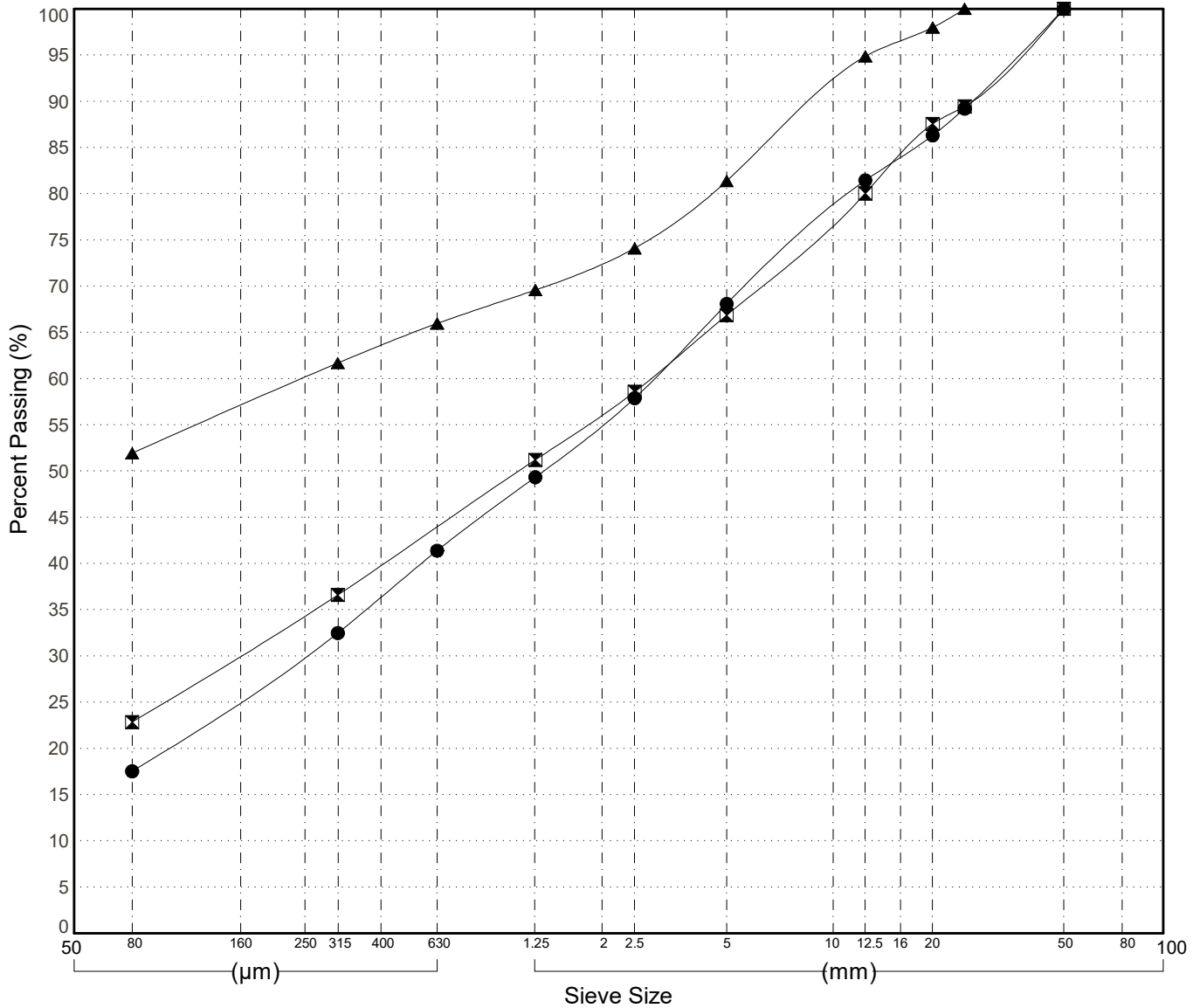
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 42	1174	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	4.2	NP	NP	NP			
☒ 43	1175	1.5 to 3.0	SILTY SAND with GRAVEL(SM)	5.1	NP	NP	NP			
▲ 44	1176	3.0 to 4.5	SANDY SILT with GRAVEL(ML)	9.6	NP	NP	NP			

Field #	Lab #	%PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
			Gravel	Sand	Silt	Clay														
●	42	1174	100.0	100.0	100.0	89.2	86.3	81.4	78.4	68.1	55.1	44.9	36.3	30.1	25.4	17.5	31.9	50.6	17.5	
☒	43	1175	100.0	100.0	100.0	89.4	87.6	80.0	77.0	66.9	56.2	47.1	39.8	34.4	30.1	22.9	33.1	44.0	22.9	
▲	44	1176	100.0	100.0	100.0	100.0	98.0	94.9	91.8	81.4	72.7	67.5	63.5	60.1	57.1	51.9	18.6	29.4	51.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

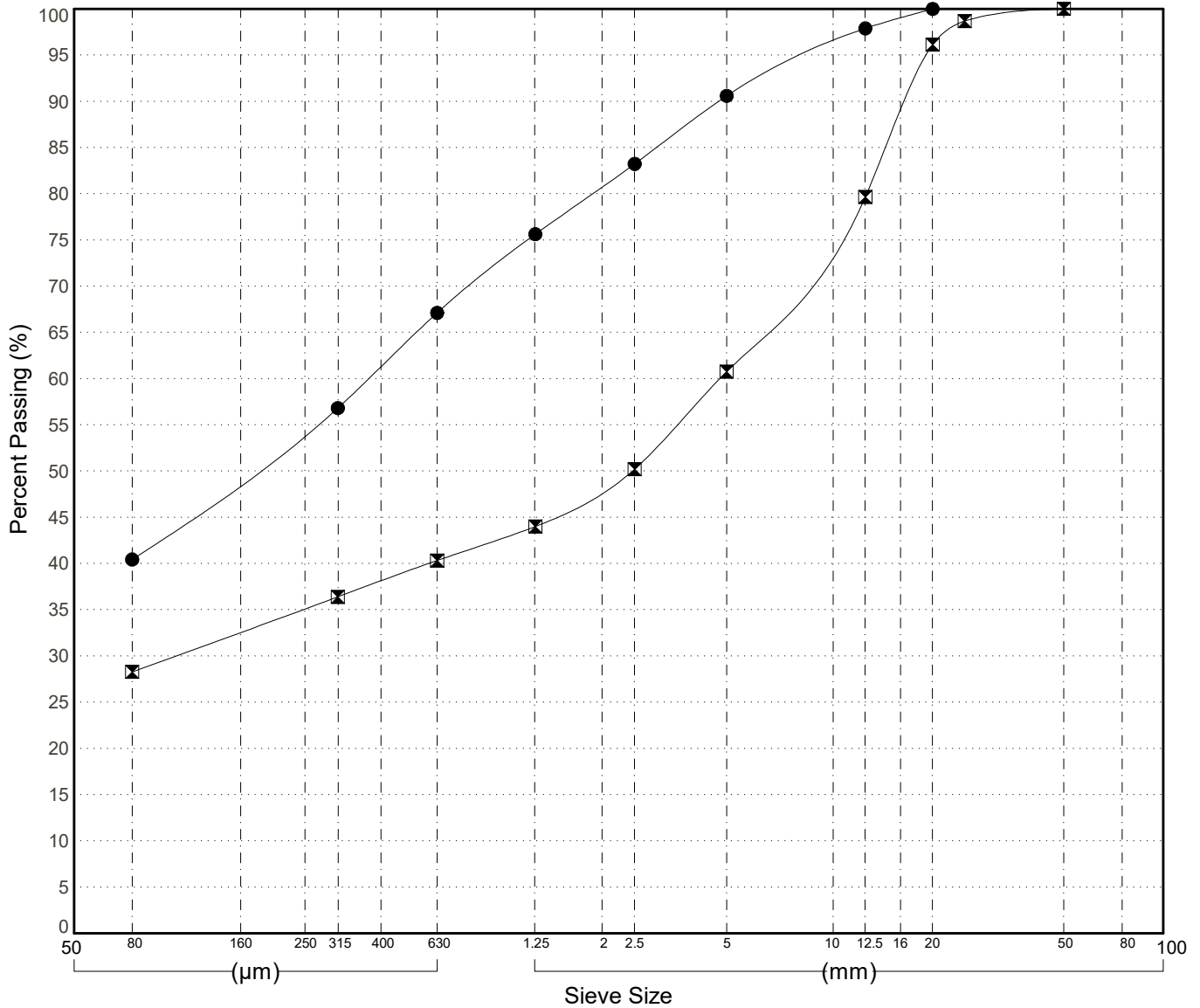


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7759
Gateway Drilling	km 174 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810102m E463885m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 20	1153	0.0 to 1.5	SILTY SAND(SM)	15.5	NP	NP	NP													
☒ 21	1154	3.0 to 4.5	SILTY GRAVEL with SAND(GM)	5.6	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 20	1153	100.0	100.0	100.0	100.0	100.0	97.9	96.2	90.6	80.8	70.8	61.3	54.2	49.1	40.4	Gravel	Sand	Silt	Clay	
☒ 21	1154	100.0	100.0	100.0	98.7	96.1	79.7	75.3	60.8	48.2	41.9	38.1	35.1	32.6	28.3	39.2	32.5	28.3		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

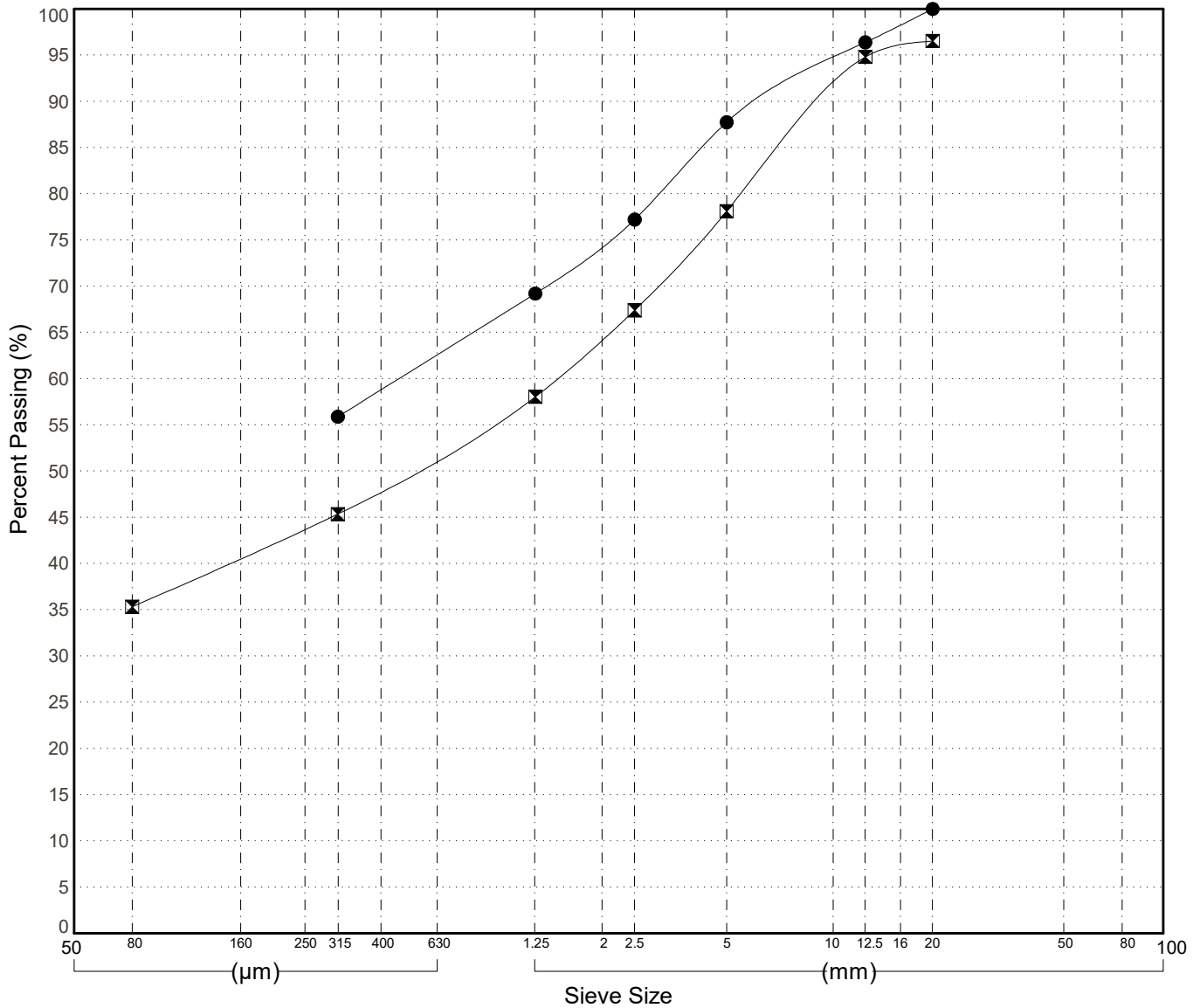


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7760
Gateway Drilling	km 185 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6817469m E457284m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 84	1215	0.0 to 1.5														9.1	NP	NP	NP			
☒ 85	1216	1.5 to 3.0	SILTY SAND with GRAVEL(SM)													6.5	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
			Gravel	Sand	Silt	Clay																
● 84	1215	100.0	100.0	100.0	100.0	100.0	96.4	94.4	87.7	74.6	65.5	58.8	100.0	100.0	100.0	12.3						
☒ 85	1216	100.0	100.0	100.0	100.0	96.5	94.8	91.0	78.1	64.4	54.5	48.1	43.7	40.6	35.3	18.4	42.8	35.3				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

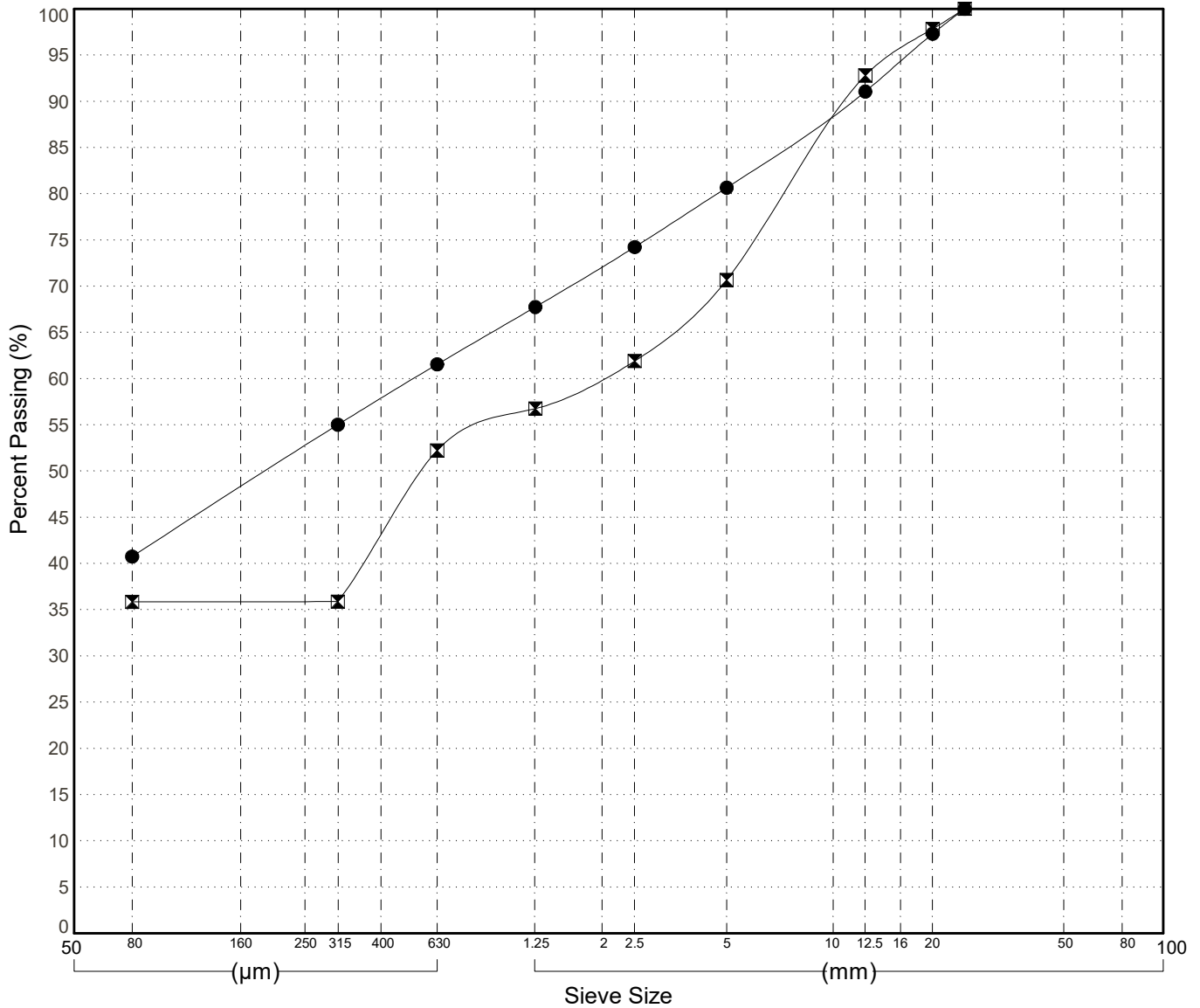


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7761
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810706m E463201m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 35	1167	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													10.3	NP	NP	NP			
☒ 36	1168	1.5 to 1.6	SILTY SAND with GRAVEL(SM)													7.6	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
● 35	1167		100.0	100.0	100.0	100.0	97.3	91.1	88.7	80.7	72.1	64.3	57.8	52.7	48.3	40.8	19.3	39.9	40.8			
☒ 36	1168		100.0	100.0	100.0	100.0	97.8	92.8	87.7	70.7	60.2	54.2	42.9	35.9	35.9	35.9	29.3	34.8	35.9			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7762
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807204m E465517m	ELEVATION: m

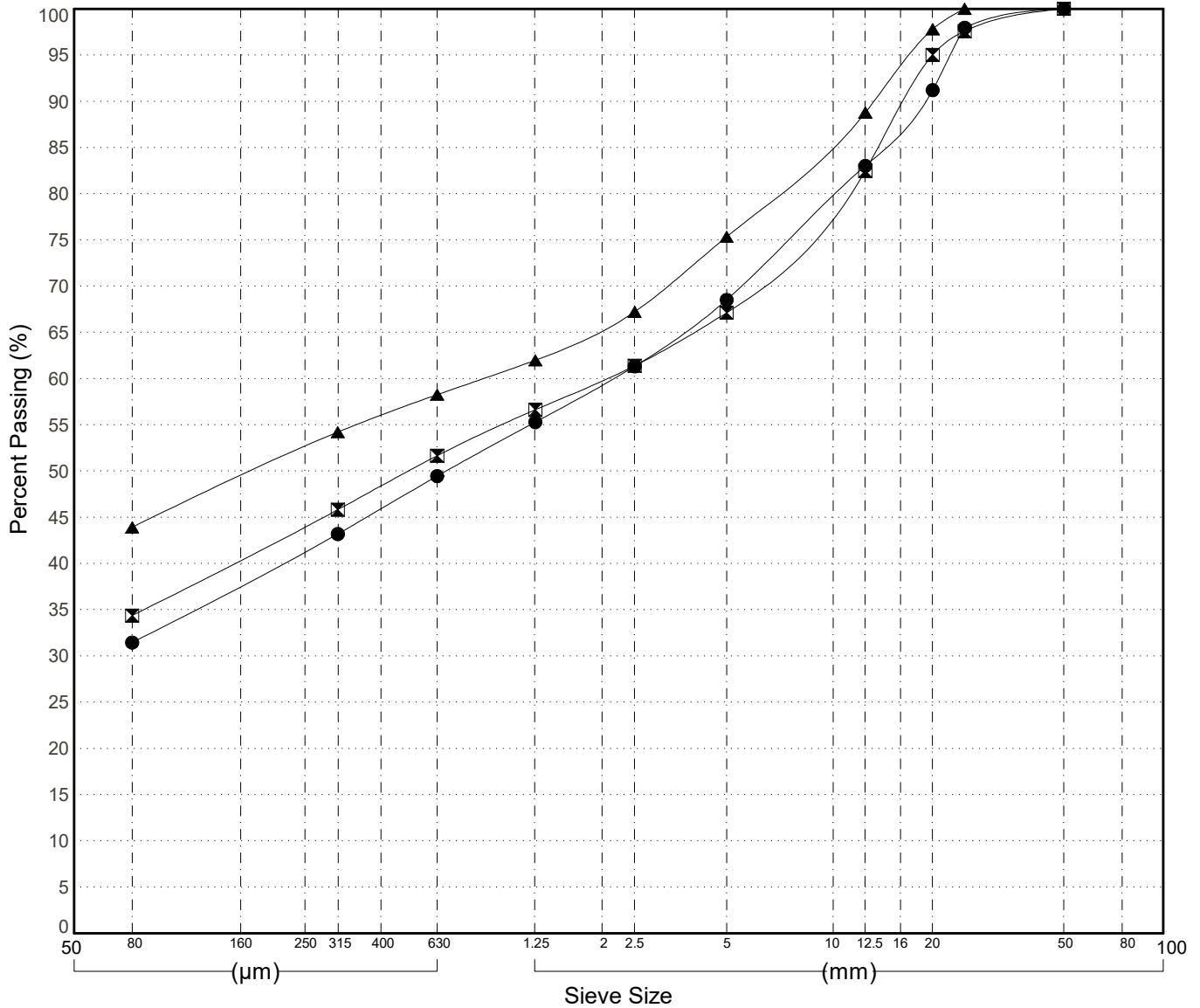
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 13	1146	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	8.1	NP	NP	NP			
☒ 14	1147	2.0 to 3.0	SILTY GRAVEL with SAND(GM)	13.0	NP	NP	NP			
▲ 15	1148	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	8.1	NP	NP	NP			

Field #	Lab #	%PASSING														% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
● 13	1146	100.0	100.0	100.0	100.0	98.0	91.2	83.0	79.7	68.5	59.4	52.0	45.9	41.3	37.7	31.4	31.5	37.1	31.4	
☒ 14	1147	100.0	100.0	100.0	97.6	95.0	82.5	78.9	67.1	59.9	53.8	48.3	44.0	40.4	34.4	34.4	32.9	32.8	34.4	
▲ 15	1148	100.0	100.0	100.0	100.0	97.8	88.8	85.7	75.4	65.5	59.9	56.0	52.6	49.4	43.9	43.9	24.6	31.4	43.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

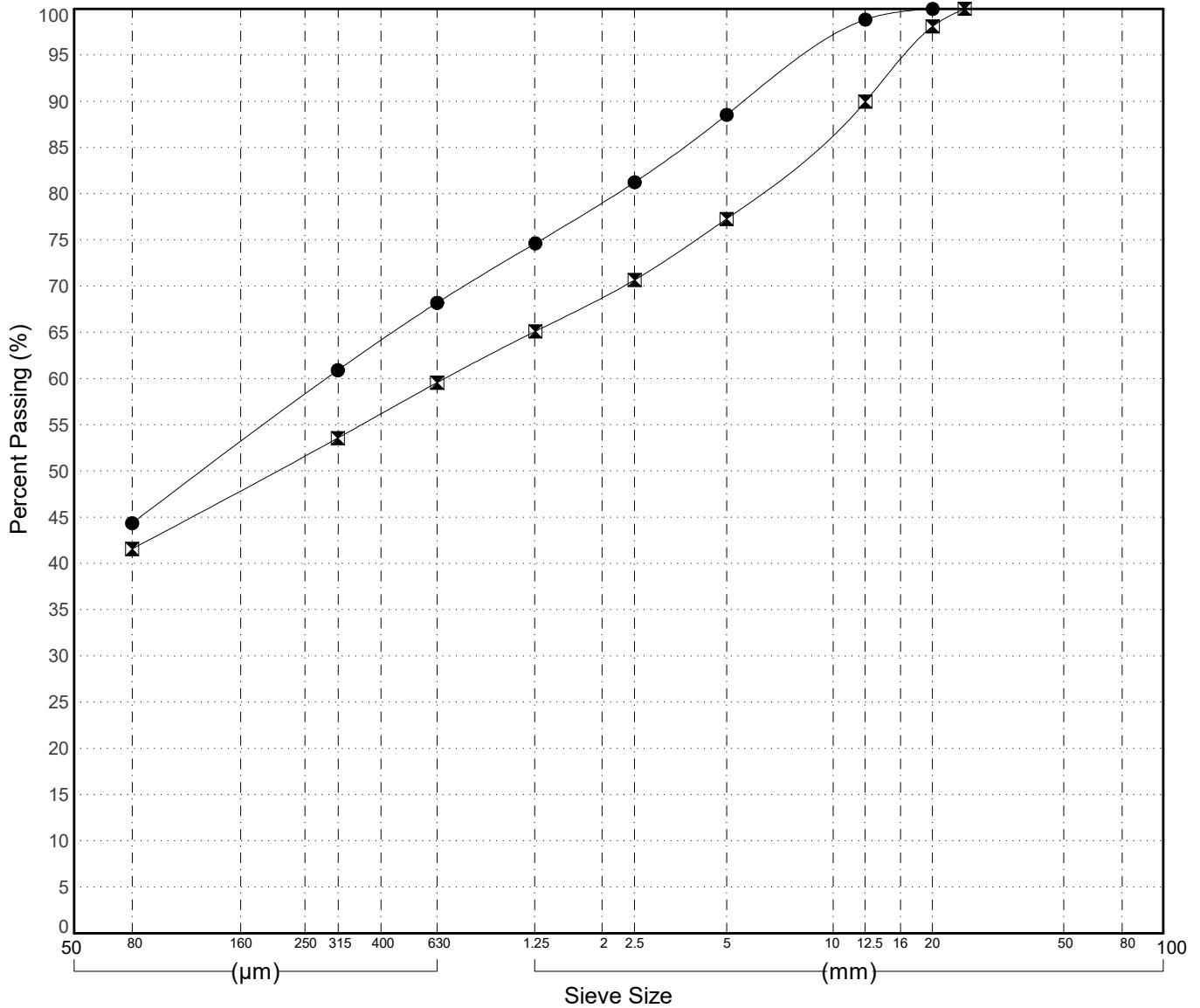


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7763
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810708m E463262m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu	D10
● 37	1169	0.0 to 1.5	SILTY SAND(SM)											12.1	NP	NP	NP			
☒ 38	1170	1.5 to 3.0	SILTY SAND with GRAVEL(SM)											8.8	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
																	Gravel	Sand	Silt	Clay
● 37	1169	100.0	100.0	100.0	100.0	100.0	98.8	96.5	88.5	79.1	71.0	64.1	58.2	53.1	44.4	11.5	44.2	44.4		
☒ 38	1170	100.0	100.0	100.0	100.0	98.1	90.0	87.0	77.3	68.9	62.0	56.2	51.6	47.9	41.6	22.7	35.7	41.6		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

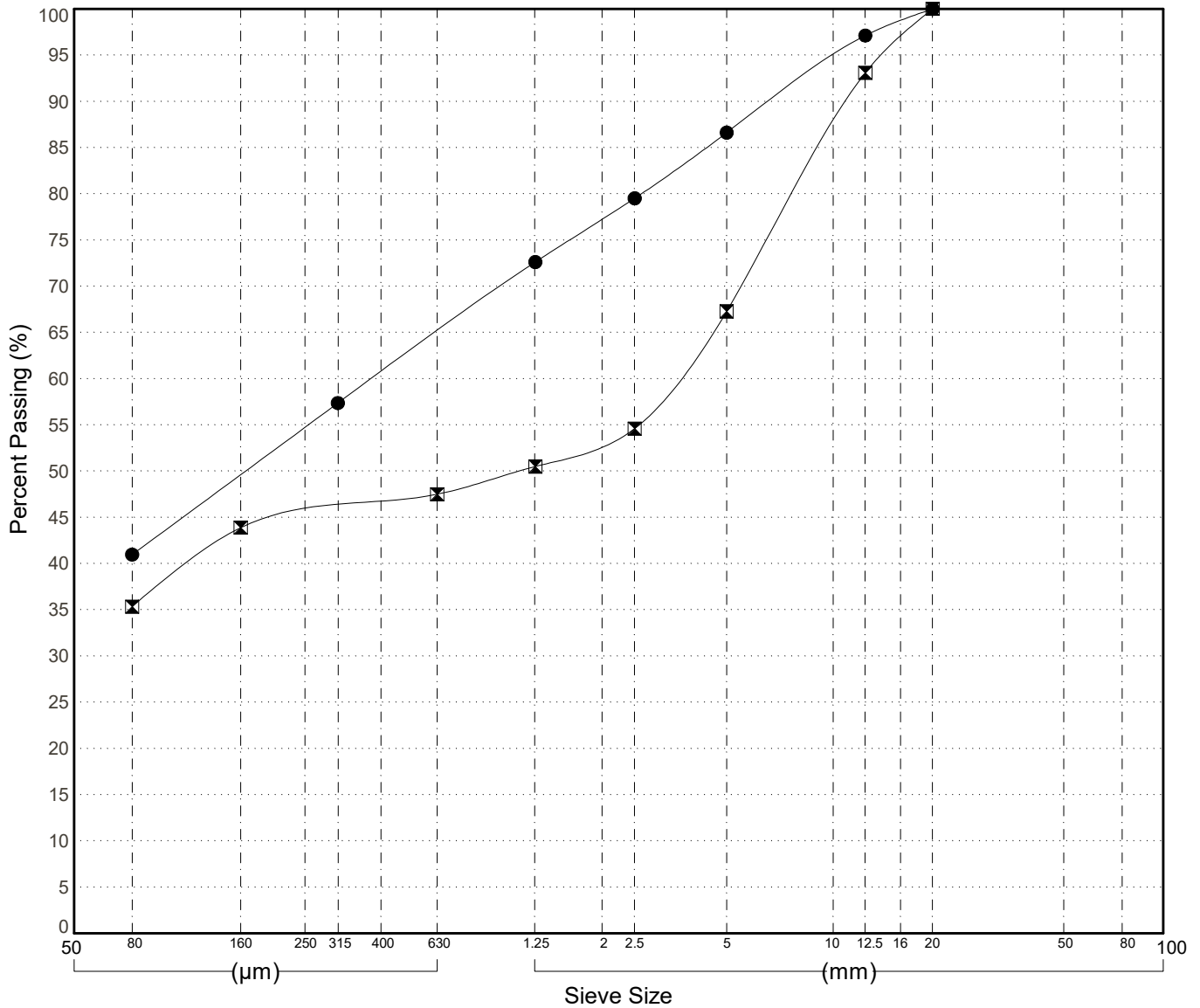


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7764
Gateway Drilling	km 175 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6810653m E463218m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 39	1171	0.0 to 1.5	SILTY SAND(SM)													10.0	NP	NP	NP			
☒ 40	1172	3.0 to 4.0	SILTY GRAVEL with SAND(GM)													7.3	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
● 39	1171	100.0	100.0	100.0	100.0	100.0	97.1	94.7	86.6	77.3	68.3	60.7	54.7	49.6	41.0		13.4	45.6	41.0			
☒ 40	1172	100.0	100.0	100.0	100.0	100.0	93.1	87.1	67.3	53.3	48.8	46.5	45.1	43.9	35.3		32.7	31.9	35.3			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7765
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807429m E465820m	ELEVATION: m

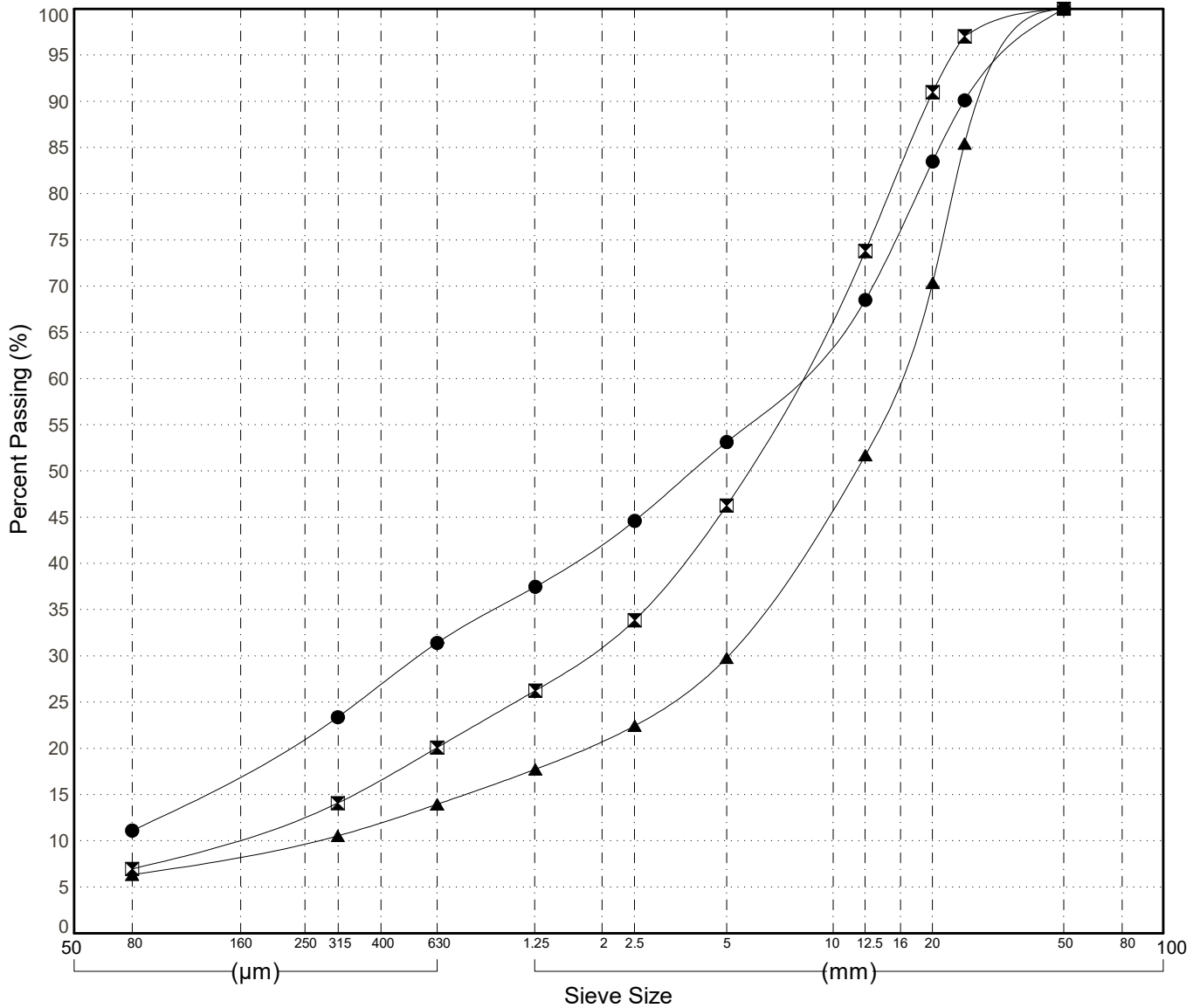
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 1	1136	0.0 to 1.5	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.9	NP	NP	NP	0.6	111.0	
☒ 2	1137	1.5 to 3.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.3	NP	NP	NP	2.9	55.6	0.14
▲ 3	11375	3.0 to 4.5	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	2.9	NP	NP	NP	5.7	58.7	0.26

Field #	Lab #	%PASSING	Sieve Size (mm)													% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
● 1	1136	100.0	100.0	100.0	100.0	90.1	83.5	68.5	65.0	53.1	42.3	34.1	26.8	21.4	17.6	11.1	46.9	42.0	11.1	
☒ 2	1137	100.0	100.0	100.0	97.0	91.0	73.8	67.5	46.3	31.4	22.8	16.7	12.9	10.7	7.0	53.7	39.3	7.0		
▲ 3	11375	100.0	100.0	100.0	85.4	70.4	51.7	46.7	29.8	20.9	15.6	12.0	9.9	8.6	6.3	70.2	23.4	6.3		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

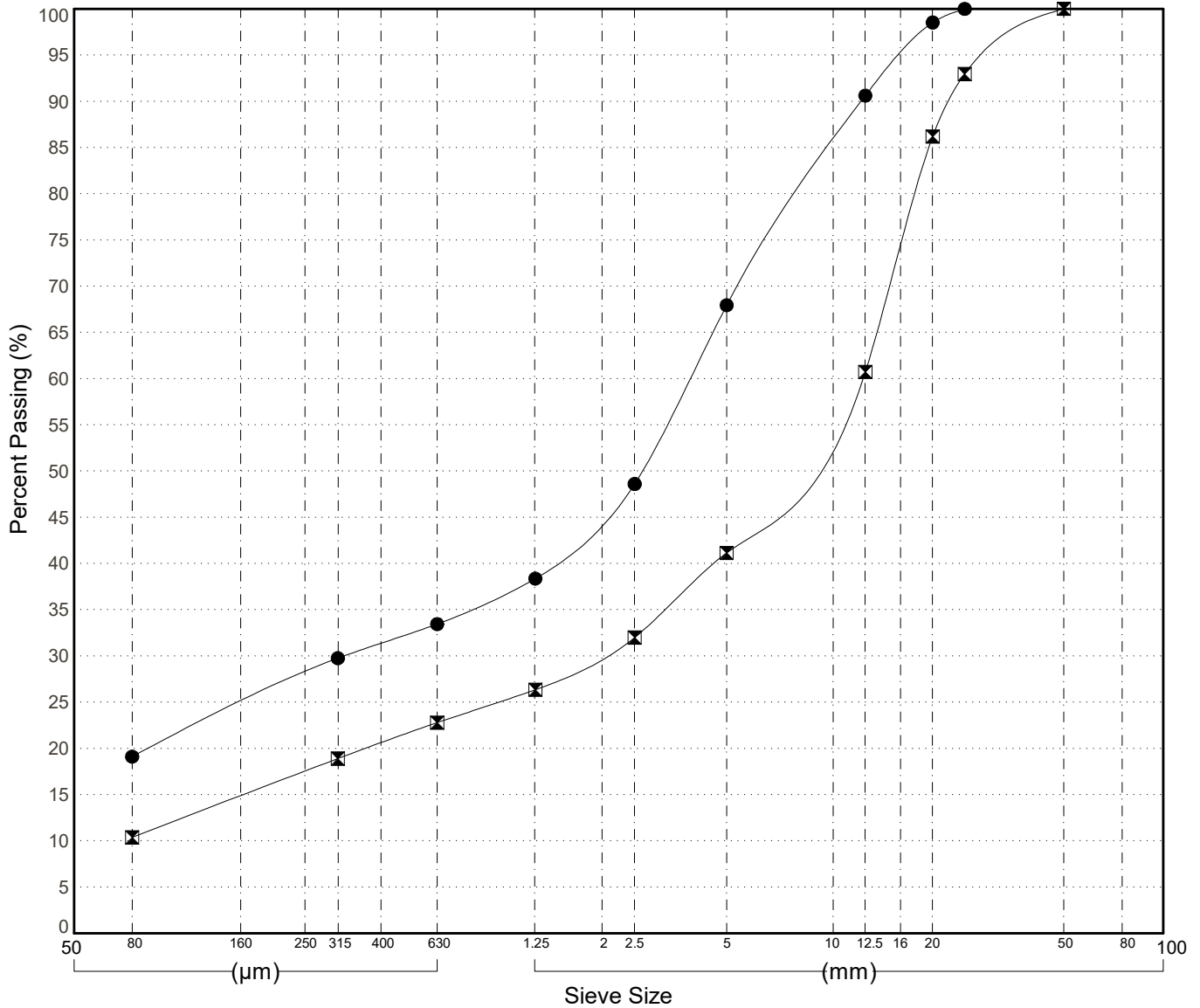


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7766
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807474m E465885m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 4	1138	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	8.3	NP	NP	NP													
☒ 5	1139	1.5 to 2.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	4.8	NP	NP	NP	4.5	171.1											
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 4	1138	100.0	100.0	100.0	100.0	98.5	90.6	85.4	67.9	45.3	35.6	31.4	28.0	24.7	19.1	Gravel	Sand	Silt	Clay	
☒ 5	1139	100.0	100.0	100.0	93.0	86.2	60.7	56.2	41.1	30.2	24.3	20.6	17.5	14.9	10.4	58.9	30.8		10.4	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7767
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807407m E465952m	ELEVATION: m

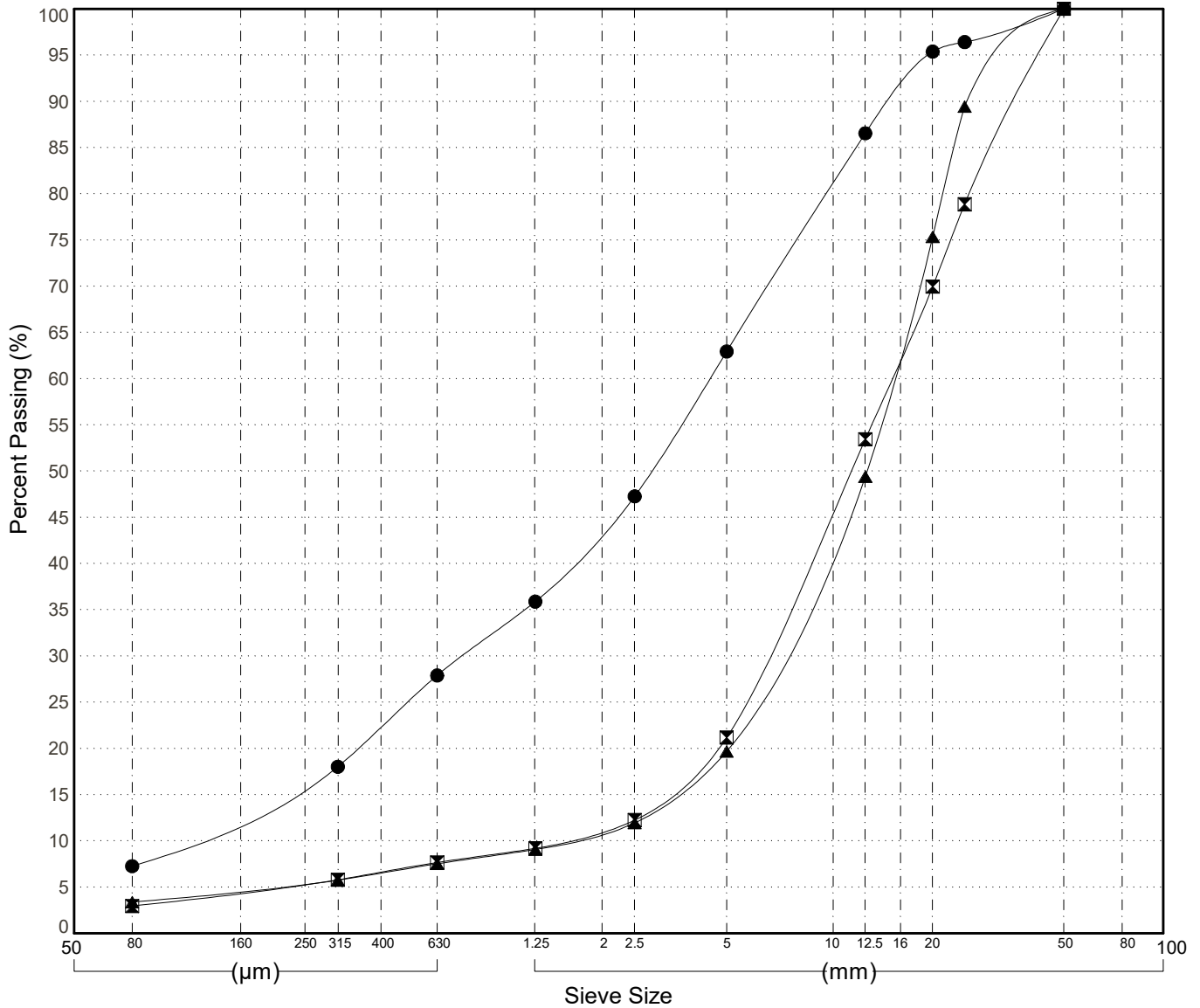
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 6	1140	0.0 to 1.5	WELL-GRADED SAND with SILT and GRAVEL(SW-SM)	4.0	NP	NP	NP	1.3	38.9	0.11
☒ 7	1141	1.5 to 3.0	WELL-GRADED GRAVEL with SAND(GW)	1.1	NP	NP	NP	1.7	10.0	1.50
▲ 8	1142	3.0 to 3.5	WELL-GRADED GRAVEL with SAND(GW)	1.3	NP	NP	NP	1.9	9.7	1.57

Field #	Lab #	%PASSING	Sieve Size (mm)													% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
● 6	1140	100.0	100.0	100.0	100.0	96.4	95.4	86.5	81.1	62.9	43.6	31.4	22.3	16.3	12.9	7.3	37.1	55.7	7.3	
☒ 7	1141	100.0	100.0	100.0	78.9	70.0	53.5	46.0	21.2	11.3	8.3	6.6	5.3	4.4	3.0	78.8	18.2	3.0		
▲ 8	1142	100.0	100.0	100.0	89.4	75.3	49.4	42.6	19.7	11.0	8.2	6.5	5.4	4.6	3.4	80.3	16.3	3.4		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

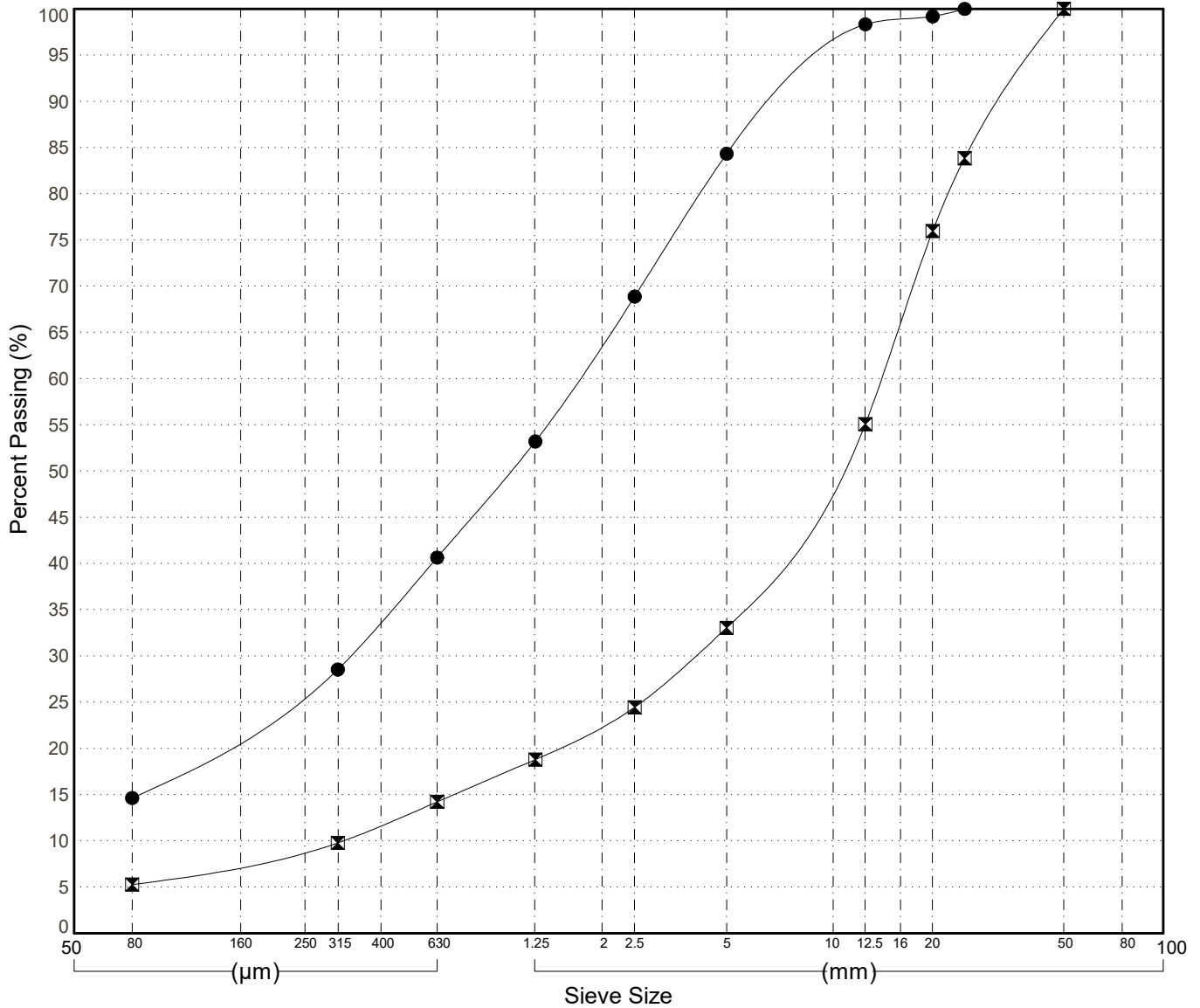


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7768
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807416m E465927m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 9	11415	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	7.0	NP	NP	NP													
☒ 10	1143	1.5 to 2.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	2.7	NP	NP	NP	3.1	42.8	0.33										
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 9	11415	100.0	100.0	100.0	100.0	99.2	98.3	95.1	84.3	63.8	46.1	33.8	26.3	22.0	14.6	Gravel	Sand	Silt	Clay	
☒ 10	1143	100.0	100.0	100.0	83.8	76.0	55.1	50.0	33.0	22.6	16.2	11.7	9.1	7.6	5.3	67.0	27.8		5.3	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7769
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816256m E458768m	ELEVATION: m

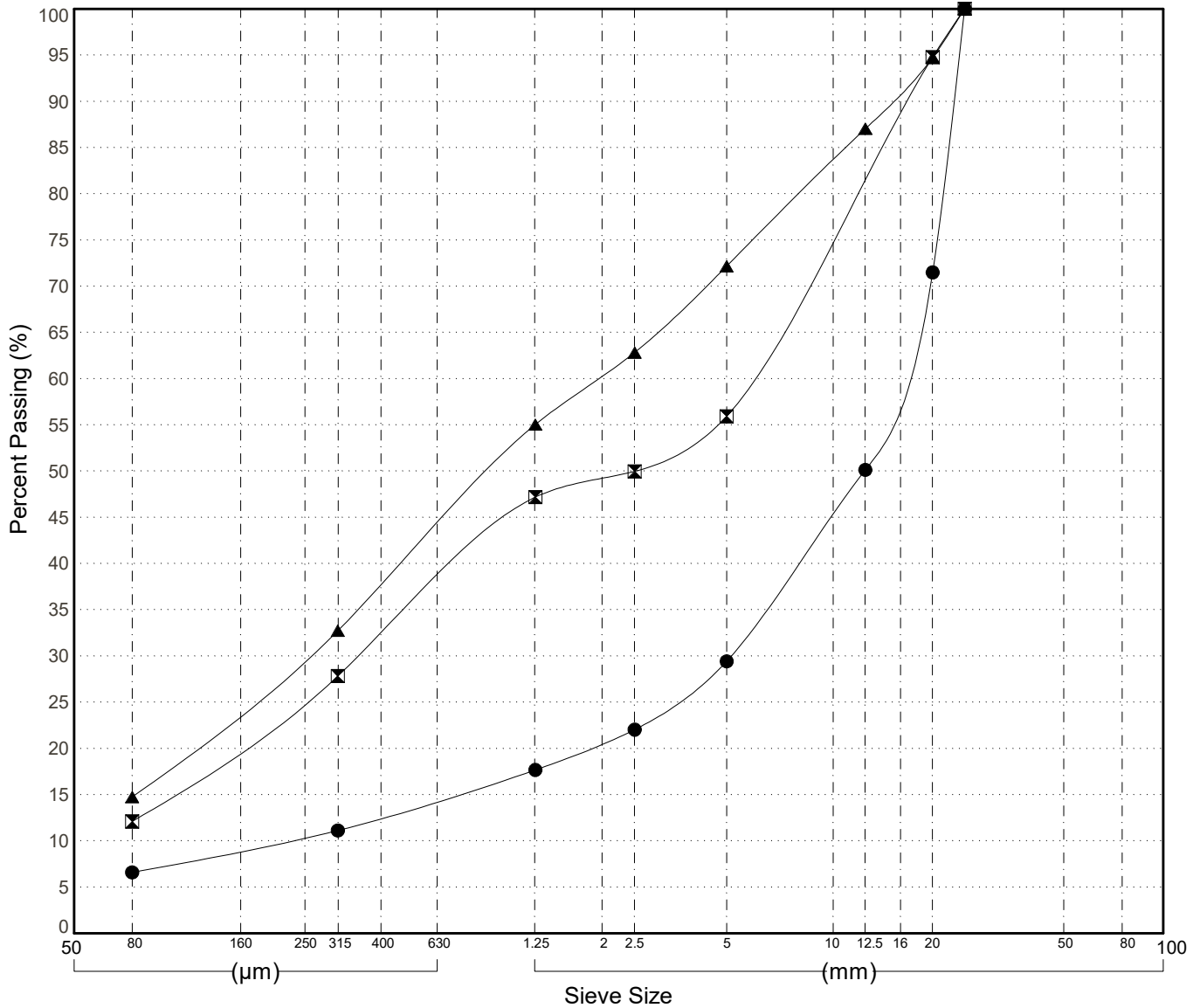
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 66	1198	0.0 to 1.9	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.0	NP	NP	NP	6.9	70.3	0.22
☒ 67	1199	1.5 to 3.0	SILTY GRAVEL with SAND(GM)	4.3	NP	NP	NP	0.4	89.1	
▲ 68	1200	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	5.6	NP	NP	NP			

Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
																Gravel	Sand	Silt	Clay
● 66	1198	100.0	100.0	100.0	100.0	71.5	50.1	45.4	29.4	20.6	15.8	12.5	10.4	9.0	6.6	70.6	22.8		6.6
☒ 67	1199	100.0	100.0	100.0	100.0	94.8	82.1	76.0	55.9	49.1	41.8	32.0	25.3	20.4	12.1	44.1	43.8		12.1
▲ 68	1200	100.0	100.0	100.0	100.0	94.7	87.0	83.6	72.2	60.3	48.8	37.6	29.8	24.2	14.7	27.8	57.4		14.7

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

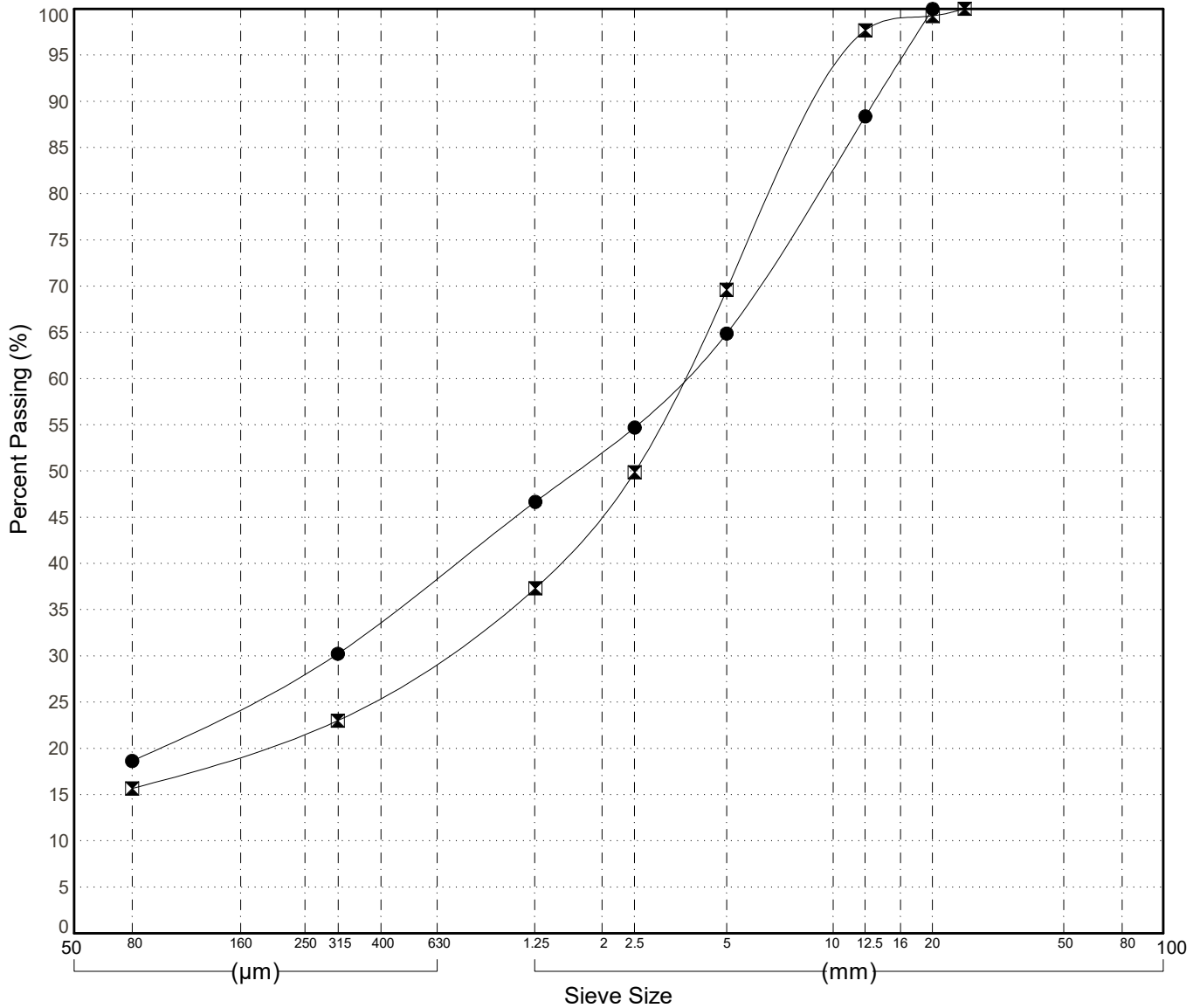


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7770
Gateway Drilling	km 185 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6817543m E457377m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 82	1213	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													10.5	NP	NP	NP			
☒ 83	1214	1.5 to 3.0	SILTY SAND with GRAVEL(SM)													5.1	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
			Gravel	Sand	Silt	Clay																
● 82	1213	100.0	100.0	100.0	100.0	100.0	88.4	83.0	64.9	52.1	42.1	33.8	28.4	24.8	18.6	35.1	46.2	18.6				
☒ 83	1214	100.0	100.0	100.0	100.0	99.2	97.7	91.2	69.6	45.8	33.3	26.1	21.8	19.5	15.7	30.4	53.9	15.7				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

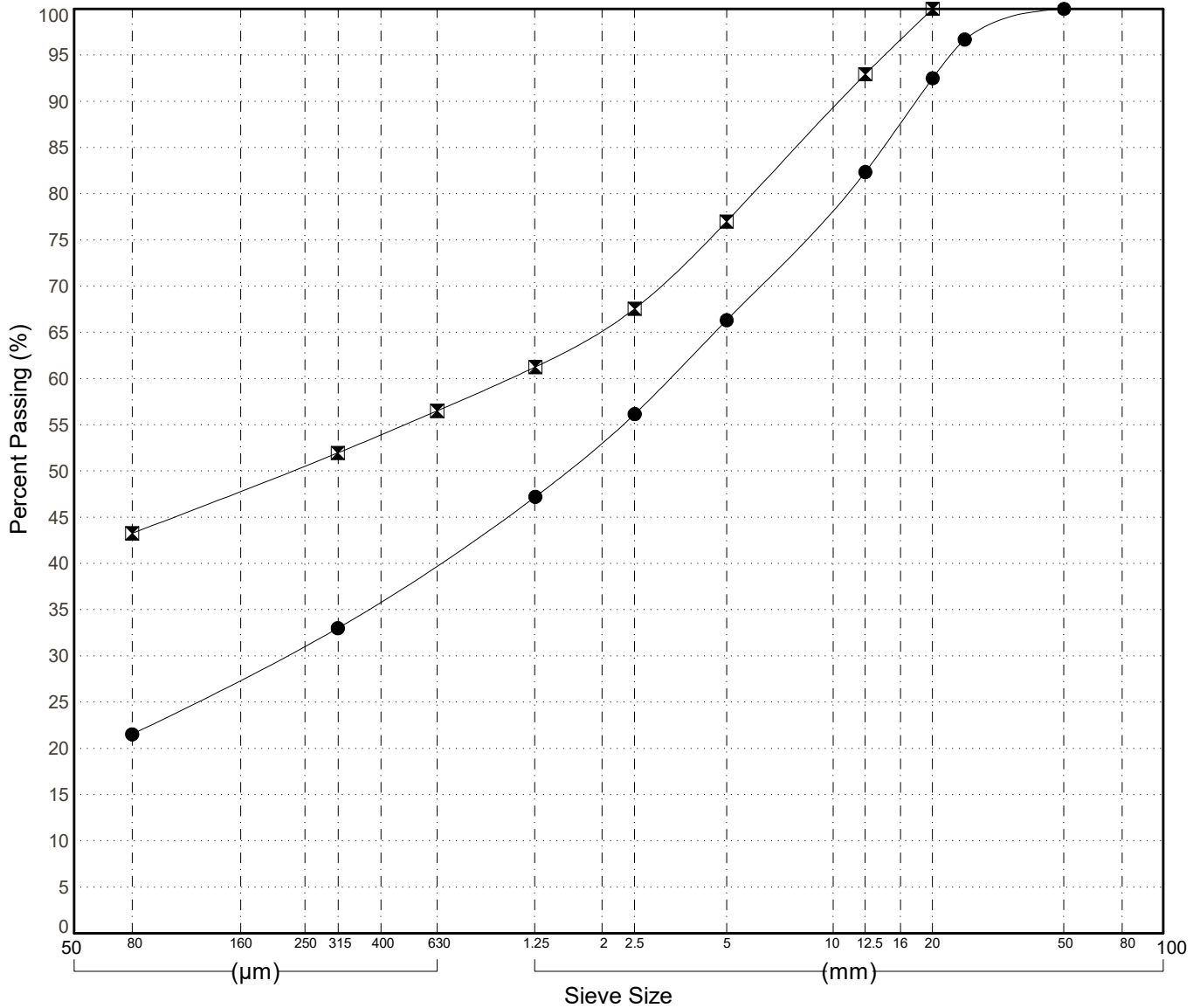


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7771
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6811156m E462711m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 45	1177	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	6.8	NP	NP	NP													
☒ 46	1178	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	7.5	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 45	1177	100.0	100.0	100.0	96.7	92.5	82.4	78.7	66.3	53.3	43.2	36.1	31.2	27.6	21.5	Gravel	Sand	Silt	Clay	
☒ 46	1178	100.0	100.0	100.0	100.0	100.0	92.9	89.3	77.0	65.5	58.6	53.9	50.6	47.9	43.3	23.0	33.7		21.5	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

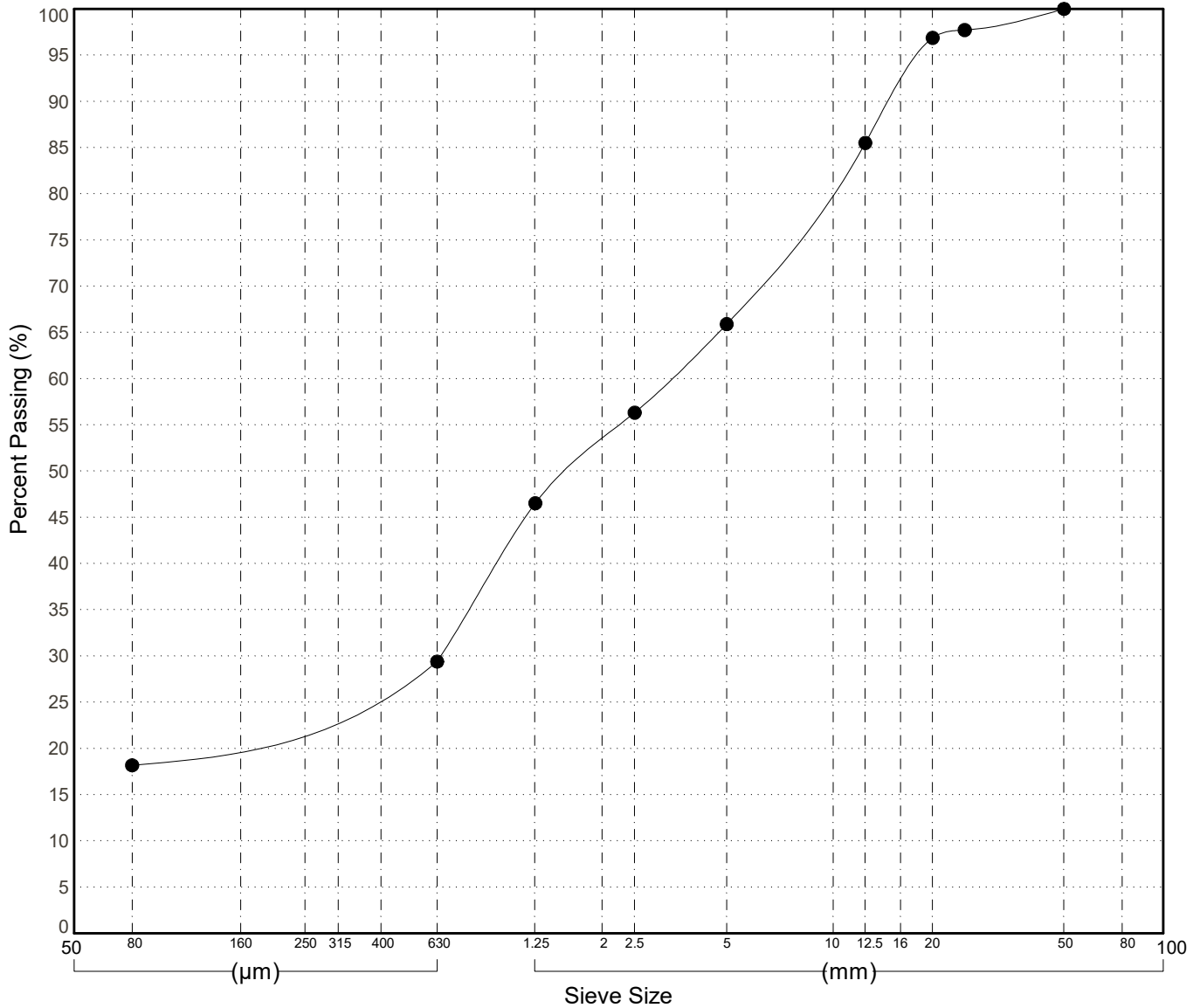


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7772
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6811293m E462707m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 41	1173	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													4.2	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 41	1173	100.0	100.0	100.0	97.7	96.9	85.5	81.0	65.9	53.2	36.9	27.3	24.5	22.2	18.2	Gravel	Sand	Silt	Clay			
																34.1	47.7	18.2				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

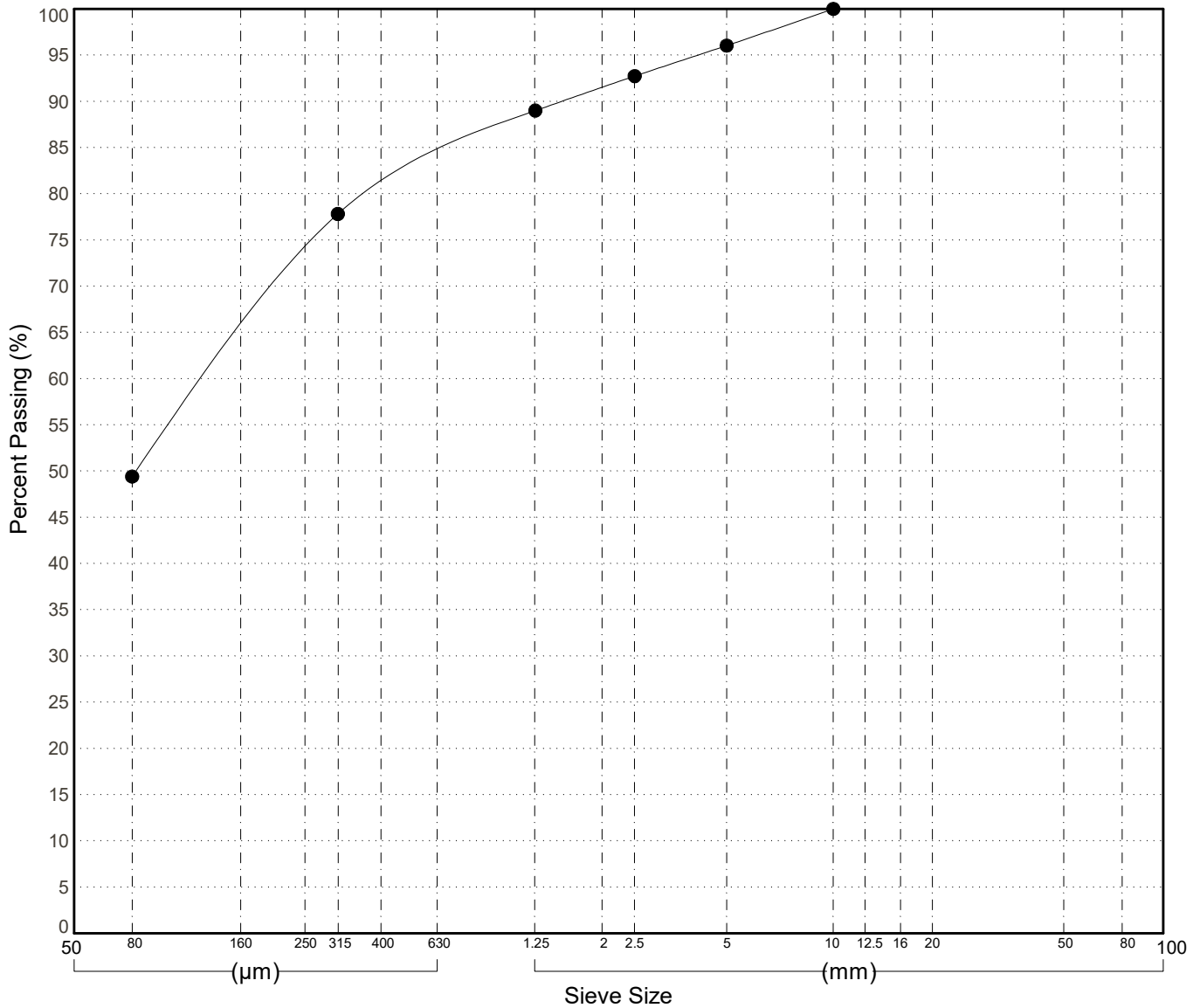


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7773
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6814876m E459985m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 62	1194	0.0 to 1.5	SILTY SAND(SM)													16.2	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 62	1194	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.0	91.5	85.9	80.2	73.2	64.4	49.4	Gravel	Sand	Silt	Clay			
																4.0	46.6		49.4			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

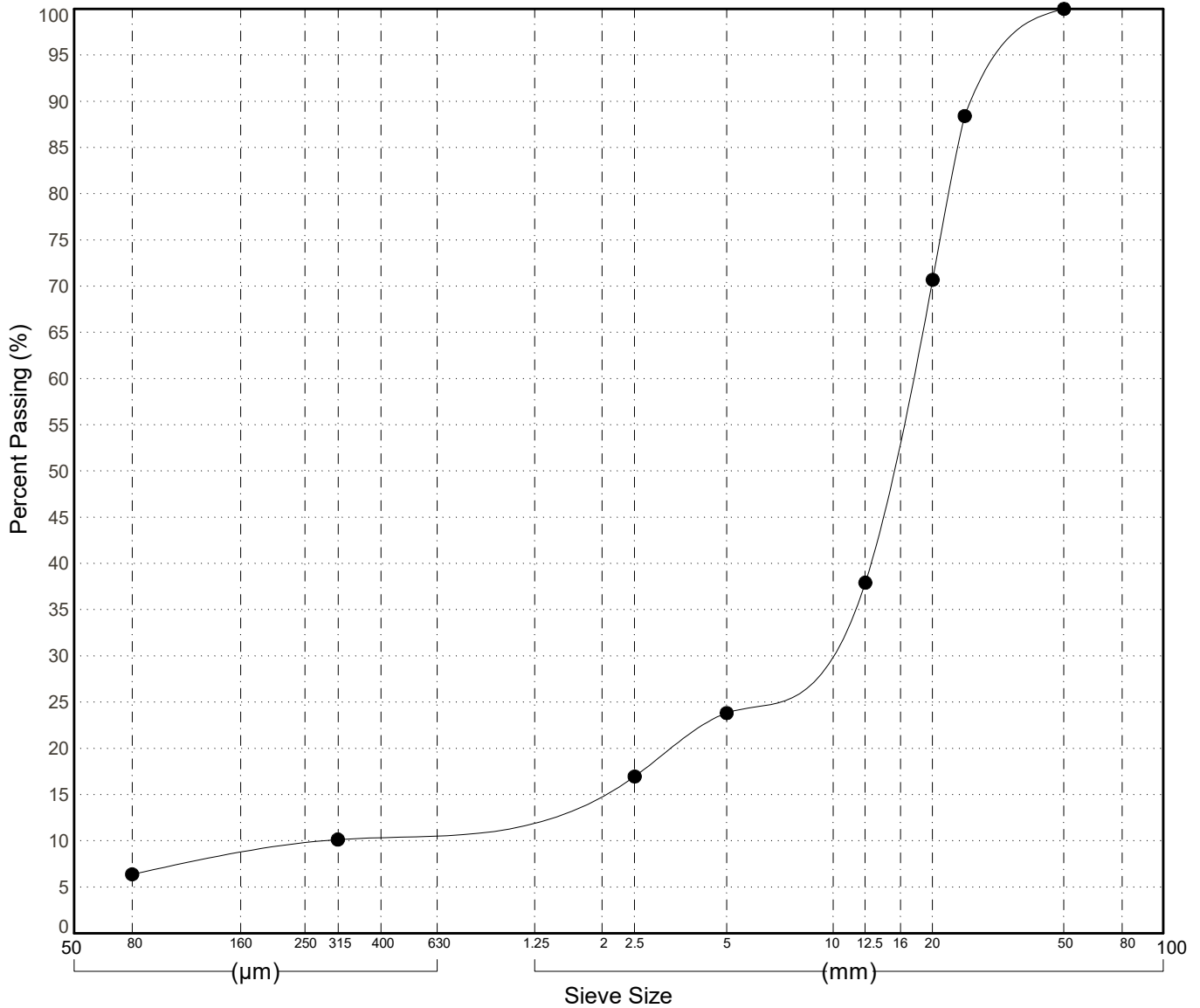


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7774
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816201m E458803m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10									
64	1196	0.0 to 1.5	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.0	NP	NP	NP	10.3	57.4	0.30									
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
64	1196	100.0	100.0	100.0	88.4	70.7	37.9	34.7	23.8	16.2	13.4	11.1	9.5	8.4	6.4	Gravel	Sand	Silt	Clay
																76.2	17.4		6.4

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

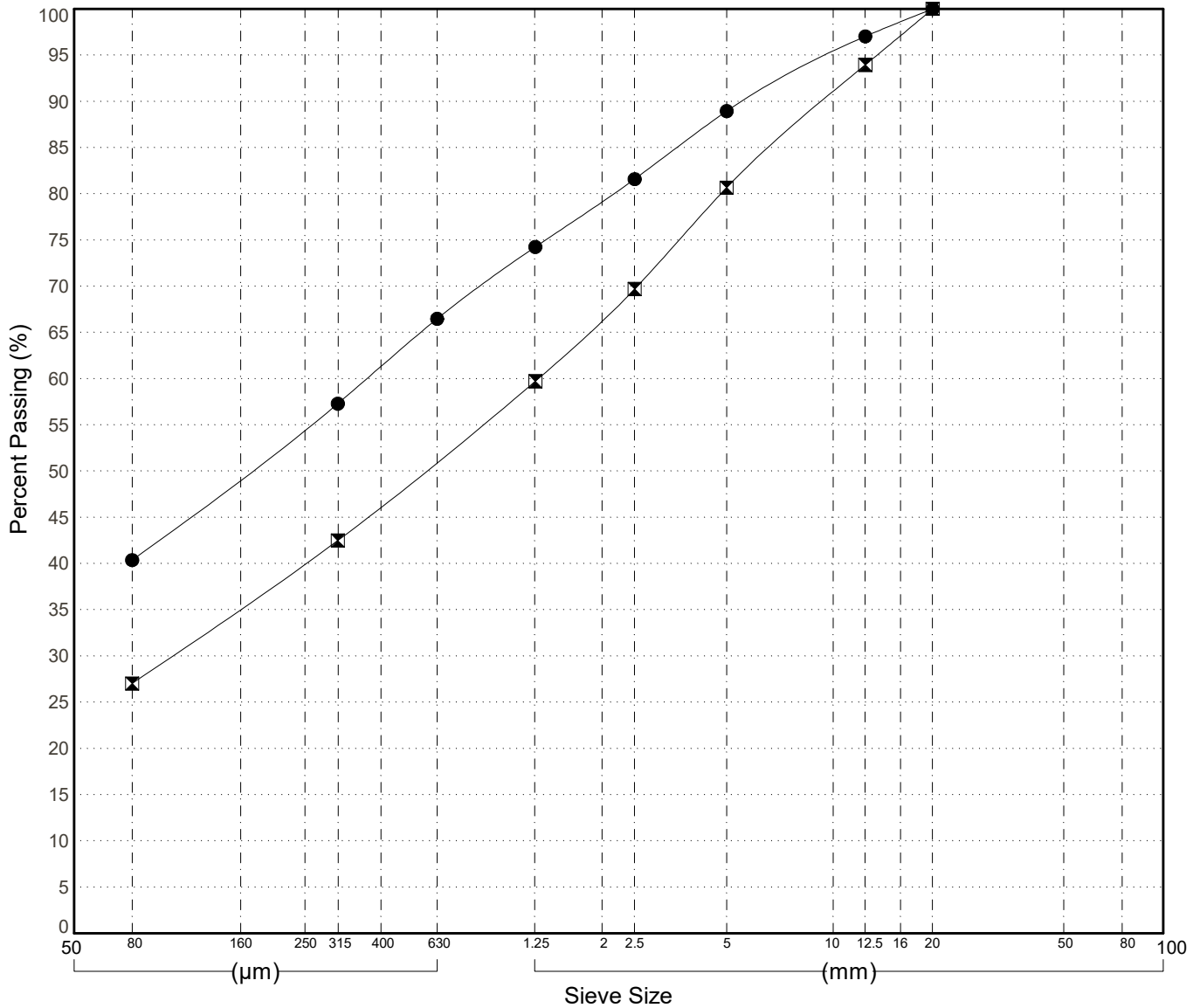


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7775
Gateway Drilling	km 176 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6814701m E459948m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 53	1182	0.0 to 1.5	SILTY SAND(SM)	9.2	NP	NP	NP													
☒ 54	1183	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	5.8	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 53	1182	100.0	100.0	100.0	100.0	100.0	97.0	95.2	88.9	79.2	69.9	61.3	54.6	49.3	40.4	Gravel	Sand	Silt	Clay	
☒ 54	1183	100.0	100.0	100.0	100.0	100.0	93.9	90.9	80.7	66.5	54.9	46.2	40.0	35.2	27.0	19.3	53.6	27.0		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

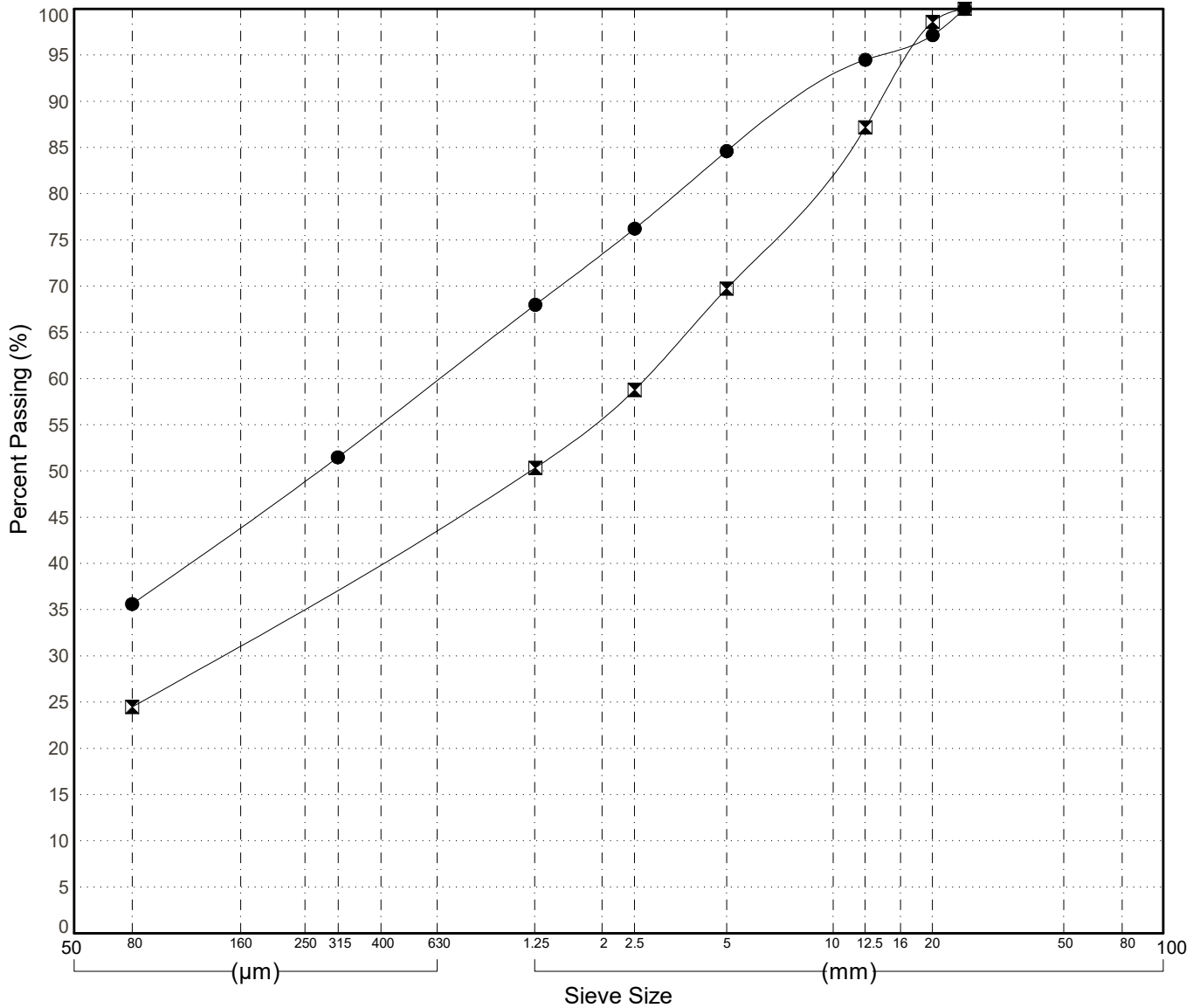


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7776
Gateway Drilling	km 176 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6814869m E459936m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 60	1192	0.0 to 1.5	SILTY SAND with GRAVEL(SM)													7.6	NP	NP	NP			
☒ 61	1193	1.5 to 2.0	SILTY SAND with GRAVEL(SM)													5.6	NP	NP	NP			
Field #	Lab #	%PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
			Gravel	Sand	Silt	Clay																
● 60	1192	100.0	100.0	100.0	100.0	97.2	94.5	92.2	84.6	73.6	63.4	55.1	48.9	44.0	35.6	15.4	49.0	35.6				
☒ 61	1193	100.0	100.0	100.0	100.0	98.6	87.2	83.2	69.7	56.1	46.8	40.4	35.6	31.5	24.5	30.3	45.2	24.5				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7777
Gateway Drilling	km 181 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6811167m E462799m	ELEVATION: m

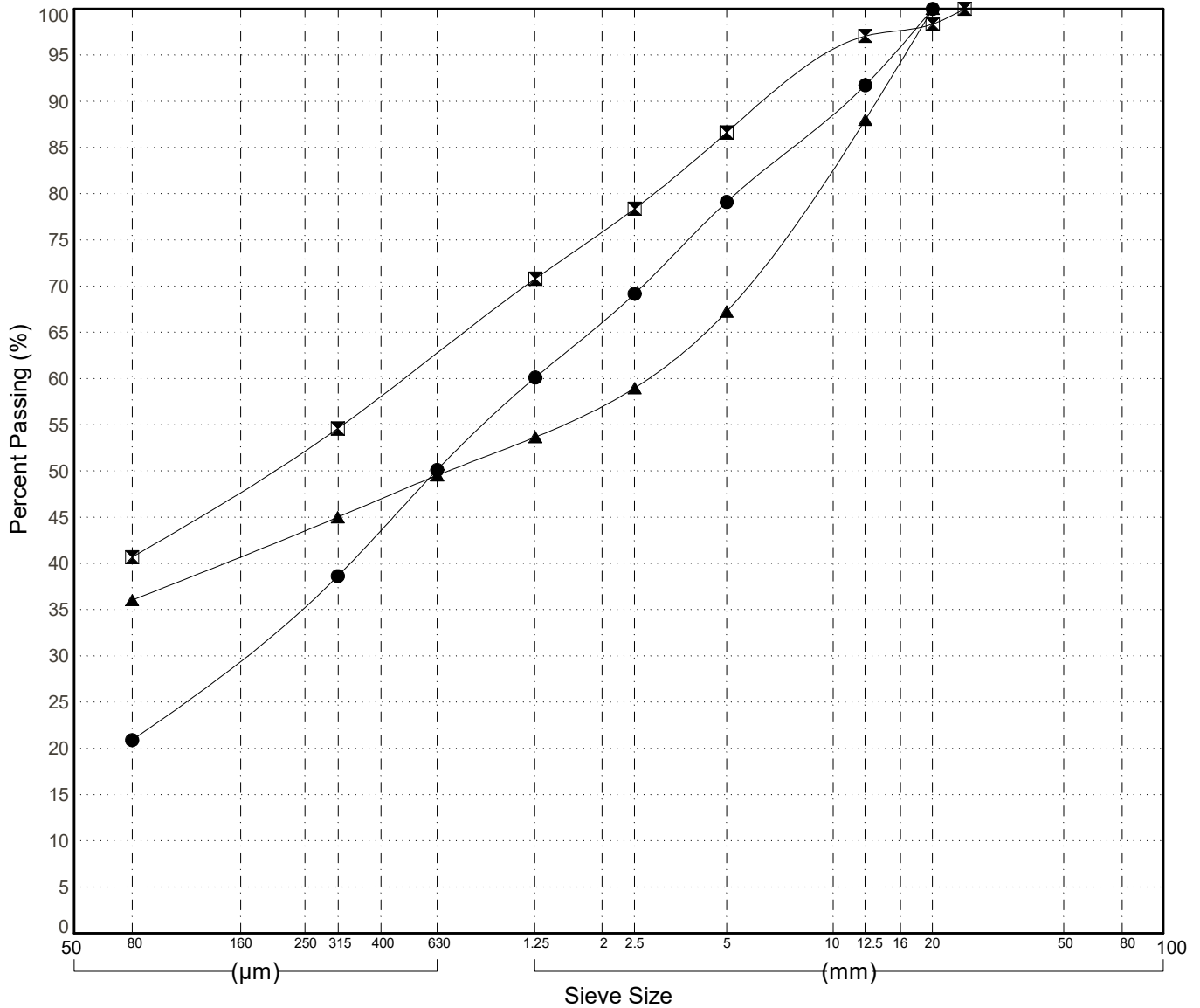
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 50	1184	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	2.2	NP	NP	NP			
☒ 51	1185	1.5 to 3.0	SILTY SAND(SM)	8.4	NP	NP	NP			
▲ 52	1186	3.0 to 3.1	SILTY GRAVEL with SAND(GM)	6.9	NP	NP	NP			

Field #	Lab #	% PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt
● 50	1184	100.0	100.0	100.0	100.0	100.0	91.7	88.8	79.1	66.3	54.5	43.6	35.8	30.3	20.9	20.9	58.2	20.9	
☒ 51	1185	100.0	100.0	100.0	100.0	98.4	97.1	94.7	86.6	75.9	66.3	58.1	52.4	48.0	40.7	13.4	45.9	40.7	
▲ 52	1186	100.0	100.0	100.0	100.0	100.0	88.0	83.2	67.3	57.3	51.3	47.0	43.6	40.8	36.0	32.7	31.2	36.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

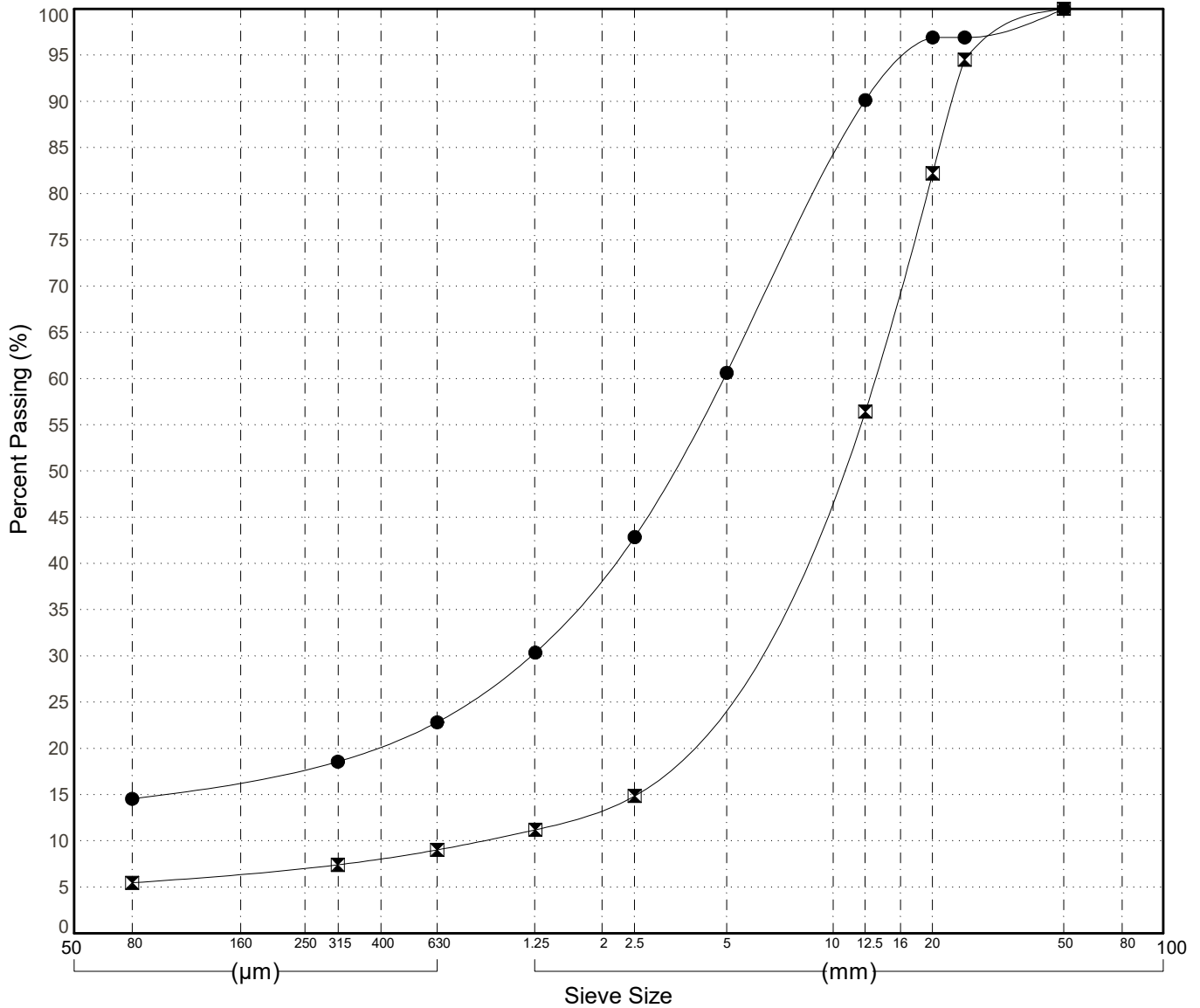


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7778
Gateway Drilling	km 170 RHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6807351m E465878m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 11	1145	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	8.0	NP	NP	NP													
☒ 12	1144	1.5 to 2.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.1	NP	NP	NP	1.8	15.5	0.86										
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 11	1145	100.0	100.0	100.0	96.9	96.9	90.1	83.3	60.6	38.8	26.1	20.4	17.9	16.7	14.5	Gravel	Sand	Silt	Clay	
☒ 12	1144	100.0	100.0	100.0	94.5	82.2	56.4	50.7	31.4	13.7	10.0	8.1	7.1	6.5	5.5	68.6	26.0		5.5	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

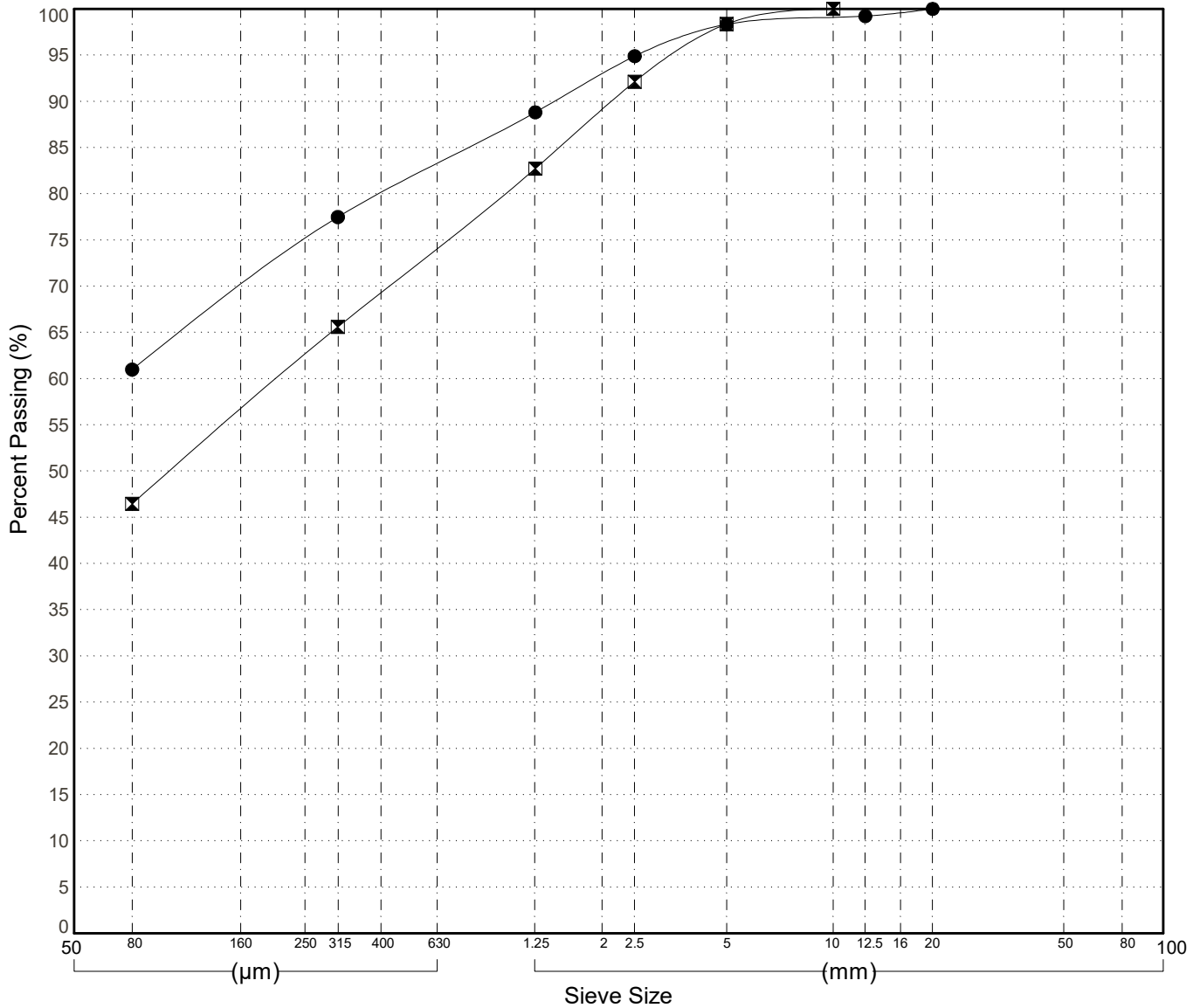


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7779
Gateway Drilling	km 185 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6817441m E457436m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 77	1209	0.0 to 1.5	SANDY SILT(ML)													12.1	NP	NP	NP			
☒ 78	12095	3.0 to 4.5	SILTY SAND(SM)													7.8	NP	NP	NP			
Field #	Lab #	%PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
			Gravel	Sand	Silt	Clay																
● 77	1209	100.0	100.0	100.0	100.0	100.0	99.2	99.0	98.3	92.9	85.6	79.9	74.8	69.7	61.0	1.7	37.4	61.0				
☒ 78	12095	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.4	89.1	77.9	69.3	62.5	56.6	46.5	1.6	51.9	46.5				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

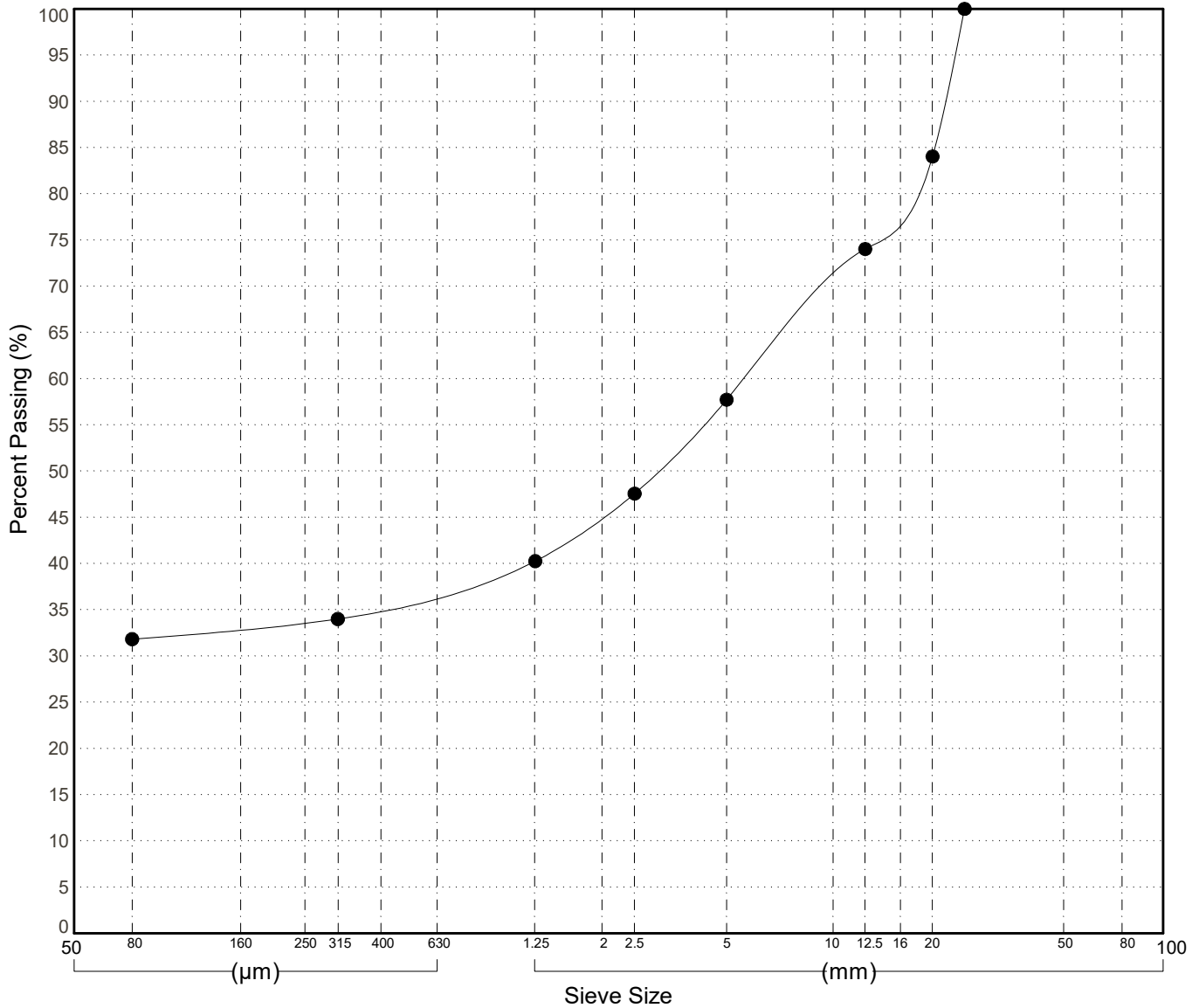


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7780
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816203m E458772m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 65	1197	0.0 to 1.0	SILTY GRAVEL with SAND(GM)													2.1	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 65	1197	100.0	100.0	100.0	100.0	84.0	74.0	70.3	57.7	45.2	38.5	35.4	33.6	33.0	31.8	Gravel	Sand	Silt	Clay			
																42.3	25.9		31.8			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

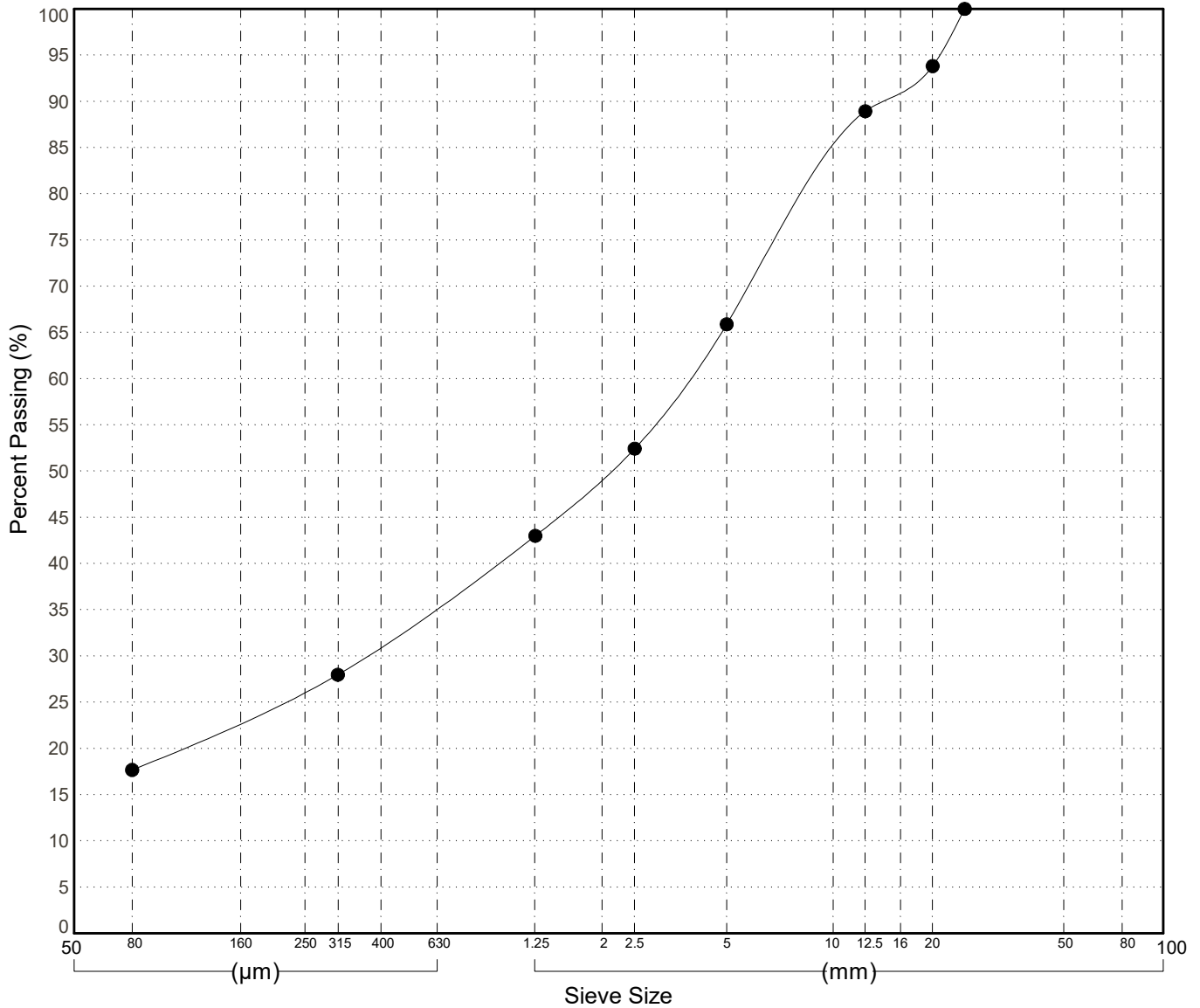


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7781
Gateway Drilling	km 185 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6817428m E457359m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 79	1210	0.0 to 1.4	SILTY SAND with GRAVEL(SM)													5.6	NP	NP	NP			
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown						
● 79	1210	100.0	100.0	100.0	100.0	93.8	88.9	83.6	65.9	49.4	38.8	31.2	26.3	23.1	17.7	Gravel	Sand	Silt	Clay			
																34.1	48.2	17.7				

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

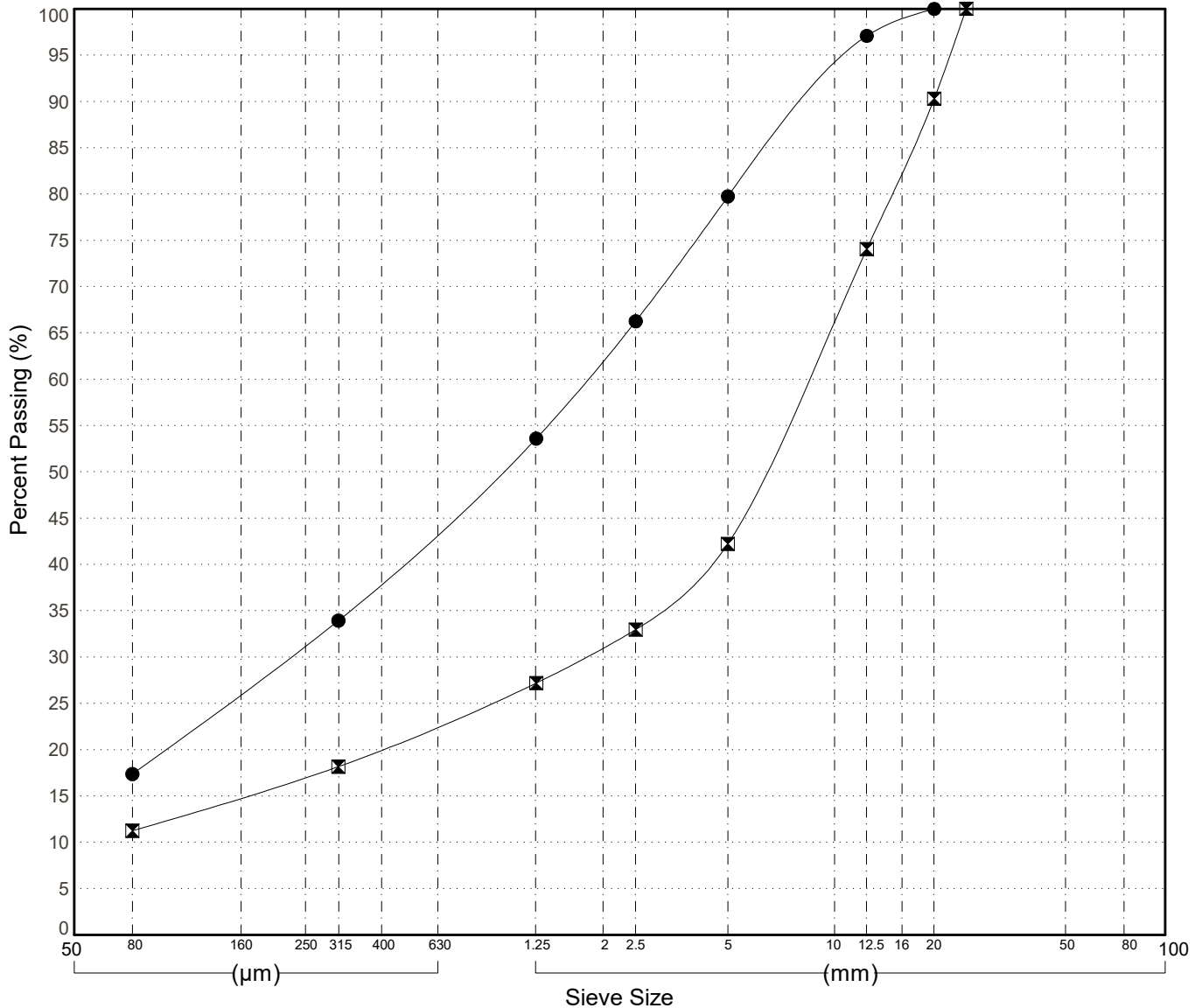


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7782
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816364m E458813m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 75	1207	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	17.4	NP	NP	NP													
☒ 76	1208	1.5 to 3.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	5.7	NP	NP	NP	6.5	140.8											
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 75	1207	100.0	100.0	100.0	100.0	100.0	97.1	93.1	79.8	62.2	48.1	38.2	31.3	26.1	17.4	Gravel	Sand	Silt	Clay	
☒ 76	1208	100.0	100.0	100.0	100.0	90.3	74.1	66.7	42.2	31.1	24.7	20.1	17.1	14.9	11.3	57.8	31.0	11.3		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

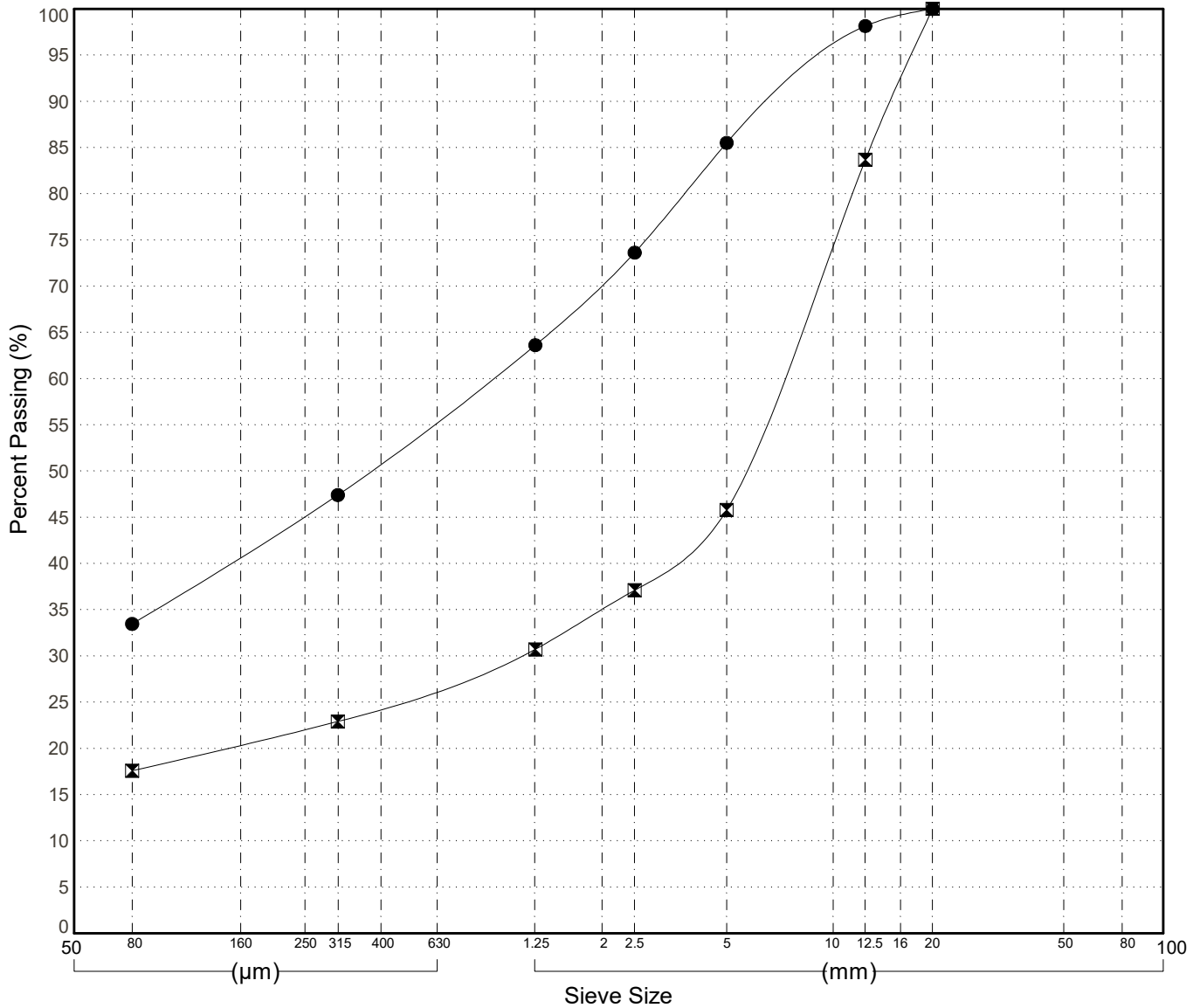


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7783
Gateway Drilling	km 185 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6817404m E457363m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 80	1211	0.0 to 1.5	SILTY SAND(SM)	7.8	NP	NP	NP													
☒ 81	1212	1.2 to 1.5	SILTY GRAVEL with SAND(GM)	3.6	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 80	1211	100.0	100.0	100.0	100.0	100.0	98.1	95.2	85.5	70.4	59.1	50.9	45.2	40.8	33.5	Gravel	Sand	Silt	Clay	
☒ 81	1212	100.0	100.0	100.0	100.0	100.0	83.7	74.9	45.8	35.1	28.5	24.6	22.0	20.4	17.6	54.2	28.2		17.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7784
Gateway Drilling	km 181 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6814761m E459940m	ELEVATION: m

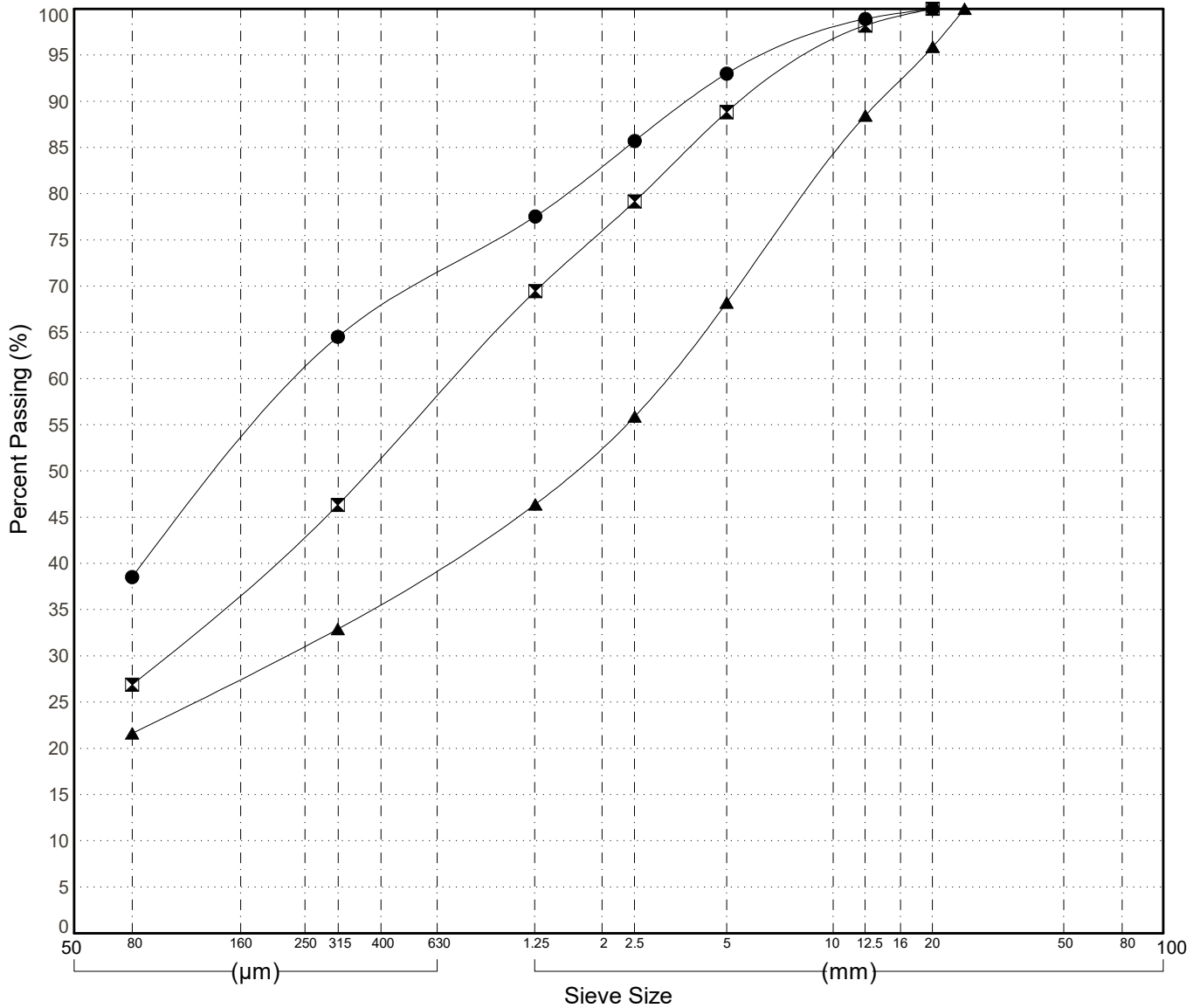
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 55	1187	0.0 to 1.5	SILTY SAND(SM)	7.9	NP	NP	NP			
☒ 56	1188	1.5 to 3.0	SILTY SAND(SM)	6.2	NP	NP	NP			
▲ 57	1189	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	5.1	NP	NP	NP			

Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
		% PASSING														Gravel	Sand	Silt	Clay
● 55	1187	100.0	100.0	100.0	100.0	100.0	98.9	97.5	93.0	83.1	73.9	67.4	60.3	52.3	38.5	7.0	54.5	38.5	
☒ 56	1188	100.0	100.0	100.0	100.0	100.0	98.2	96.1	88.8	76.0	63.0	51.4	43.2	37.2	26.9	11.2	62.0	26.9	
▲ 57	1189	100.0	100.0	100.0	100.0	95.9	88.5	83.8	68.2	52.8	42.6	35.8	31.1	27.6	21.6	31.8	46.6	21.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

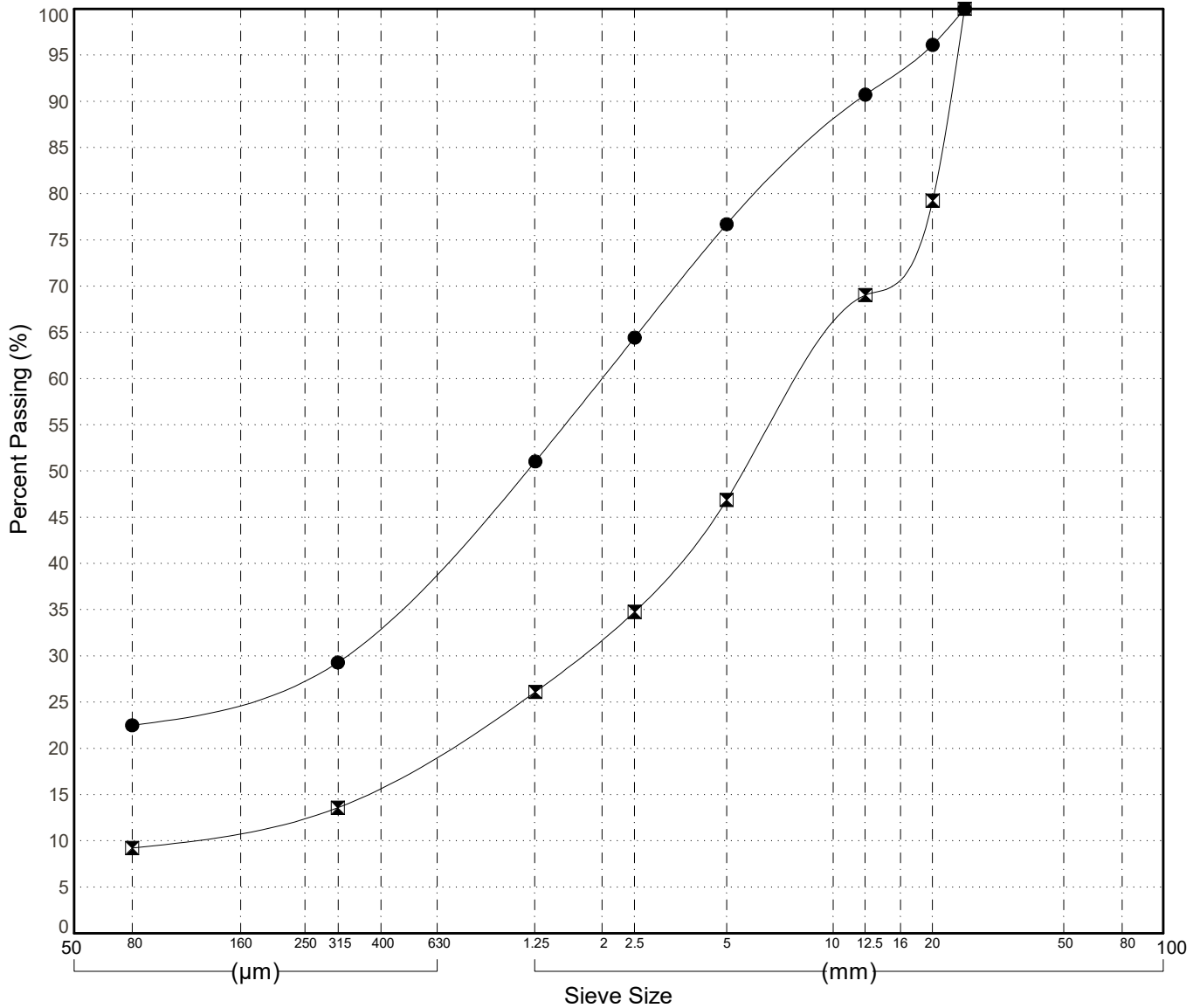


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7785
Gateway Drilling	km 189 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6818728m E454282m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 94	1224	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	6.4	NP	NP	NP													
☒ 95	1225	1.5 to 2.0	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.4	NP	NP	NP	3.6	86.9	0.10										
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 94	1224	100.0	100.0	100.0	100.0	96.1	90.7	87.5	76.7	60.1	45.0	34.0	28.2	26.1	22.5	Gravel	Sand	Silt	Clay	
☒ 95	1225	100.0	100.0	100.0	100.0	79.3	69.0	63.9	46.9	32.0	22.6	16.3	12.9	11.5	9.2	53.1	37.7		9.2	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

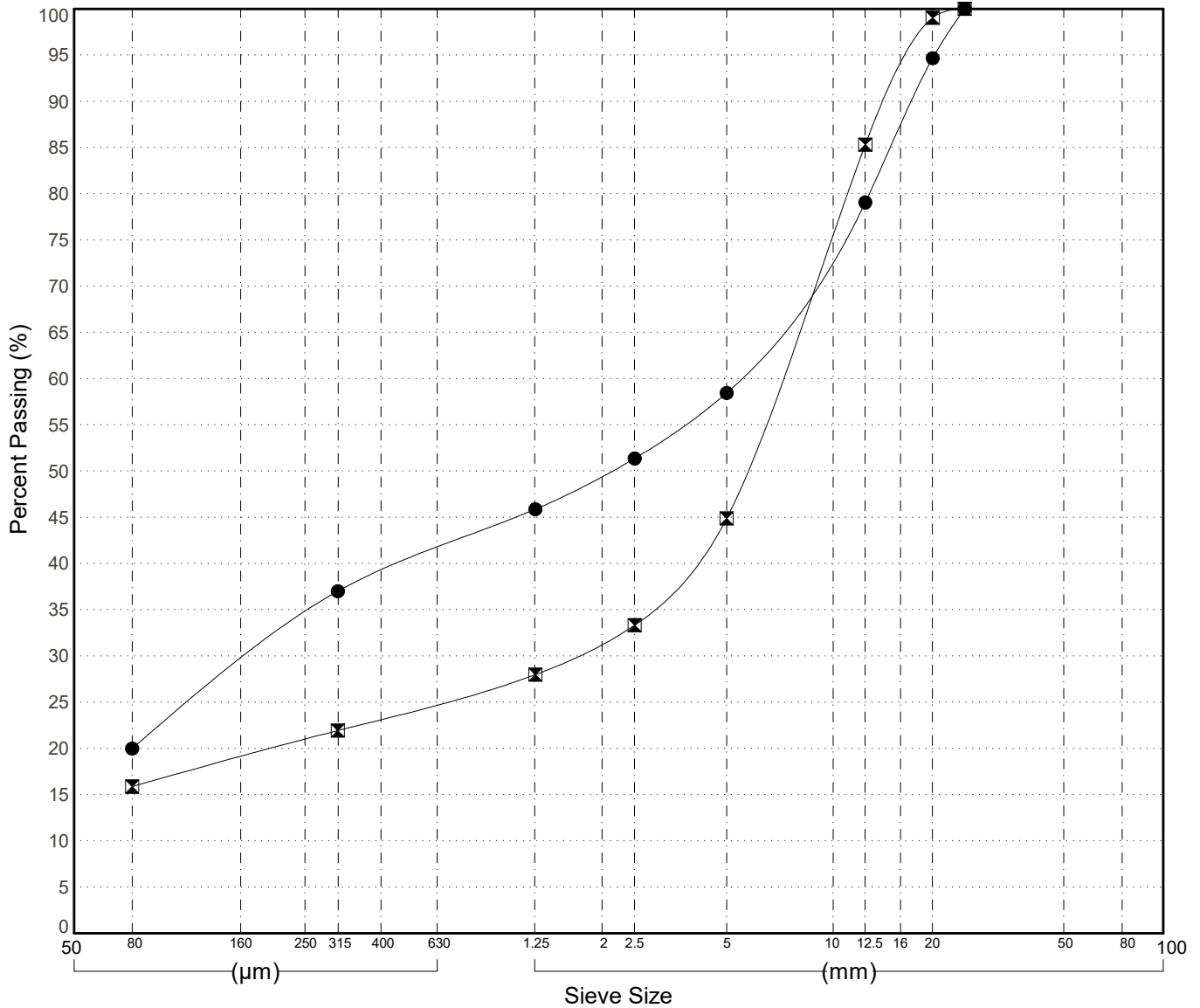


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7786
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816264m E458904m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu	D10
● 70	1202	0.0 to 1.5	SILTY GRAVEL with SAND(GM)													21.1	NP	NP	NP			
☒ 71	1203	1.5 to 2.1	SILTY GRAVEL with SAND(GM)													7.0	NP	NP	NP			
Field #	Lab #	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown					
● 70	1202	100.0	100.0	100.0	100.0	94.7	79.1	74.3	58.5	49.6	43.4	38.9	34.3	29.0	20.0		41.5	38.5	20.0	Clay		
☒ 71	1203	100.0	100.0	100.0	100.0	99.0	85.3	76.0	44.9	31.6	26.3	23.2	21.0	19.1	15.9		55.1	29.0	15.9			

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

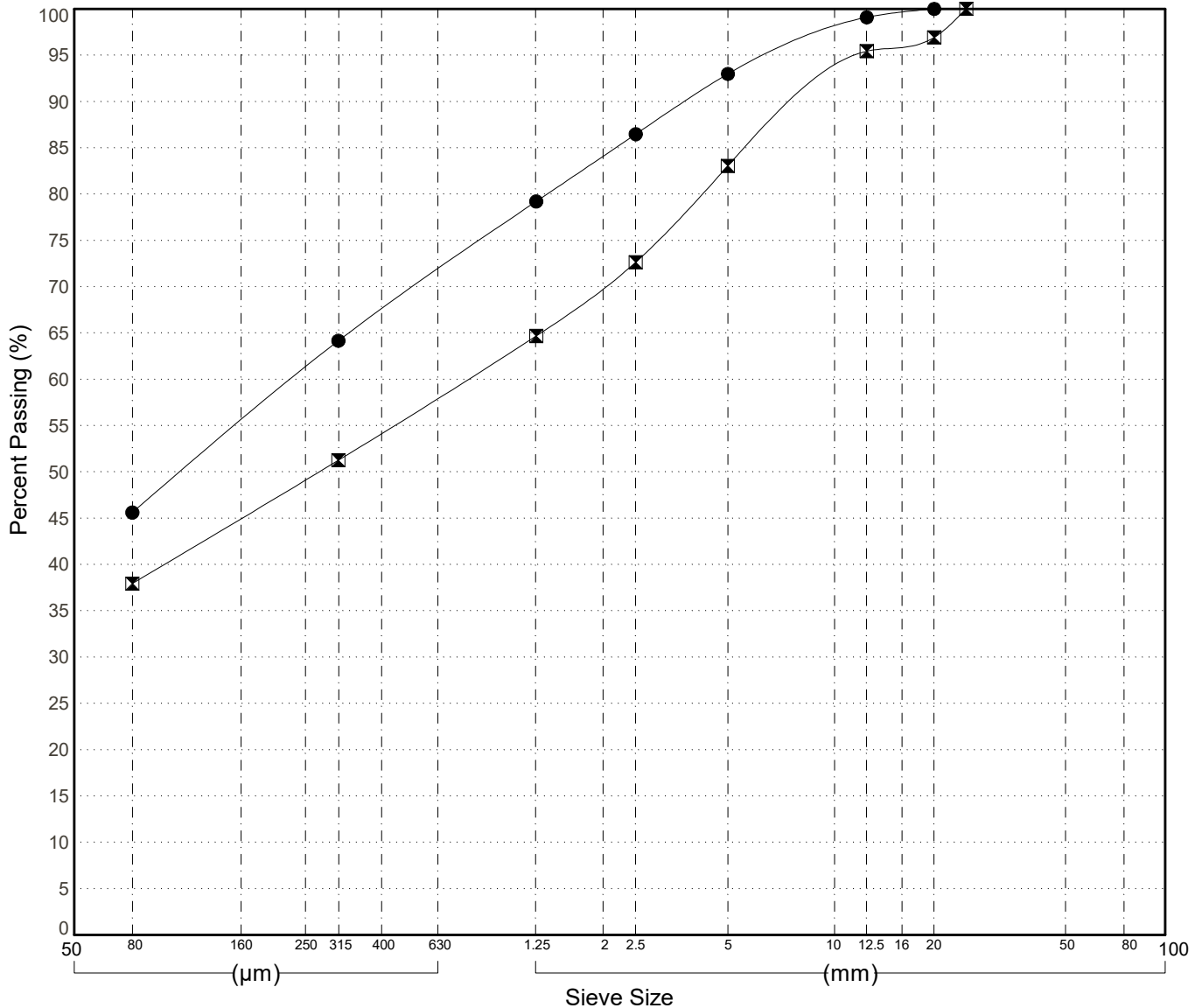


GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7787
Gateway Drilling	km 181 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6814815m E459936m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10										
● 58	1190	0.0 to 1.5	SILTY SAND(SM)	9.1	NP	NP	NP													
☒ 59	1191	3.0 to 4.5	SILTY SAND with GRAVEL(SM)	9.6	NP	NP	NP													
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown				
● 58	1190	100.0	100.0	100.0	100.0	100.0	99.1	97.7	93.0	84.1	75.0	67.4	61.2	55.4	45.6	Gravel	Sand	Silt	Clay	
☒ 59	1191	100.0	100.0	100.0	100.0	96.9	95.4	92.6	83.1	70.1	60.9	54.2	49.1	45.0	37.9	16.9	45.1	37.9		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7788
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816311m E458859m	ELEVATION: m

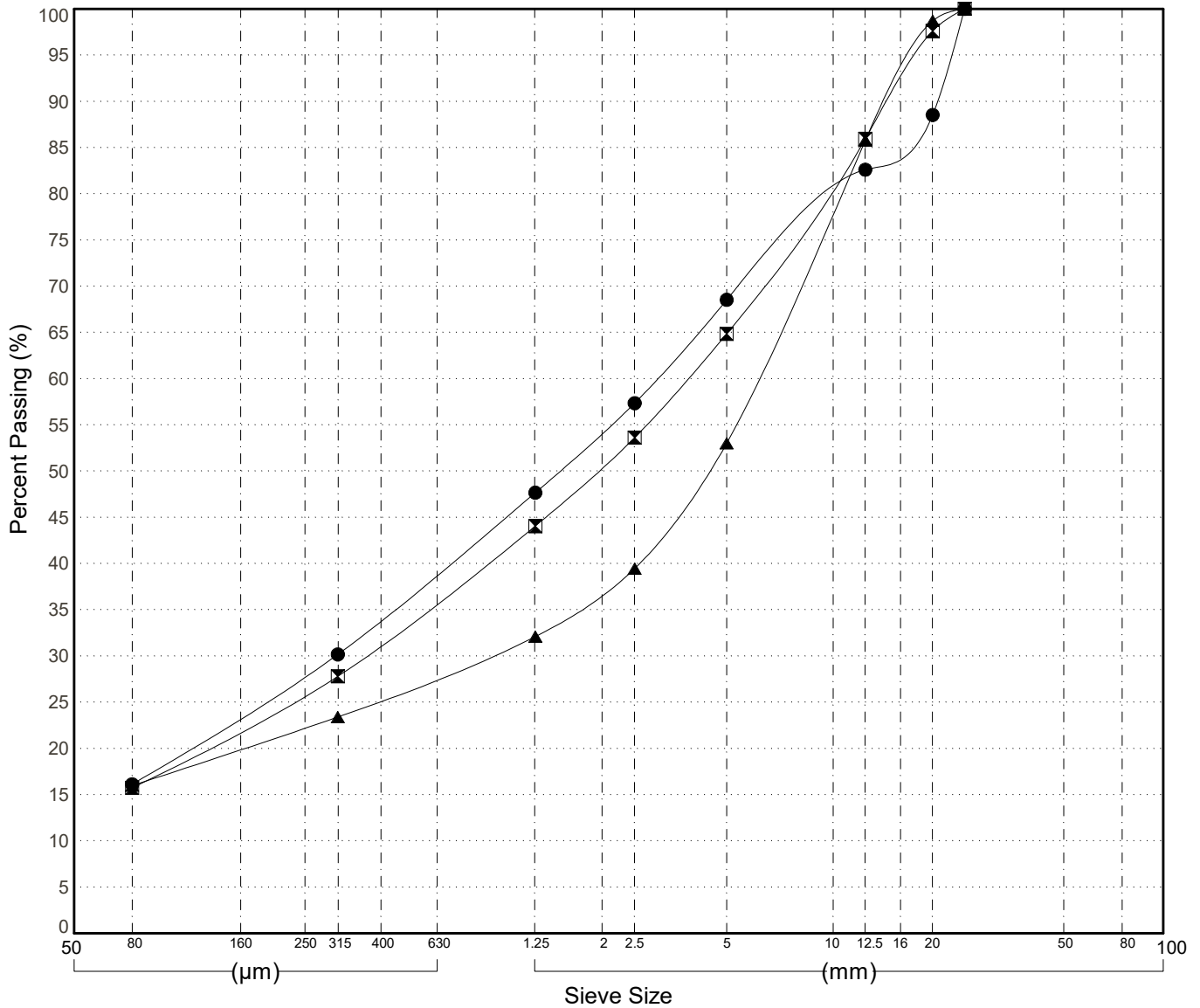
Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10
● 72	1204	0.0 to 1.5	SILTY SAND with GRAVEL(SM)	5.3	NP	NP	NP			
☒ 73	1205	1.5 to 3.0	SILTY SAND with GRAVEL(SM)	5.5	NP	NP	NP			
▲ 74	1206	3.0 to 4.5	SILTY GRAVEL with SAND(GM)	4.8	NP	NP	NP			

Field #	Lab #	%PASSING	Sieve Size (mm)													% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	Gravel	Sand	Silt	Clay
● 72	1204	100.0	100.0	100.0	100.0	100.0	88.5	82.6	79.4	68.5	54.2	42.8	34.0	27.9	23.5	16.1	31.5	52.4	16.1	
☒ 73	1205	100.0	100.0	100.0	100.0	97.6	85.9	81.1	64.8	50.5	39.5	31.3	25.8	22.1	15.7	35.2	49.1	15.7		
▲ 74	1206	100.0	100.0	100.0	100.0	98.7	85.8	78.2	53.0	37.1	29.7	25.3	22.2	19.9	16.0	47.0	37.0	16.0		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Small Rig Testing	SOURCE/TP#: 920-7794
Gateway Drilling	km 183 LHS	PROJECT NO: 552-202104
Small Rig	Coordinates:Z09N N6816200m E458848m	ELEVATION: m

Master Revised June 2017

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu	D10									
63	1195	0.0 to 1.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	3.4	NP	NP	NP	2.2	68.8	0.17									
Field #	Lab #	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.0	0.850	0.400	0.250	0.160	0.080	% Breakdown			
63	1195	100.0	100.0	100.0	100.0	73.1	60.8	56.5	42.3	29.2	20.4	14.7	11.4	9.7	6.8	Gravel	Sand	Silt	Clay
																57.7	35.5		6.8

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

