

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5139				
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1				
Komatsu PC 270		Coordinates: Z07V N6828383.1m E586714.3m		ELEVATION: m				
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	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	
				857-001	GM		SILTY GRAVEL with SAND -Brown, damp, loose -5-10% Cobbles	1
				857-002	GM		-Greyish brown, frozen -Odd boulder	2
				857-003	GP-GM		POORLY GRADED GRAVEL with SILT and SAND -Greyish brown, loose, frozen -5-10% cobbles, odd boulder	4
							END of HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5140				
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1				
Komatsu PC 270		Coordinates: Z07V N6828326m E586731.4m		ELEVATION: m				
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	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	
							POORLY GRADED GRAVEL with SAND -Dark brown, loose, damp -5% Cobbles	
							WELL-GRADED GRVEL with SAND -Greyish brown, loose, damp -10-15% Cobbles, odd boulder	1
							POORLY GRADED GRAVEL with SILT and SAND -Orange brown -Suspect weatherd bedrock, hard digging	2
							END of HOLE - Refusal	3
								4



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5141					
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1					
Komatsu PC 270		Coordinates: Z07V N6828292.9m E586747.5m		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	
					857-007	SM		SILTY SAND -Frozen, very hard digging	1
								END of HOLE -Refusal, frozen	2
									3
									4
		Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy	Termination Depth: 1.7m		
						COMPILED BY: M. Jubinville	Complete: 5/29/2015 3:01:00 PM		
						REVIEWED BY: R. Stilwell	Pit #: 115-G-14 Page 1 of 1		


SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5143						
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1						
Komatsu PC 270		Coordinates: Z07V N6828236.3m E586894.5m		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◆								■ Percent Gravel■
	0 20 40 60 80 100	0 20 40 60 80 100	0 20 40 60 80 100							
								ORGANICS		
								WELL-GRADED GRAVEL with SAND -Dark brown, loose, damp -15-20% Cobbles, some boulders > 500mm	1	
								-Greyish, frozen -5-10% Cobbles	2	
					857-011	GW			3	
								END of HOLE	4	
		Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy	Termination Depth: 3.8m			
						COMPILED BY: M. Jubinville	Complete: 5/29/2015 4:29:00 PM			
						REVIEWED BY: R. Stilwell	Pit #: 115-G-14		Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5144				
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1				
Komatsu PC 270		Coordinates: Z07V N6828095.2m E586944.4m		ELEVATION: m				
SAMPLE TYPE		UNDISTURBED		DCPT				
		AUGER		BULK				
		SPT		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 80 100		0 20 40 60 80 100					
					SP-SM		ORGANICS	
					SP-SM		POORLY GRADED SAND with SILT -Greyish white, frozen	
					ML		SANDY SILT -Brown	1
					ML			2
							END of HOLE -Refusal, frozen	3
								4



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5145				
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1				
Komatsu PC 270		Coordinates: Z07V N6827949.1m E587106.6m		ELEVATION: m				
SAMPLE TYPE		UNDISTURBED	DCPT	AUGER	BULK	SPT	CORE	
ELEV. (m)	★ Percent Fines★ ◆ Percent Sand◆ ■ Percent Gravel■		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
	PLASTIC 0 20 40 60 80 100 M.C. 50 LIQUID 80	0 20 40 60 80 100						
							ORGANICS	
							POORLY GRADED GRAVEL with SILT and SAND -Brown, loose, damp -5% Cobbles	1
							POORLY GRADED GRAVEL with SAND -Brown, loose, damp -10-15% Cobbles	2
							WELL-GRADED GRAVEL with SAND -Brown, loose, damp -10-15% Cobbles, odd boulders	3
							END of HOLE -Target depth reached	4



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5146					
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1					
Komatsu PC 270		Coordinates: Z07V N6827898.7m E587141.6m		ELEVATION: m					
SAMPLE TYPE		UNDISTURBED		DCPT					
		AUGER		BULK					
		SPT		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 80 100		0 20 40 60 80 100						
					857-017 SW-SM		ORGANICS		
							WELL-GRADED SAND with SILT -Greyish brown, frozen -Hard digging	1	
					857-018 SM		SILTY SAND -Dark greyish brown, frozen -Hard digging		
							END of HOLE -Refusal, frozen	2	
								3	
								4	
		Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy		Termination Depth: 2m	
						COMPILED BY: M. Jubinville		Complete: 5/30/2015 9:48:00 AM	
						REVIEWED BY: R. Stilwell		Pit #: 115-G-14 Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway	SOURCE/TP#: 857-5147
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270		Coordinates: Z07V Nm Em	ELEVATION: m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT 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	
											SILT with SAND -Brown, frozen	1
											-SANDY SILT -Light brown, frozen	2
											END of HOLE -Refusal, frozen	3
												4




Highways and Public Works
Transportation Engineering Branch

LOGGED BY: G. Kennedy	Termination Depth: 2.2m
COMPILED BY: M. Jubinville	Complete: 5/30/2015 10:40:00 AM
REVIEWED BY: R. Stilwell	Pit #: 115-G-14 Page 1 of 1

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5148									
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1									
Komatsu PC 270		Coordinates: Z07V N6827813.4m E587183.9m		ELEVATION: m									
SAMPLE TYPE		UNDISTURBED		DCPT		AUGER		BULK		SPT		CORE	
ELEV. (m)	PLASTIC M.C. LIQUID		★ Percent Fines★		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION		Depth (m)		
	0	20	40	60								80	100
									ORGANICS				
						857-021	ML		SILT with SAND -Brown, frozen				
						857-022	SP		POORLY GRADED SAND with GRAVEL -Brown, compact, damp -10-15% Cobbles	1			
										2			
										3			
						857-023	GP		POORLY GRADED GRAVEL with SAND -Brown, compact, damp -20-25% Cobbles	4			
									END of HOLE -Target depth reached				



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5149					
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1					
Komatsu PC 270		Coordinates: Z07V N6827705.8m E587270.9m		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★		Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
		◆ Percent Sand◆							
								ORGANICS	
								SILTY SAND -Light brown, frozen -Whitish grey	
					857-024	SM			1
					857-025	ML			2
									3
									4
		Highways and Public Works Transportation Engineering Branch				LOGGED BY: G. Kennedy		Termination Depth: 2m	
						COMPILED BY: M. Jubinville		Complete: 5/30/2015 12:49:00 PM	
						REVIEWED BY: R. Stilwell		Pit #: 115-G-14 Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5150				
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1				
Komatsu PC 270		Coordinates: Z07V N6827825.6m E587167.6m		ELEVATION: m				
SAMPLE TYPE		UNDISTURBED		DCPT				
		AUGER		BULK				
		SPT		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	
				857-026	SM		SILTY SAND with GRAVEL -Brown, frozen	
				857-027	GW		WELL-GRADED GRAVEL with SAND -Brownish grey, damp, compact -20-25% Cobbles	1
								2
								3
							-Darker brown, compact to loose	4
							END OF HOLE -Target depth reached	



SUBSURFACE EXPLORATION AND TEST REPORT		Alaska Highway		SOURCE/TP#: 857-5151						
Ivan Thompson		Geotechnical exploration, KM 1736.6 LHS		PROJECT NO: 552-202101-1001-1-1						
Komatsu PC 270		Coordinates: Z07V N6827847.3m E587149.6m		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							
									ORGANICS	
						857-028	ML		SILT with SAND -Brown, frozen	1
						857-030	ML		SANDY SILT -Lighter brown, frozen	2
									END of HOLE -Refusal, frozen	3
										4



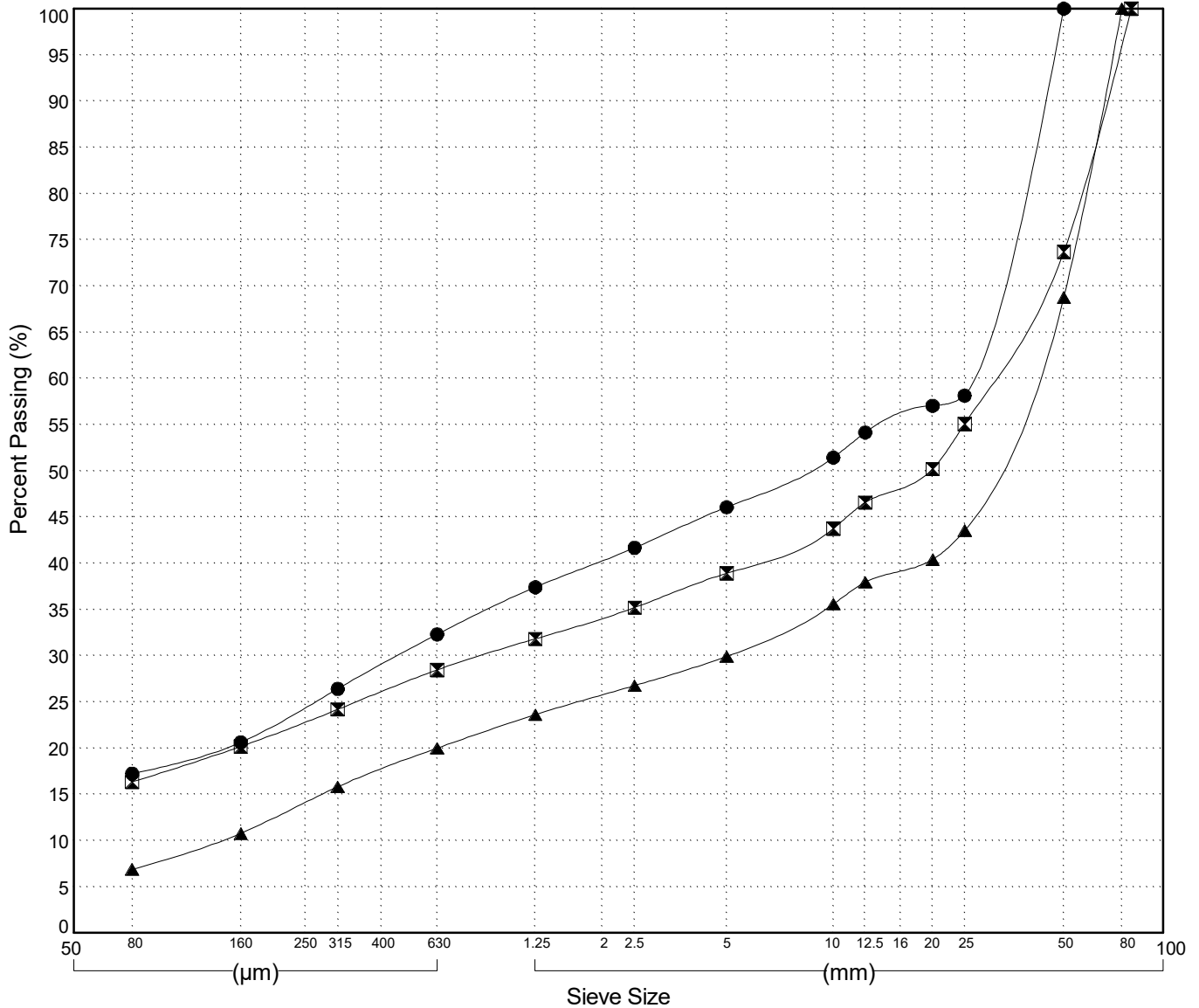
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5139
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828383.1m E586714.3m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 857-001	2015-1157	0.4 to 0.8	SILTY GRAVEL with SAND(GM)	7.9	NP	NP	NP		
☒ 857-002	2015-1158	1.6 to 1.8	SILTY GRAVEL with SAND(GM)	5.8	NP	NP	NP		
▲ 857-003	2015-1159	3.8 to 4.2	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	5.9	NP	NP	NP	4.3	285.7

Field#	Lab#	% PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt/Clay
● 857-001	2015-1157	100.0	100.0	100.0	100.0	58.1	57.0	54.1	51.4	46.1	41.7	37.4	32.3	26.4	20.6	17.2	53.9	28.8	17.2
☒ 857-002	2015-1158	100.0	96.4	73.7	55.1	50.2	46.6	43.7	38.9	35.2	31.8	28.5	24.2	20.2	16.3	57.5	22.6	16.3	
▲ 857-003	2015-1159	100.0	100.0	68.8	43.5	40.4	37.9	35.6	29.9	26.8	23.6	20.0	15.8	10.8	6.9	70.1	23.0	6.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



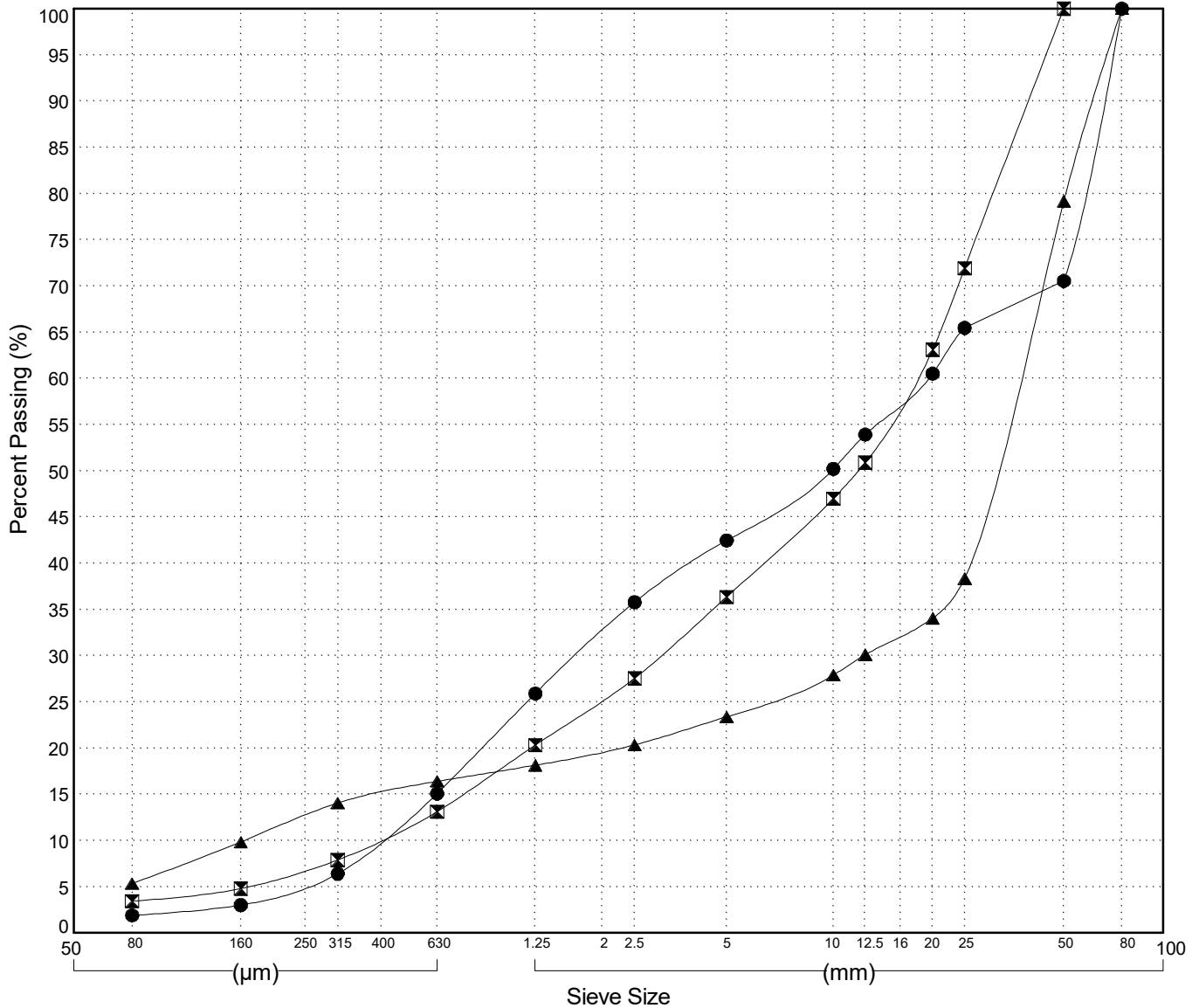
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5140
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828326m E586731.4m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 857-004	2015-1160	0.2 to 0.6	POORLY GRADED GRAVEL with SAND(GP)	4.1	NP	NP	NP	0.3	46.0
☒ 857-005	2015-1161	1.0 to 1.4	WELL-GRADED GRAVEL with SAND(GW)	3.8	NP	NP	NP	1.2	42.7
▲ 857-006	2015-1162	2.2 to 2.6	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.9	NP	NP	NP	25.8	220.1

Field#	Lab#	% PASSING	Sieve Size (mm)													% Breakdown		
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand
● 857-004	2015-1160	100.0	100.0	70.5	65.5	60.5	53.9	50.2	42.5	35.8	25.9	15.1	6.4	3.0	1.9	57.5	40.5	1.9
☒ 857-005	2015-1161	100.0	100.0	100.0	71.9	63.1	50.9	47.0	36.4	27.6	20.3	13.1	7.9	4.8	3.4	63.6	32.9	3.4
▲ 857-006	2015-1162	100.0	100.0	79.2	38.3	34.0	30.1	27.9	23.4	20.3	18.2	16.4	14.1	9.8	5.4	76.6	18.0	5.4

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

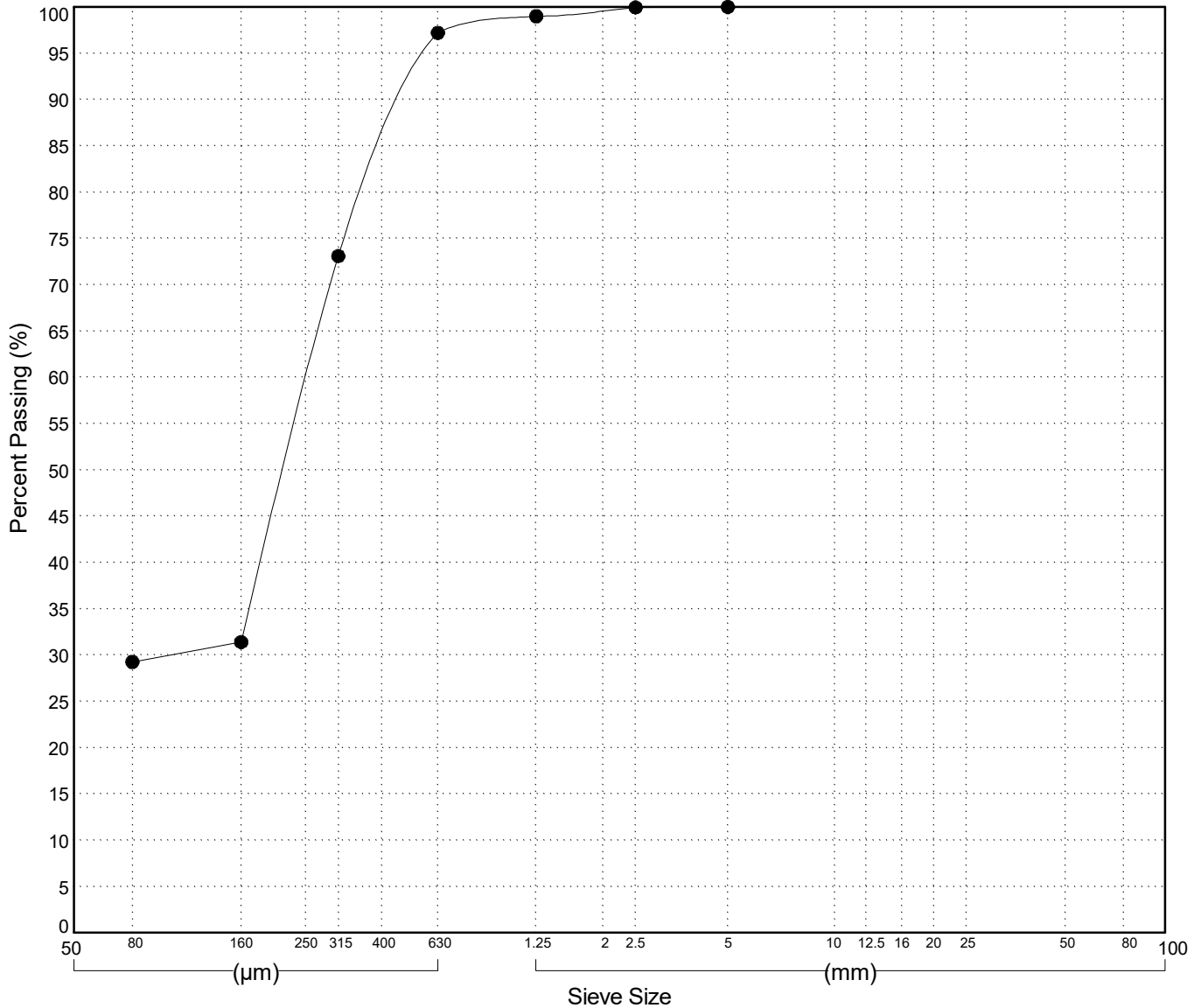


GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5141
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828292.9m E586747.5m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu	
● 857-007	2015-1163	0.3 to 0.6	SILTY SAND(SM)											48.0	NP	NP	NP			
Field#	Lab#		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	%Breakdown			
● 857-007	2015-1163	% PASSING	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.0	97.2	73.1	31.4	29.3	Gravel	Sand	Silt	Clay
																	0.0	70.7	29.3	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
Transportation Engineering Branch

LOGGED BY: G. Kennedy
COMPILED BY: M. Jubinville
REVIEWED BY: R. Stilwell

Pit # 115-G-14
Complete: 5/29/2015 3:01:00 PM

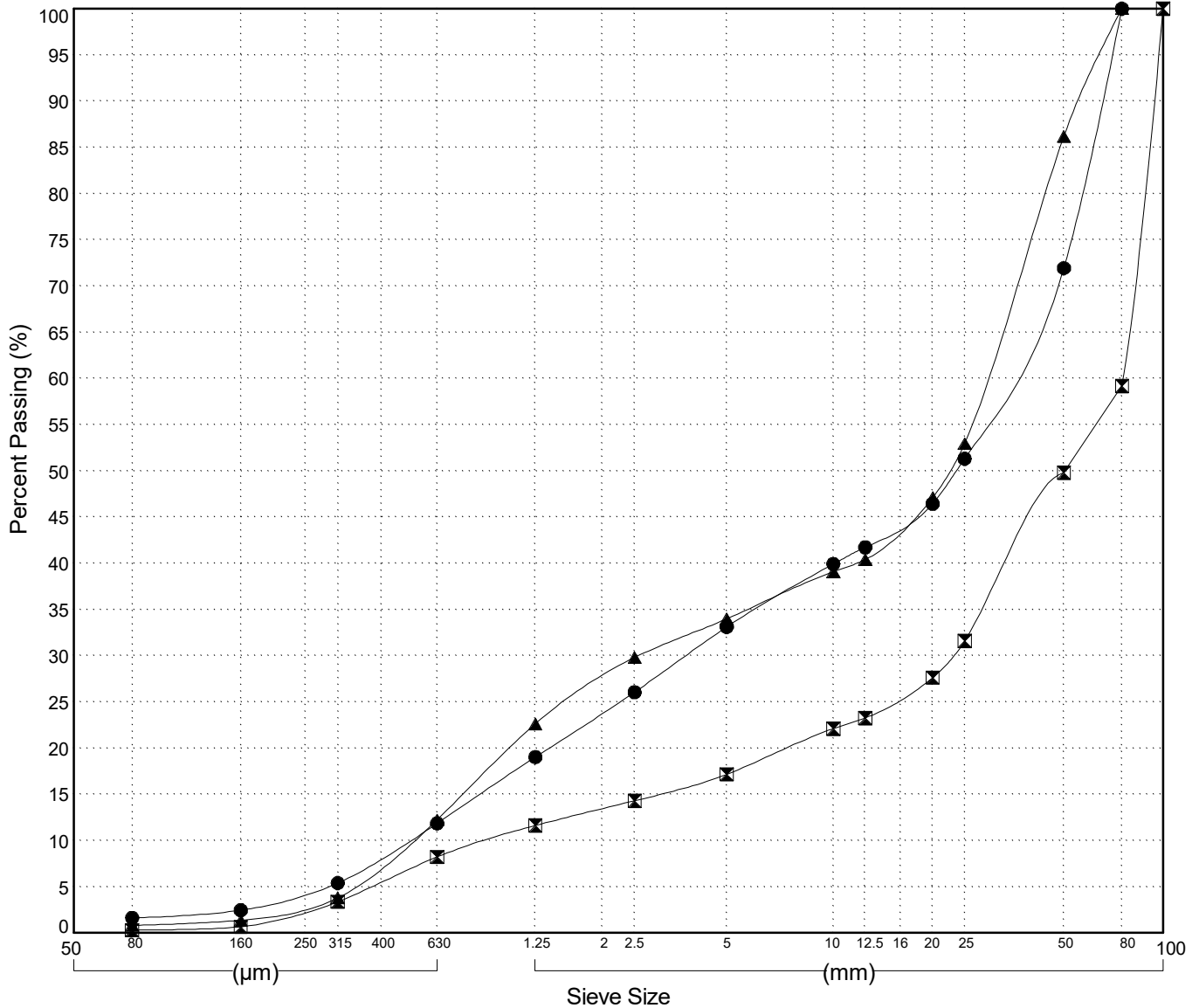
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5142
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828297.7m E586812.1m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 857-008	2015-1164	0.2 to 0.6	POORLY GRADED GRAVEL with SAND(GP)	2.3	NP	NP	NP	0.7	64.9
☒ 857-010	2015-1166	0.3 to 0.7	POORLY GRADED GRAVEL with SAND(GP)	2.4	NP	NP	NP	7.7	83.8
▲ 857-009	2015-1165	1.6 to 2.0	POORLY GRADED GRAVEL with SAND(GP)	1.4	NP	NP	NP	0.4	55.2

Field#	Lab#	% PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt/Clay
● 857-008	2015-1164	100.0	100.0	100.0	71.9	51.3	46.4	41.7	39.9	33.1	26.1	19.0	11.9	5.4	2.5	1.6	66.9	31.5	1.6
☒ 857-010	2015-1166	100.0	59.2	49.8	31.6	27.6	23.3	22.1	17.2	14.3	11.6	8.2	3.4	0.7	0.3	42.0	16.9	0.3	
▲ 857-009	2015-1165	100.0	100.0	86.2	52.9	47.1	40.4	39.1	34.0	29.8	22.6	12.2	3.8	1.4	0.8	66.0	33.2	0.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

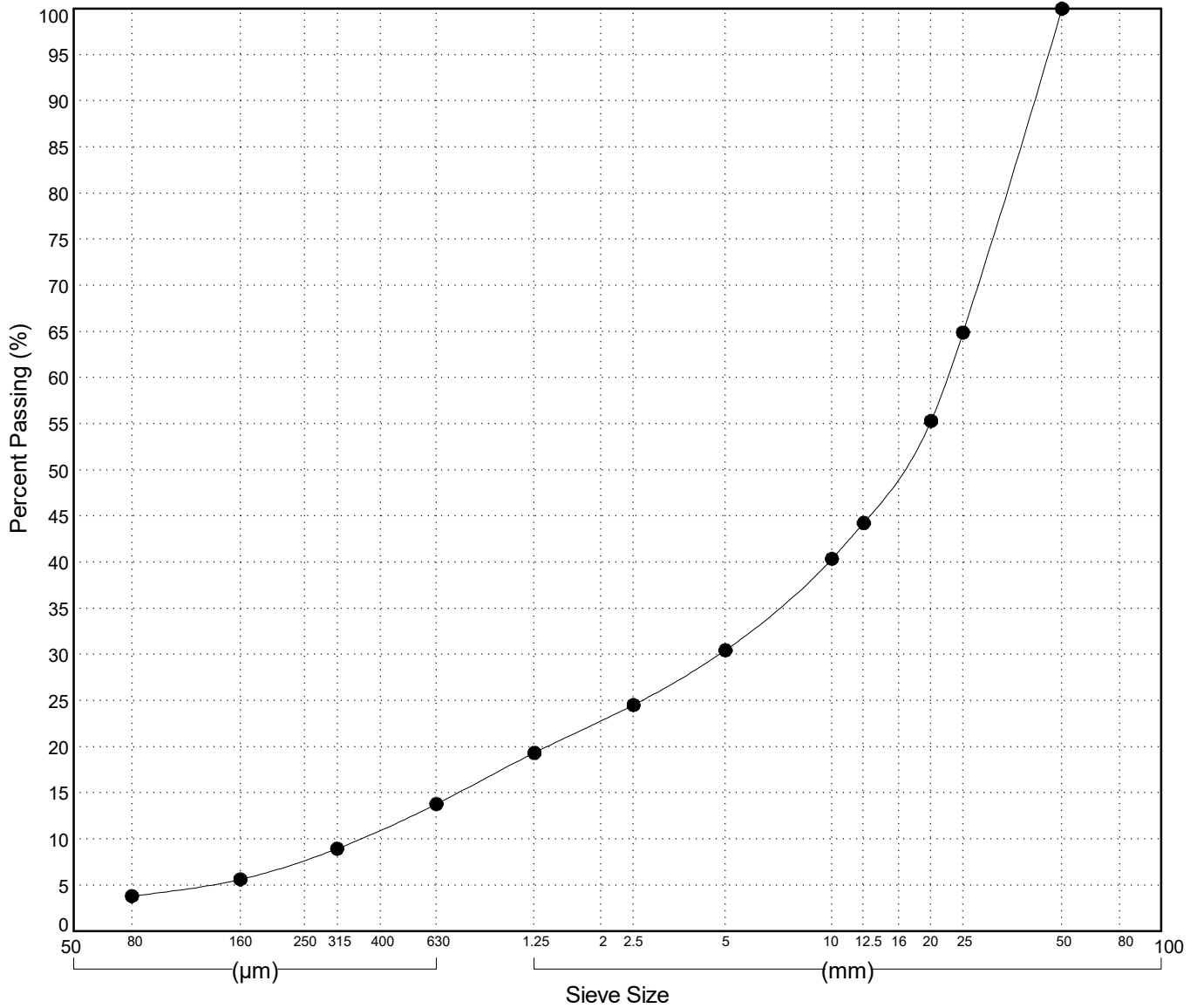


GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5143
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828236.3m E586894.5m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification													%H2O	LL	PL	PI	Cc	Cu
● 857-011	2015-1167	2.0 to 2.4	WELL-GRADED GRAVEL with SAND(GW)													4.7	NP	NP	NP	2.5	61.0
Field#	Lab#		100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown				
● 857-011	2015-1167	% PASSING	100.0	100.0	100.0	64.9	55.3	44.3	40.4	30.5	24.5	19.3	13.8	9.0	5.6	3.8	Gravel	Sand	Silt	Clay	
																	69.5	26.6	3.8		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



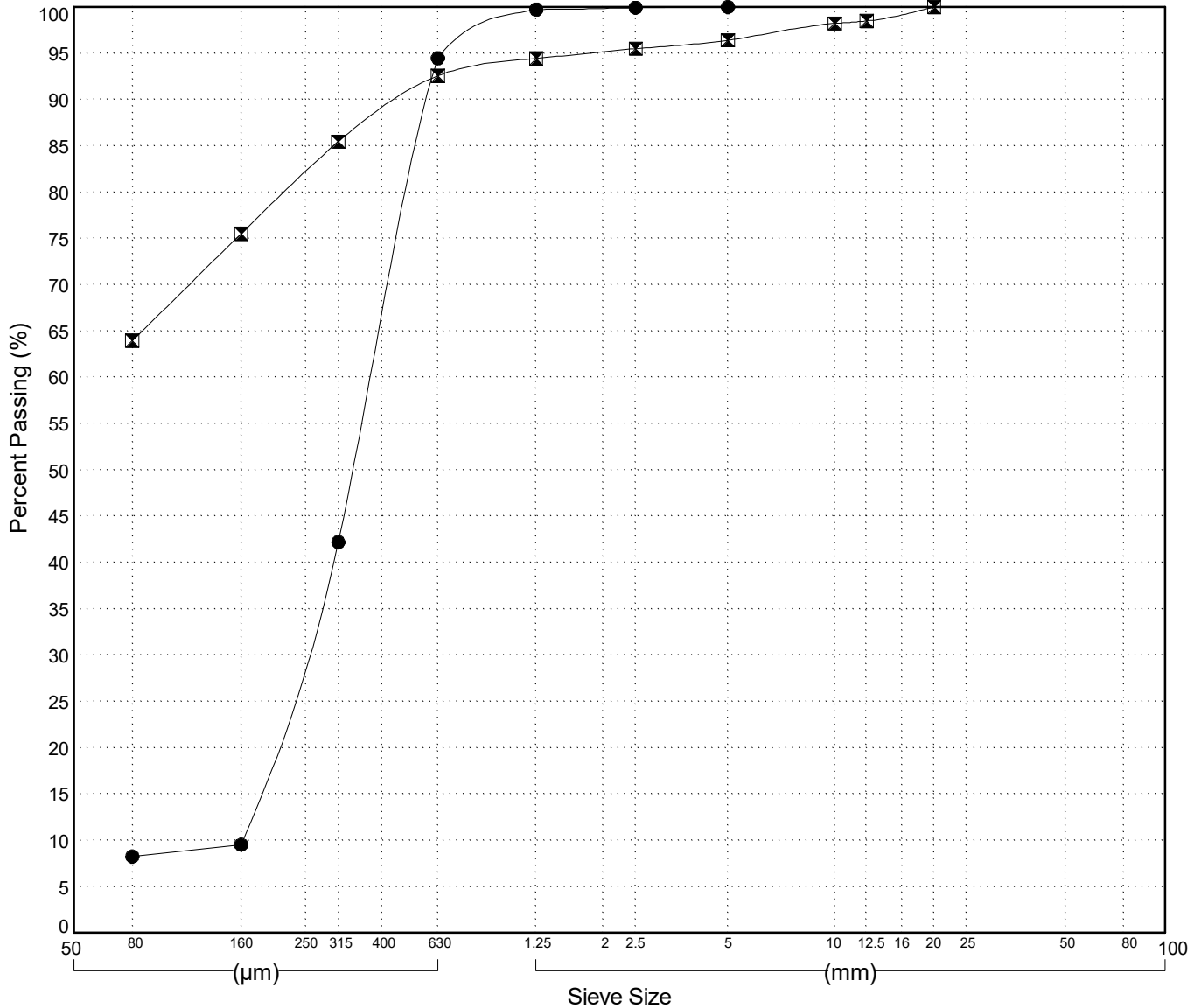
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5144
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6828095.2m E586944.4m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 857-012	2015-1168	0.2 to 0.3	POORLY GRADED SAND with SILT(SP-SM)	40.3	NP	NP	NP	0.9	2.5
☒ 857-013	2015-1169	1.2 to 1.6	SANDY SILT(ML)	83.8	NP	NP	NP		
Field#	Lab#								
● 857-012	2015-1168								
☒ 857-013	2015-1169								

Field#	Lab#	% PASSING														% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt
● 857-012	2015-1168	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	94.5	42.2	9.5	8.3	0.0	91.7	8.3	
☒ 857-013	2015-1169	100.0	100.0	100.0	100.0	100.0	98.5	98.2	96.4	95.5	94.4	92.6	85.5	75.5	63.9	3.6	32.5	63.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



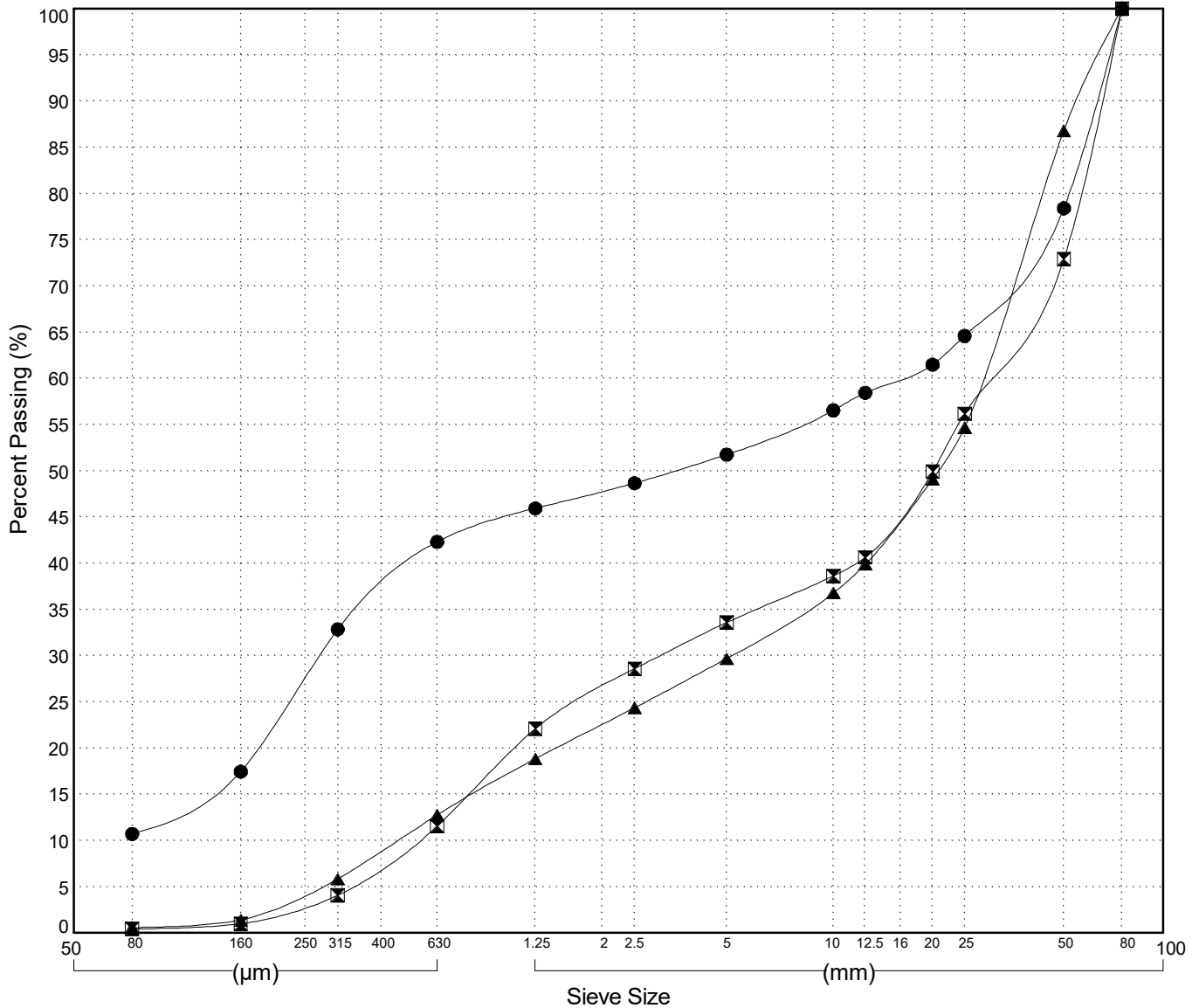
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5145
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827949.1m E587106.6m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 857-014	2015-1170	0.2 to 0.6	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	6.5	NP	NP	NP	0.1	229.6
☒ 857-015	2015-1171	1.2 to 1.6	POORLY GRADED GRAVEL with SAND(GP)	1.6	NP	NP	NP	0.6	53.7
▲ 857-016	2015-1172	3.2 to 3.6	WELL-GRADED GRAVEL with SAND(GW)	2.1	NP	NP	NP	1.8	58.7

Field#	Lab#	% PASSING														% Breakdown				
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt	Clay
● 857-014	2015-1170	100.0	100.0	100.0	78.4	64.6	61.5	58.4	56.5	51.8	48.7	45.9	42.3	32.9	17.5	10.7	48.2	41.0	10.7	
☒ 857-015	2015-1171	100.0	100.0	72.9	56.2	49.9	40.6	38.6	33.6	28.6	22.1	11.6	4.1	1.0	0.4	66.4	33.1	0.4		
▲ 857-016	2015-1172	100.0	100.0	86.8	54.7	49.1	39.9	36.8	29.7	24.4	18.8	12.8	5.8	1.4	0.6	70.3	29.1	0.6		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



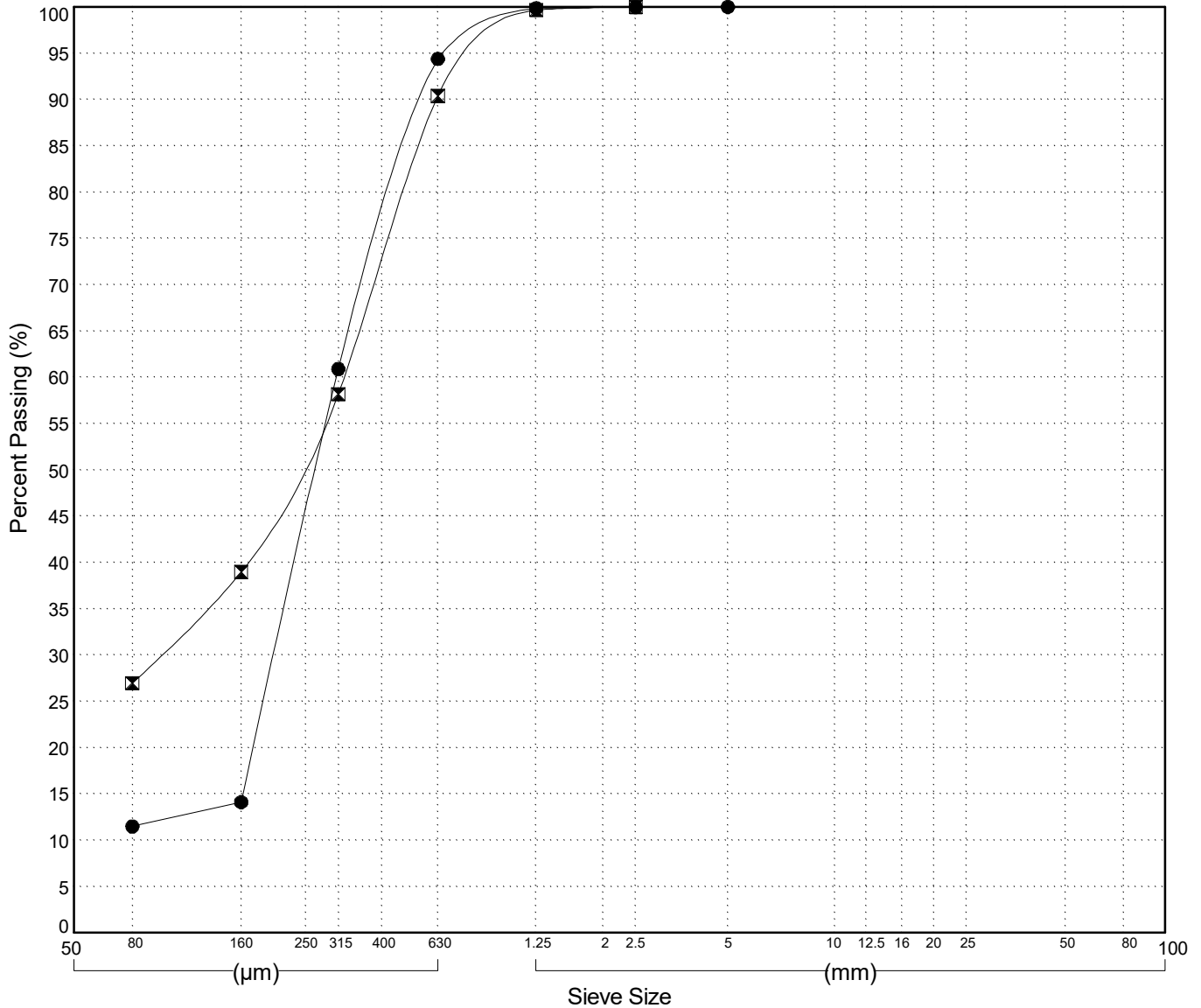
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5146
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827898.7m E587141.6m	ELEVATION: m

Master Revised July 2013

Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 857-017	2015-1173	0.2 to 0.6	WELL-GRADED SAND with SILT(SW-SM)	73.4	NP	NP	NP	2.7	6.4
☒ 857-018	2015-1174	1.4 to 1.8	SILTY SAND(SM)	24.3	NP	NP	NP		

Field#	Lab#	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown			
			Gravel	Sand	Silt	Clay														
● 857-017	2015-1173	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	94.4	60.9	14.1	11.5	0.0	88.5	11.5	
☒ 857-018	2015-1174	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.7	90.4	58.2	39.0	27.0	0.0	73.0	27.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
Transportation Engineering Branch

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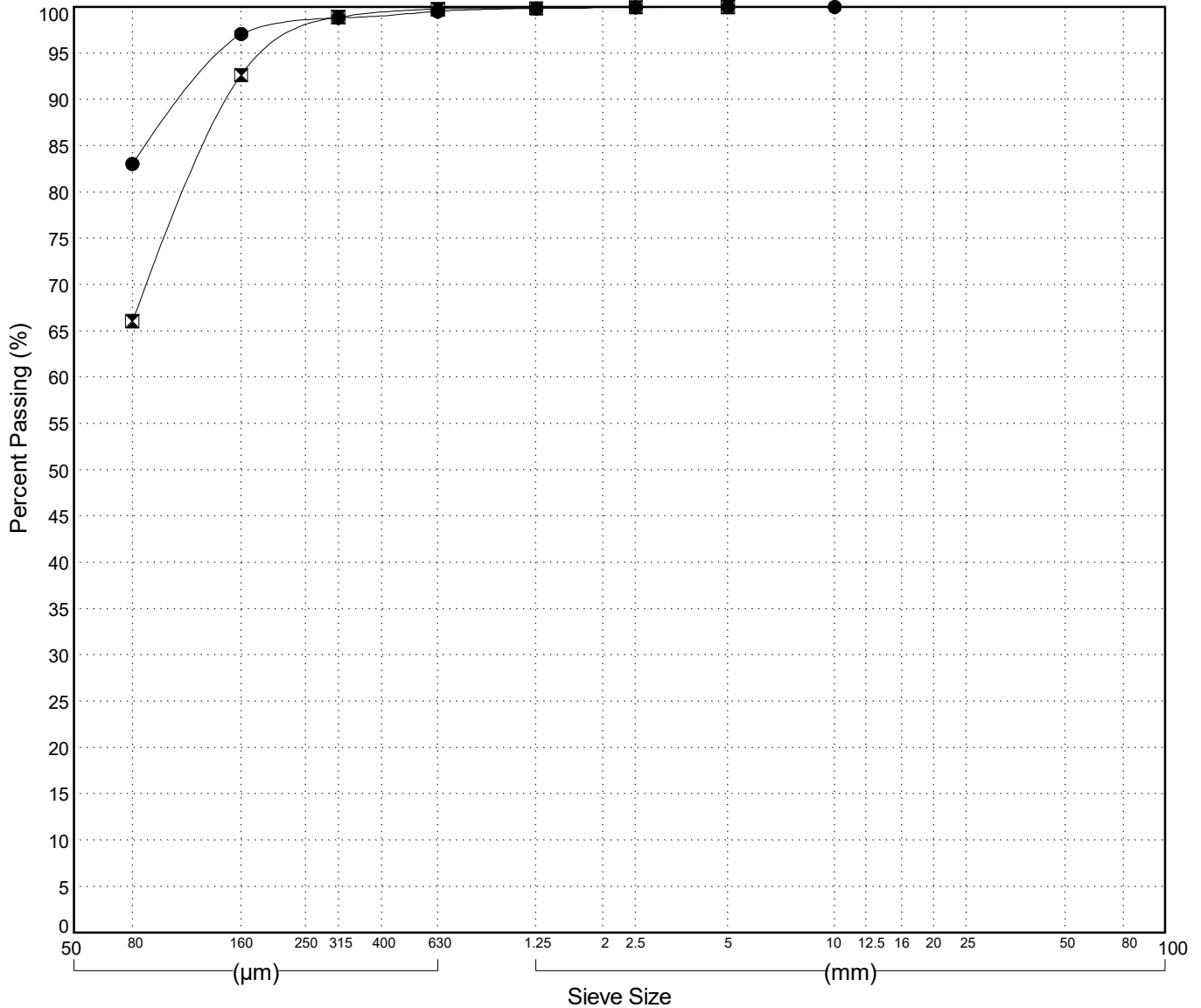
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5147
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V Nm Em	ELEVATION: m

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Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 857-019	2015-1175	0.2 to 0.6	SILT with SAND(ML)	37.4	NP	NP	NP		
☒ 857-020	2015-1176	1.4 to 1.8	SANDY SILT(ML)	48.8	NP	NP	NP		

Field#	Lab#	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown			
																Gravel	Sand	Silt	Clay
● 857-019	2015-1175	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.8	99.5	98.8	97.1	83.0	0.0	16.9	83.0	
☒ 857-020	2015-1176	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	98.9	92.6	66.1	0.0	33.9	66.1	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



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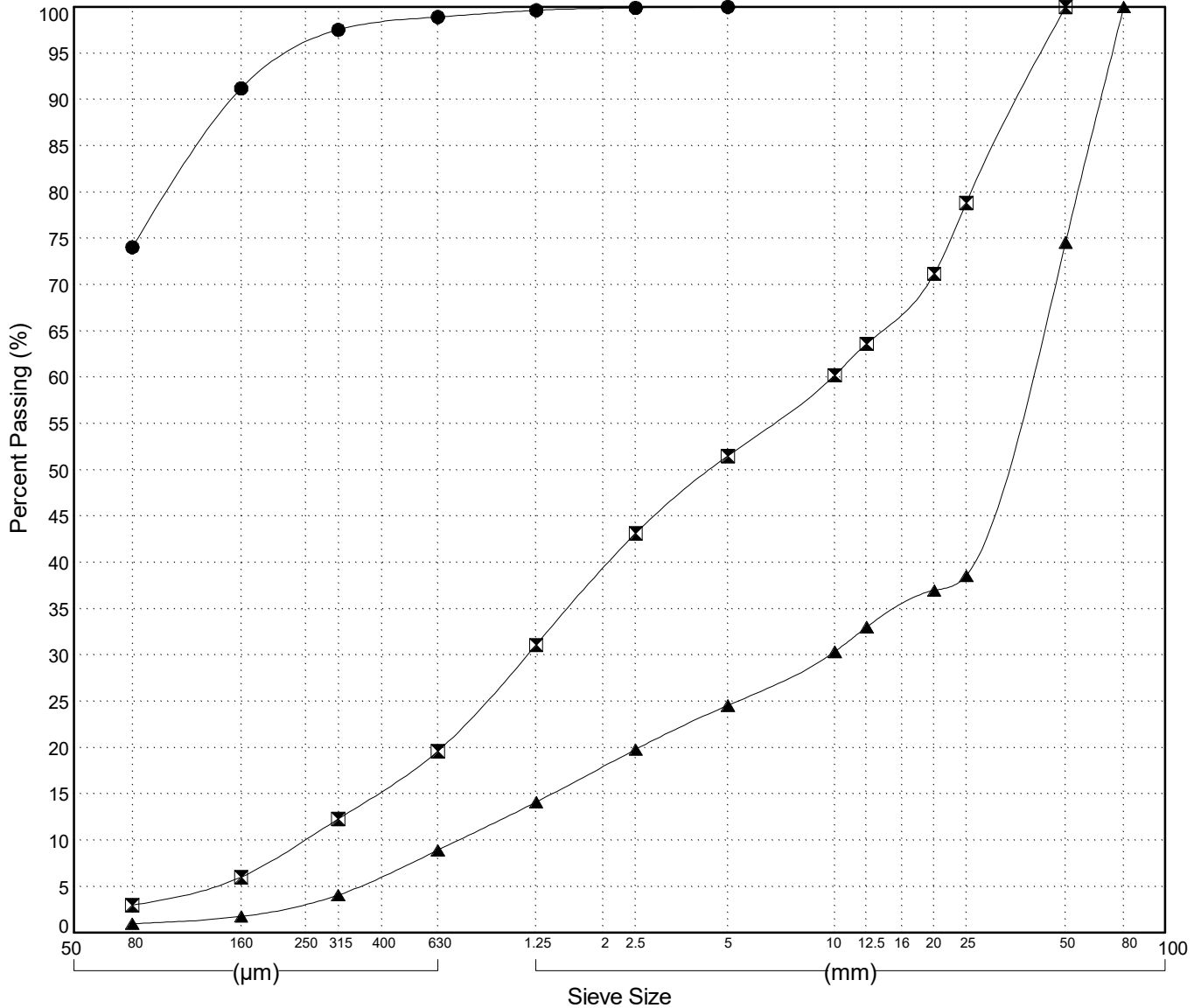
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5148
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827813.4m E587183.9m	ELEVATION: m

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Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 857-021	2015-1177	0.2 to 0.6	SILT with SAND(ML)	50.6	NP	NP	NP		
☒ 857-022	2015-1178	1.0 to 1.4	POORLY GRADED SAND with GRAVEL(SP)	3.4	NP	NP	NP	0.6	39.9
▲ 857-023	2015-1179	3.4 to 3.8	POORLY GRADED GRAVEL with SAND(GP)	2.3	NP	NP	NP	3.3	52.0

Field#	Lab#	% PASSING	Sieve Size (mm)													% Breakdown			
			100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	Gravel	Sand	Silt
● 857-021	2015-1177	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.6	98.9	97.5	91.2	74.0	0.0	26.0	74.0	
☒ 857-022	2015-1178	100.0	100.0	100.0	78.8	71.2	63.6	60.2	51.5	43.2	31.1	19.6	12.3	6.0	3.0	48.5	48.5	3.0	
▲ 857-023	2015-1179	100.0	100.0	74.6	38.6	37.0	33.0	30.4	24.6	19.8	14.1	8.9	4.1	1.8	1.0	75.4	23.6	1.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

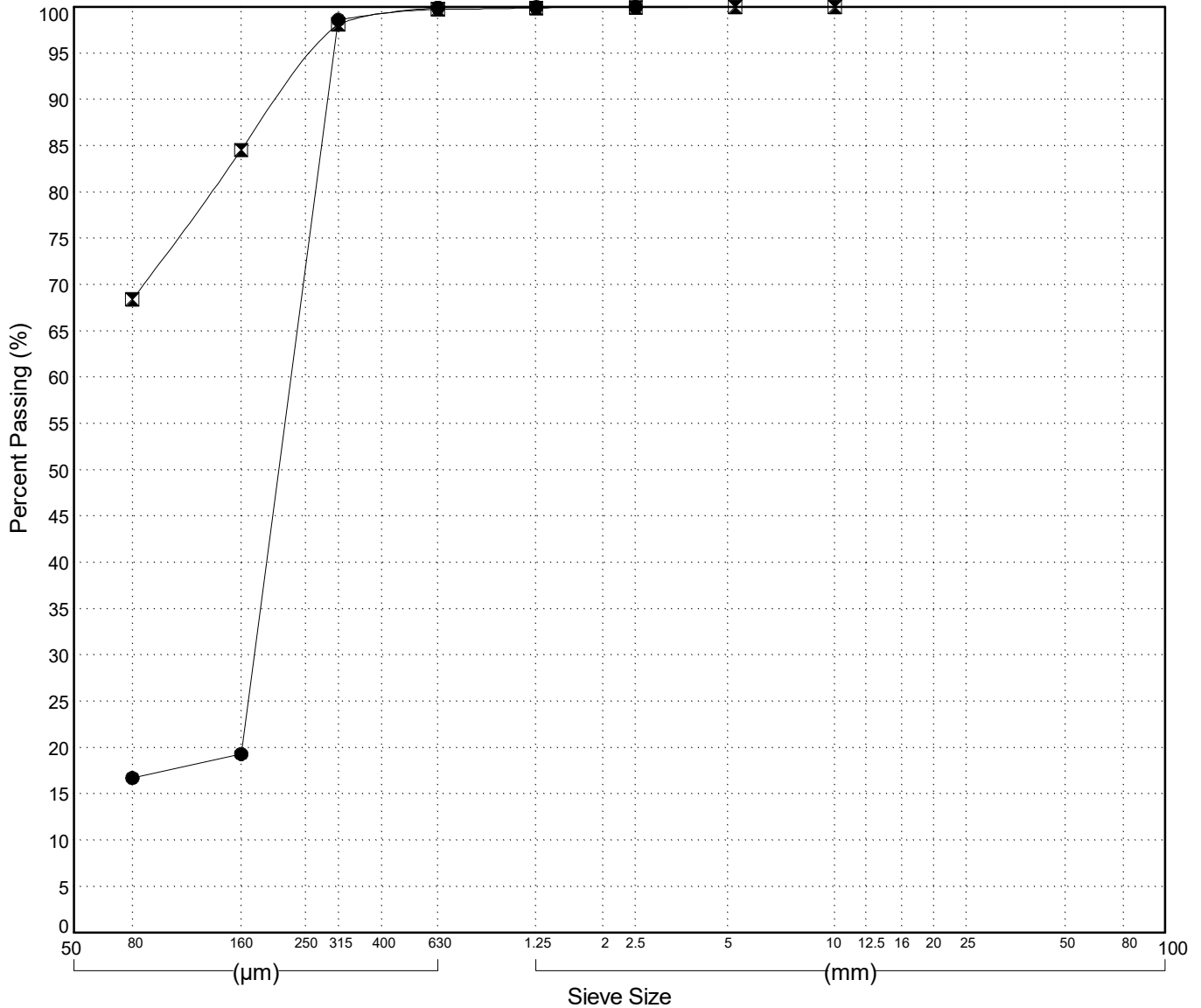


GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5149
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827705.8m E587270.9m	ELEVATION: m

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Field#	Lab#	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 857-024	2015-1180	0.4 to 0.8	SILTY SAND(SM)	33.8	NP	NP	NP													
☒ 857-025	2015-1181	1.4 to 1.8	SANDY SILT(ML)	51.3	NP	NP	NP													
Field#	Lab#	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown				
																Gravel	Sand	Silt	Clay	
● 857-024	2015-1180	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	98.6	19.3	16.7	0.0	83.3	16.7		
☒ 857-025	2015-1181	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.8	98.1	84.6	68.4	0.0	31.6	68.4		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
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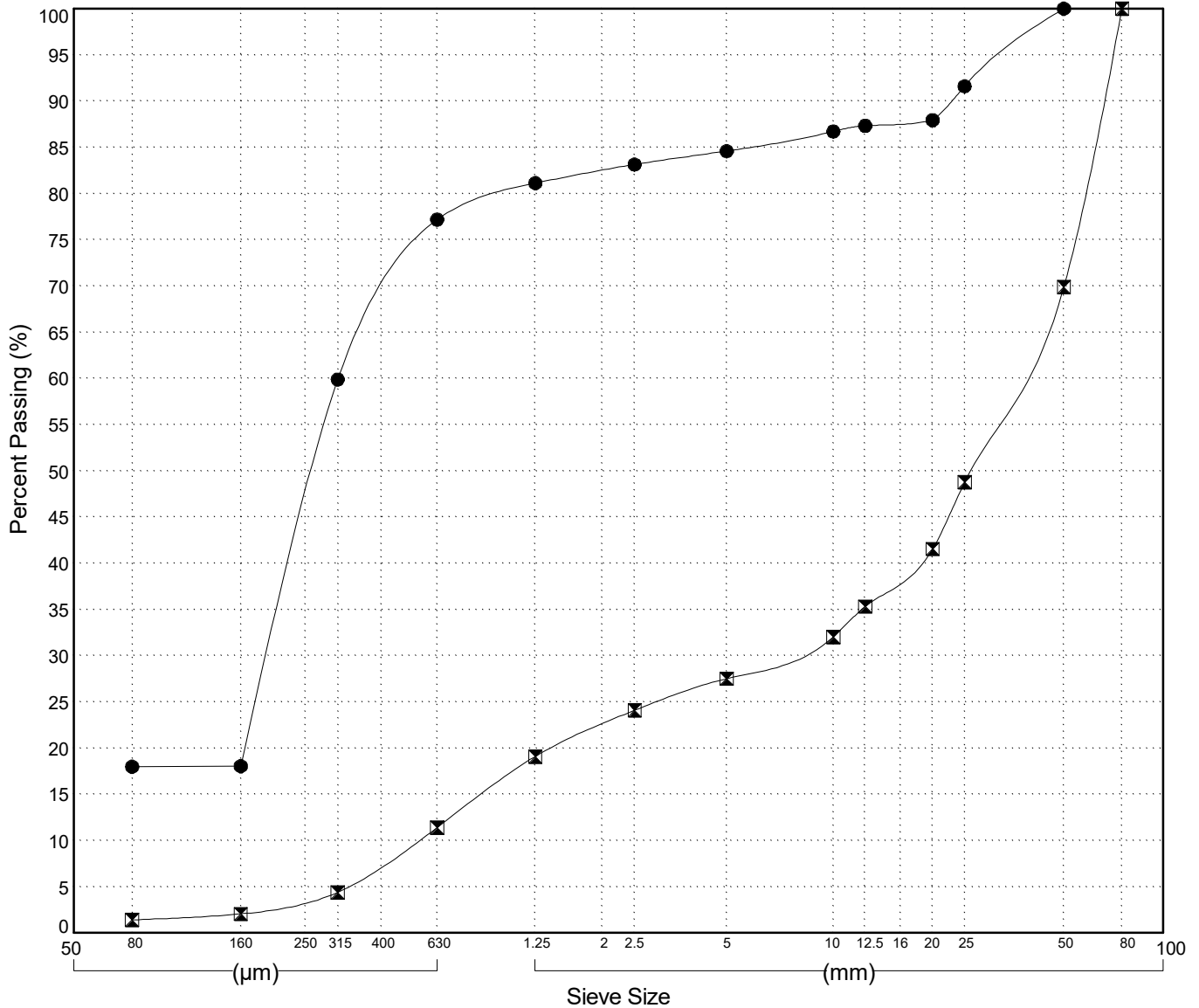
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5150
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827825.6m E587167.6m	ELEVATION: m

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Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 857-026	2015-1182	0.2 to 0.6	SILTY SAND with GRAVEL(SM)	11.3	NP	NP	NP		
☒ 857-027	2015-1183	1.2 to 1.6	WELL-GRADED GRAVEL with SAND(GW)	1.6	NP	NP	NP	2.6	66.0
Field#	Lab#								
● 857-026	2015-1182								
☒ 857-027	2015-1183								

Field#	Lab#	% PASSING	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown			
																	Gravel	Sand	Silt	Clay
● 857-026	2015-1182	100.0	100.0	100.0	91.6	87.9	87.3	86.7	84.6	83.1	81.1	77.2	59.9	18.0	18.0		15.4	66.6	18.0	
☒ 857-027	2015-1183	100.0	100.0	69.9	48.8	41.6	35.3	32.0	27.5	24.1	19.1	11.4	4.4	2.1	1.4		72.5	26.1	1.4	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



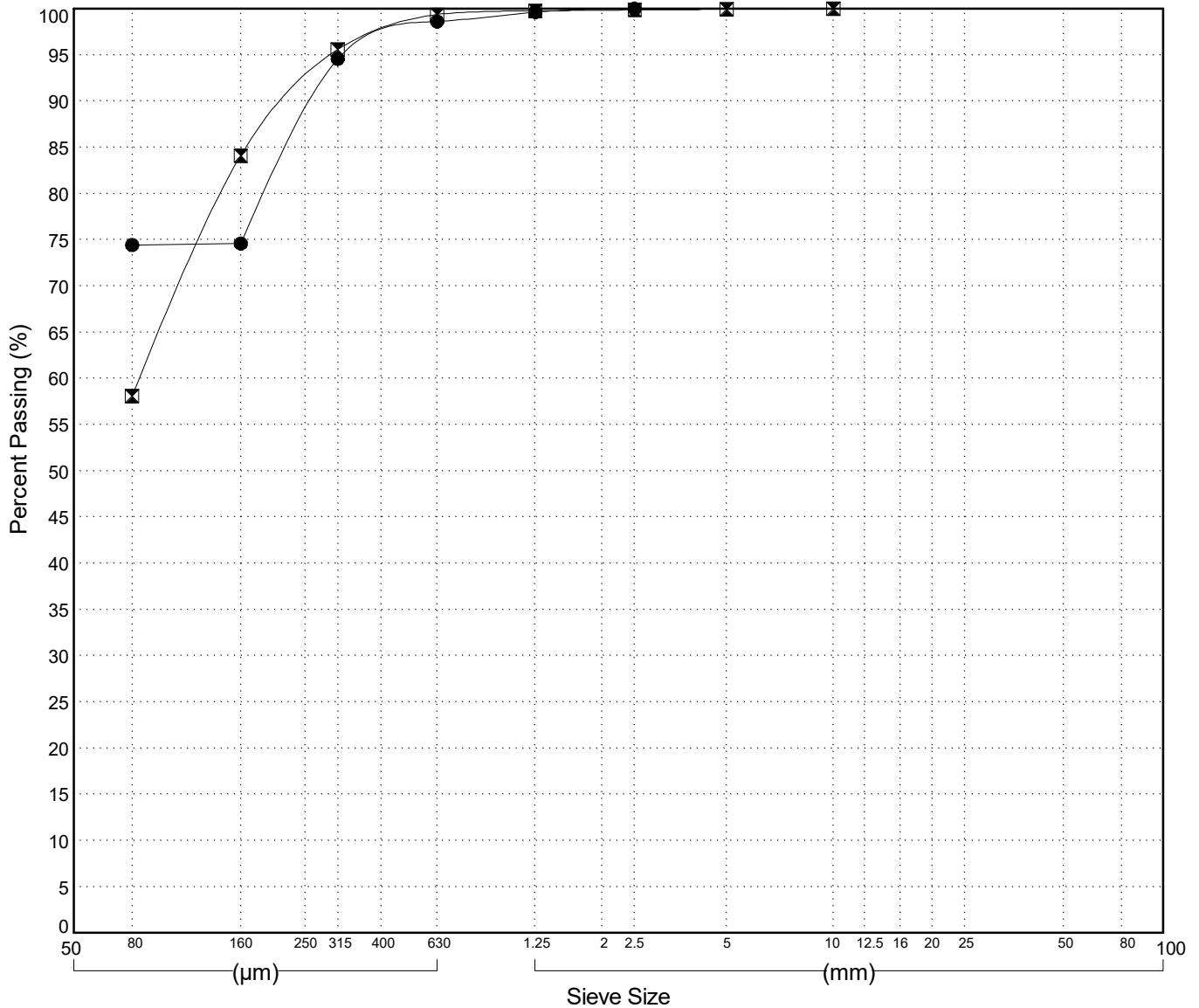
GRAIN SIZE ANALYSIS	Geotechnical exploration	SOURCE/TP#: 857-5151
Ivan Thompson	KM 1736.6 LHS	PROJECT NO: 552-202101-1001-1-1
Komatsu PC 270	Coordinates: Z07V N6827847.3m E587149.6m	ELEVATION: m

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Field#	Lab#	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u
● 857-028	2015-1186	0.2 to 0.6	SILT with SAND(ML)	69.9	NP	NP	NP		
☒ 857-030	2015-1184	1.4 to 1.8	SANDY SILT(ML)	45.4	NP	NP	NP		

Field#	Lab#	100.0	80.0	50.0	25.0	20.0	12.5	10.0	5.0	2.5	1.25	0.630	0.315	0.160	0.080	% Breakdown				
																Gravel	Sand	Silt	Clay	
● 857-028	2015-1186	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.6	98.6	94.6	74.6	74.4	0.0	25.6	74.4		
☒ 857-030	2015-1184	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.9	99.8	99.4	95.6	84.1	58.1	0.1	41.8	58.1		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



Highways and Public Works
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