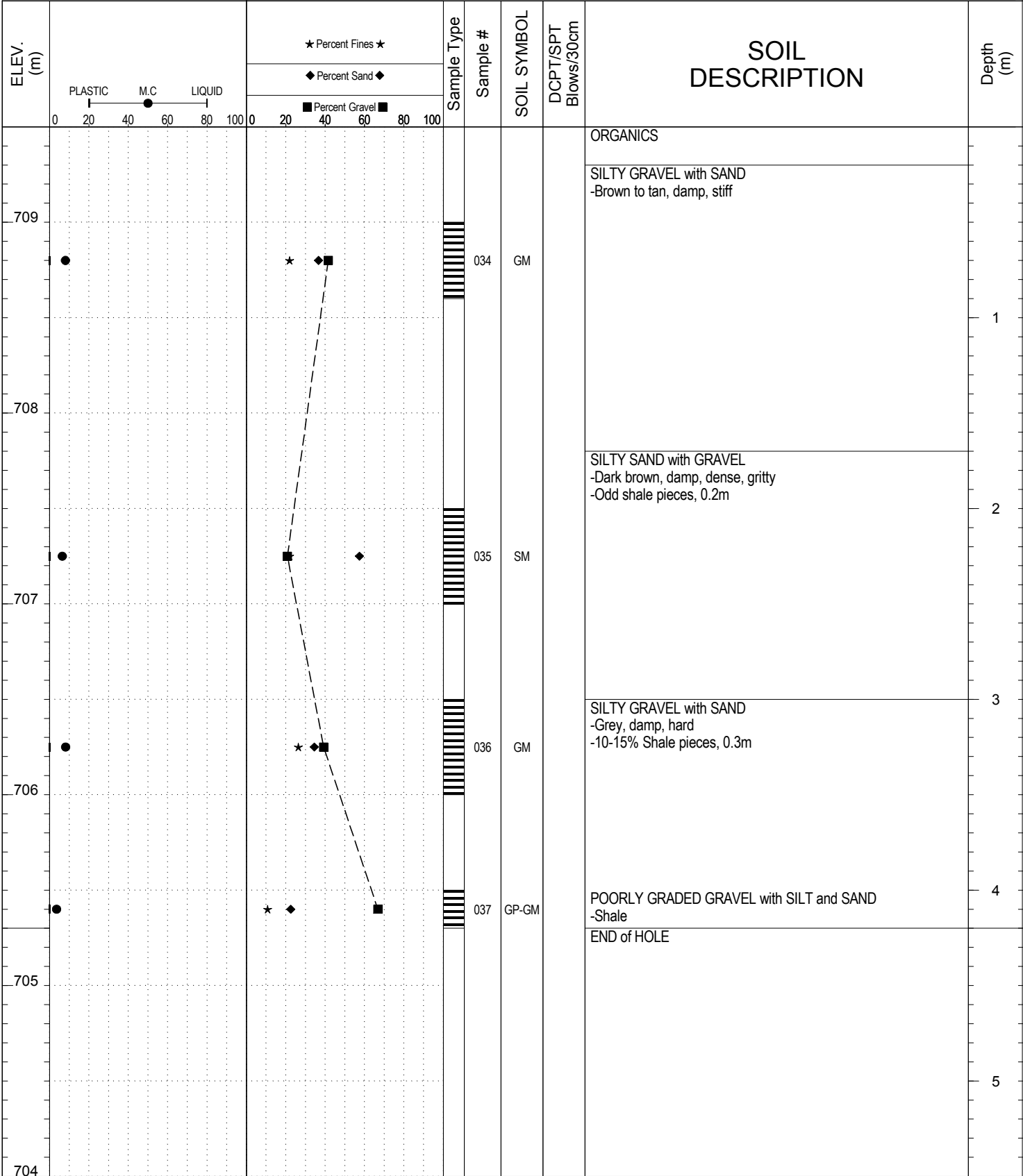


SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4633

J.Magun Campbell Highway Gravel Search km 70-90, km 81.6 PROJECT NO: 552-202104-2035-0661-5

Hitachi 200 LC Coordinates: Z09 N6727385.181m E488934.0624m ELEVATION: 709.5m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4634				
J.Magun		Campbell Highway Gravel Search km 70-90, km 81.6		PROJECT NO: 552-202104-2035-0661-5				
Hitachi 200 LC		Coordinates: Z09 N6727324.131m E488902.5183m		ELEVATION: 704.4m				
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							
704							ORGANICS	
							SILTY SAND -Reddish tan, damp, dense	
703								
							-Light tan	1
702								
							SILTY SAND with GRAVEL -Greyish brown -Odd round cobble -Pieces of shale	2
701								
							SILTY GRAVEL with SAND -Greyish brown, damp, hard -Tight to grindy digging -Pieces of shale rock, 0.1-0.2m	3
700								
							POORLY GRADED GRAVEL with SILT and SAND -Larger pieces of shale rock, 0.2-0.4m	4
699							END of HOLE -Refusal	5
			LOGGED BY: B.Tyhy		Termination Depth: 4.3m			
			COMPILED BY: R.Stilwell		Complete: 10/25/2013 2:30:00 PM			
			REVIEWED BY: M. Idrees		Pit #: unassigned Page 1 of 1			

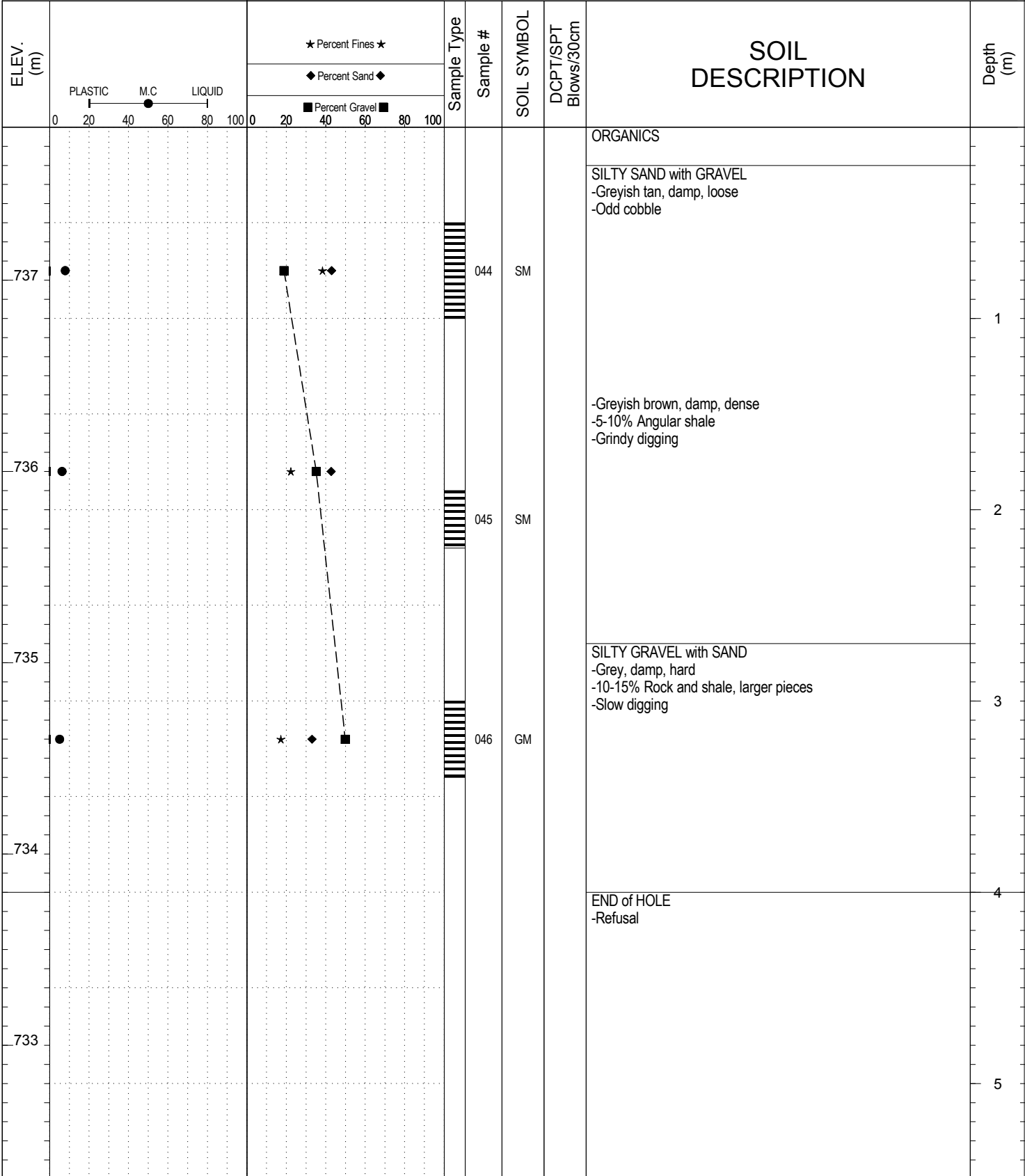
SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4635						
J.Magun		Campbell Highway Gravel Search km 70-90, km 81.6		PROJECT NO: 552-202104-2035-0661-5						
Hitachi 200 LC		Coordinates: Z09 N6727226.874m E488873.9201m		ELEVATION: 708.9m						
SAMPLE TYPE		UNDISTURBED	DCPT	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							
708	●		◆ ★		█	042	ML		ORGANICS	1
707									SANDY SILT -Grey, damp, very stiff -Sticky -Frozen	2
706									SILT	3
705	●		◆ ★		█	043	ML		END of HOLE	4
704										5

SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4636

J.Magun Campbell Highway Gravel Search km 70-90, km 81.6 PROJECT NO: 552-202104-2035-0661-5

Hitachi 200 LC Coordinates: Z09 N6727400.813m E489030.3612m ELEVATION: 737.8m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE



SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4637

J. Magun Campbell Highway Gravel Search km 70-90, km 81.6 PROJECT NO: 552-202104-2035-0661-5

Hitachi 200 LC Coordinates: Z09 N6727341.394m E489048.0971m ELEVATION: 744.4m

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)
	0	20	40						
744	0	20	40	60	80	100		ORGANICS	
744	0	20	40	60	80	100		SILTY SAND with GRAVEL -Tan, damp, hard digging -Rock pieces with surface silt	
743	0	20	40	60	80	100		END of HOLE -Refusal, bedrock outcrop exposed to left	1
742	0	20	40	60	80	100			2
741	0	20	40	60	80	100			3
740	0	20	40	60	80	100			4
739	0	20	40	60	80	100			5

SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4637R

Midnight Sun Drilling Campbell Highway Diamond Drilling, km 81.7 RHS PROJECT NO:

Diamond Drill Coordinates: Z09 N6727357m E489048.5m 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 ■ 0 20 40 60 80 100	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
			AUGER	SA01			OVERBURDEN	1
							BEDROCK -Fractured/weathered -Blue/green -Competent	2
								3
				SA02	BEDROCK			4
								5

SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4637R

Midnight Sun Drilling Campbell Highway Diamond Drilling, km 81.7 RHS PROJECT NO:

Diamond Drill Coordinates: Z09 N6727357m E489048.5m 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 ■ 0 20 40 60 80 100	Sample Type	Sample #	SOIL SYMBOL	DCPT/SPT Blows/30cm	SOIL DESCRIPTION	Depth (m)
							-Blue/green -Competent	6
					SA03	BEDROCK		7
								8
								9
					SA04	BEDROCK		10
							END of HOLE	

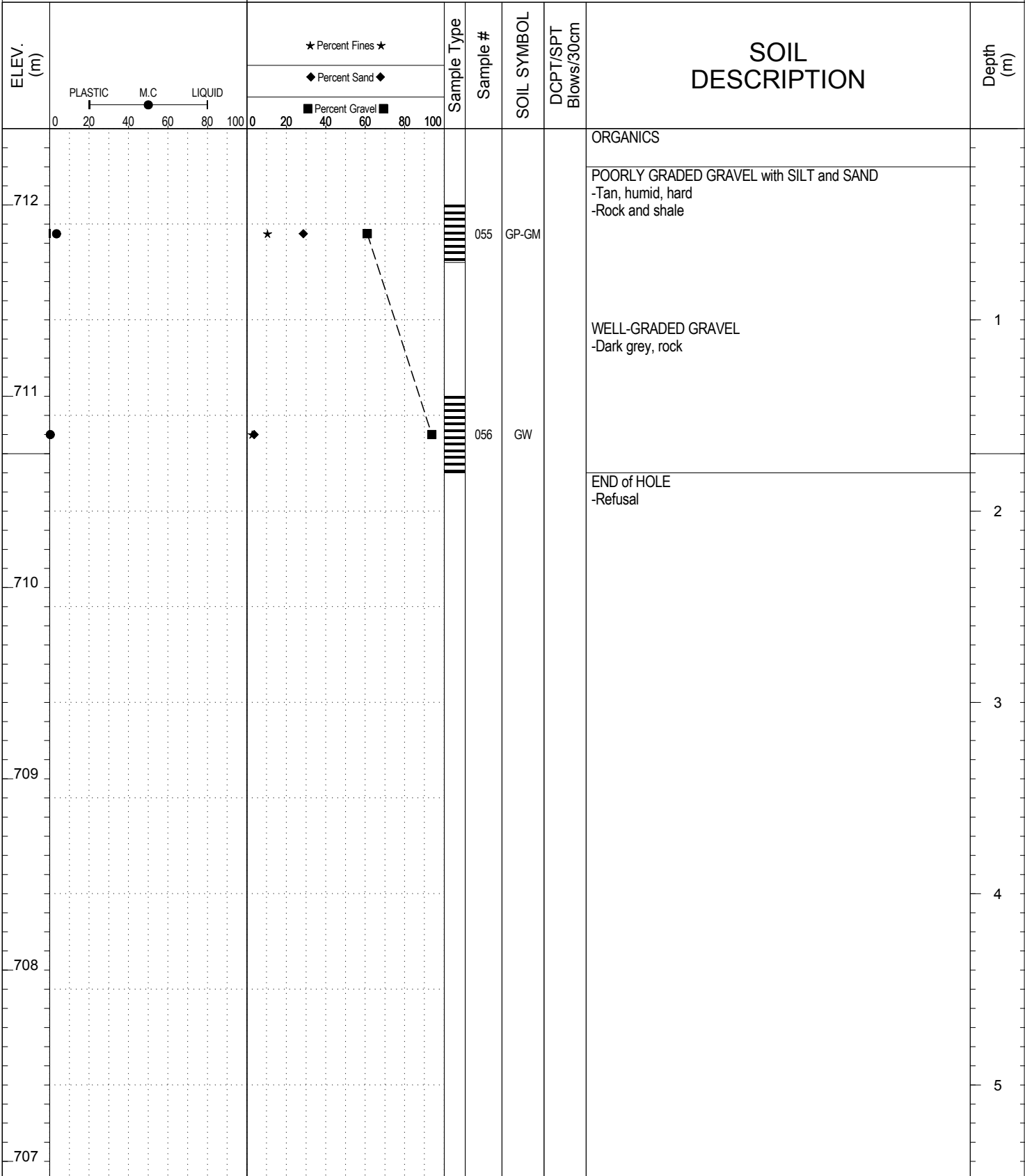
SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4638						
J.Magun		Campbell Highway Gravel Search km 70-90, km 81.6		PROJECT NO: 552-202104-2035-0661-5						
Hitachi 200 LC		Coordinates: Z09 N6727431.612m E489084.3705m		ELEVATION: 734m						
SAMPLE TYPE		<input type="checkbox"/> 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							
733	●		■ ◆		█	048	SM		ORGANICS SILTY SAND -Light brown, damp, loose -Odd cobble	1
732	●		■ ◆			049	SM		-5% Cobbles -Tighter digging -More cobbles as depth increases SILTY SAND with GRAVEL	2
731										3
730									END of HOLE	4
729										5
					LOGGED BY: B.Tyhy		Termination Depth: 3.4m			
					COMPILED BY: R.Stilwell		Complete: 10/26/2013 10:45:00 AM			
					REVIEWED BY: M. Idrees		Pit #: unassigned		Page 1 of 1	

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4639						
J.Magun		Campbell Highway Gravel Search km 70-90, km 82.4		PROJECT NO: 552-202104-2035-0661-5						
Hitachi 200 LC		Coordinates: Z09 N6728038.655m E488752.6218m		ELEVATION: 715.3m						
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							
715									ORGANICS	
									SILTY SAND -Tan, damp, loose	1
714										
									SILTY SAND with GRAVEL -Dense -Odd cobble	2
713										
712										
711										
710										
									END of HOLE	4
										5

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4640				
J.Magun		Campbell Highway Gravel Search km 70-90, km 82.4		PROJECT NO: 552-202104-2035-0661-5				
Hitachi 200 LC		Coordinates: Z09 N6728039.765m E488825.21m		ELEVATION: 721.9m				
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							
721			SM	052	SM		ORGANICS SILTY SAND with GRAVEL -Tan, humid, dense -Odd cobble	1
720			GW-GM	053	GW-GM		WELL-GRADED GRAVEL with SILT and SAND -Whitish rock, damp, hard -Rock END of HOLE	2
719								3
718								4
717								5
		LOGGED BY: B.Tyhy		Termination Depth: 2m				
		COMPILED BY: R.Stilwell		Complete: 10/26/2013 1:30:00 PM				
		REVIEWED BY: M. Idrees		Pit #: unassigned Page 1 of 1				

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4677				
J.Magun		Campbell Highway Gravel Search km 70-90, km 82.4		PROJECT NO: 552-202104-2035-0661-5				
Hitachi 200 LC		Coordinates: Z09 N6728043.966m E488907.0378m		ELEVATION: 723.2m				
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 ★ ◆ 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							
723			054	GW		ORGANICS WELL-GRADED GRAVEL -Rusty brown, damp, hard -Shale	1	
722						END of HOLE -Refusal	2	
721							3	
720							4	
719							5	
718								

SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway	SOURCE/TP#: 823-4678
J.Magun		Campbell Highway Gravel Search km 70-90, km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC		Coordinates: Z09 N6728010.754m E488949.7545m	ELEVATION: 712.4m
SAMPLE TYPE	<input type="checkbox"/> UNDISTURBED	<input type="checkbox"/> DCPT	<input type="checkbox"/> AUGER
			<input checked="" type="checkbox"/> BULK
			<input checked="" type="checkbox"/> SPT
			<input type="checkbox"/> CORE

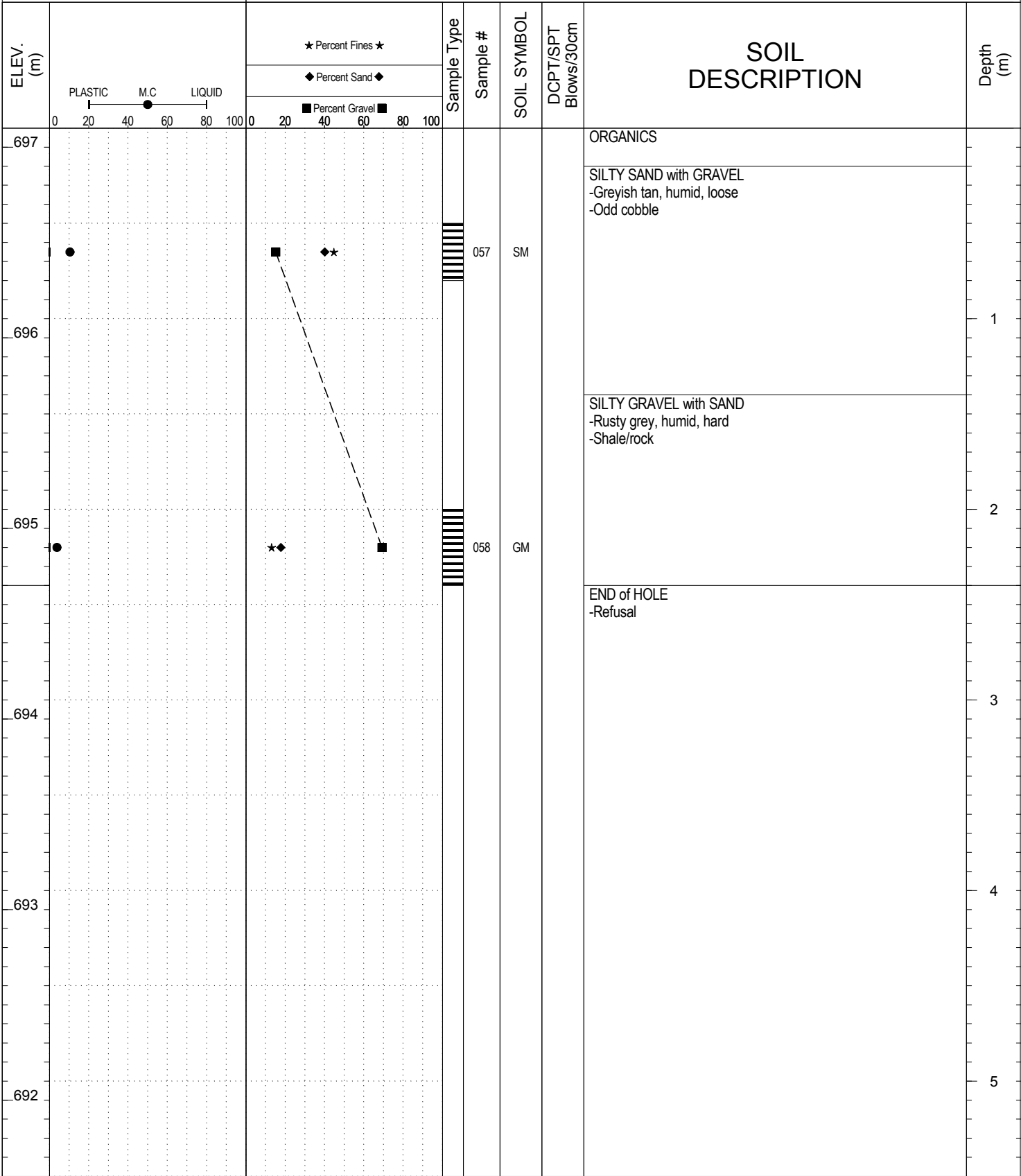


SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4679

J.Magun Campbell Highway Gravel Search km 70-90, km 82.4 PROJECT NO: 552-202104-2035-0661-5

Hitachi 200 LC Coordinates: Z09 N6727958.372m E488924.6877m ELEVATION: 697.1m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE

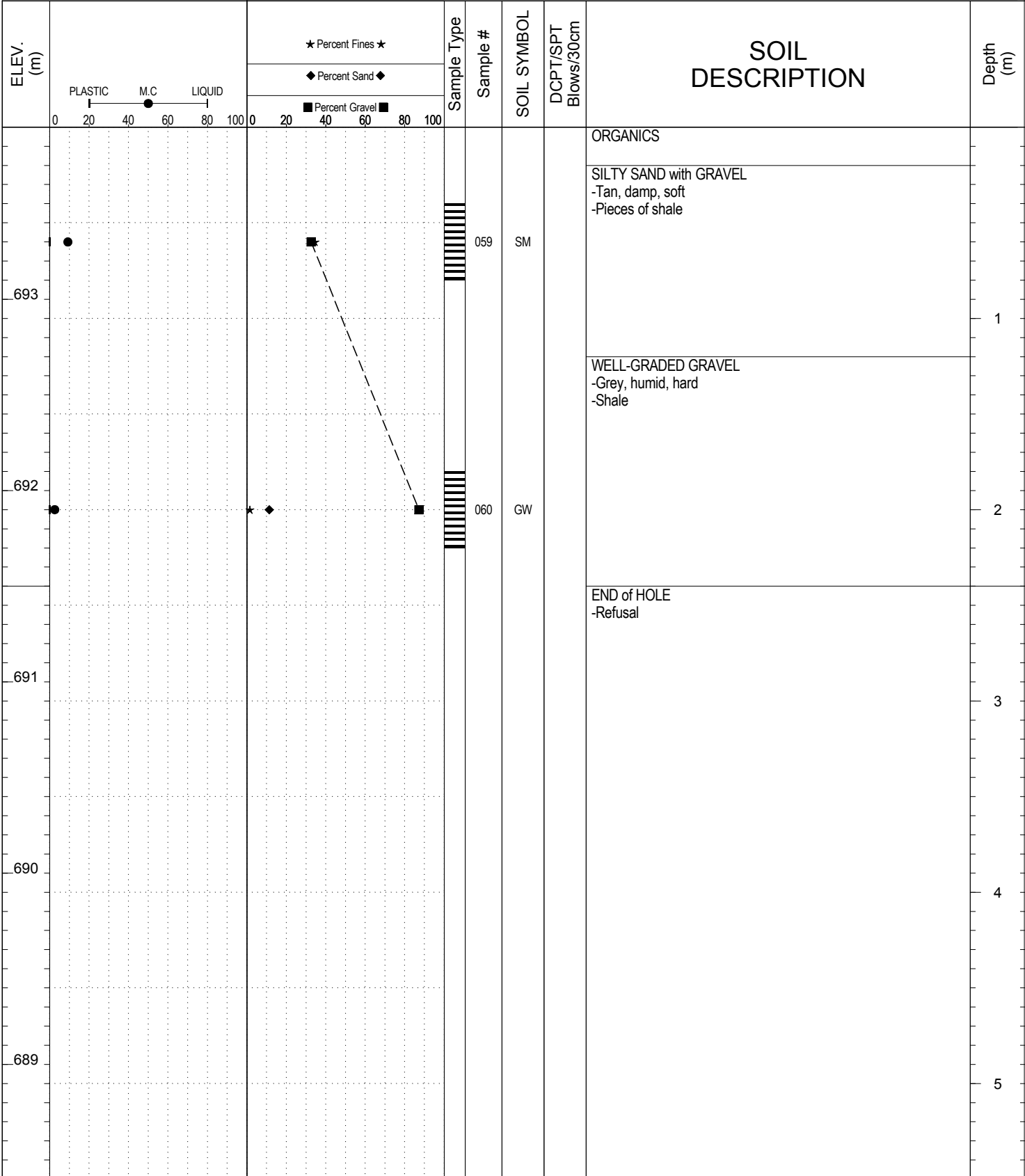


SUBSURFACE EXPLORATION AND TEST REPORT Campbell Highway SOURCE/TP#: 823-4680

J.Magun Campbell Highway Gravel Search km 70-90, km 82.4 PROJECT NO: 552-202104-2035-0661-5

Hitachi 200 LC Coordinates: Z09 N6728111.495m E488896.5967m ELEVATION: 693.9m

SAMPLE TYPE UNDISTURBED DCPT AUGER BULK SPT CORE



SUBSURFACE EXPLORATION AND TEST REPORT		Campbell Highway		SOURCE/TP#: 823-4681						
J.Magun		Campbell Highway Gravel Search km 70-90, km 82.4		PROJECT NO: 552-202104-2035-0661-5						
Hitachi 200 LC		Coordinates: Z09 N6728083.677m E488780.2344m		ELEVATION: 674.3m						
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							
674									ORGANICS	
									SILTY SAND -Light tan, humid, loose	1
673										
									SANDY SILT -Grey, humid, soft -Odd cobble	2
672										
									END of HOLE	3
671										
										4
670										
										5
669										
					LOGGED BY: B.Tyhy		Termination Depth: 3m			
					COMPILED BY: R.Stilwell		Complete: 10/26/2013 5:20:00 PM			
					REVIEWED BY: M. Idrees		Pit #: unassigned		Page 1 of 1	

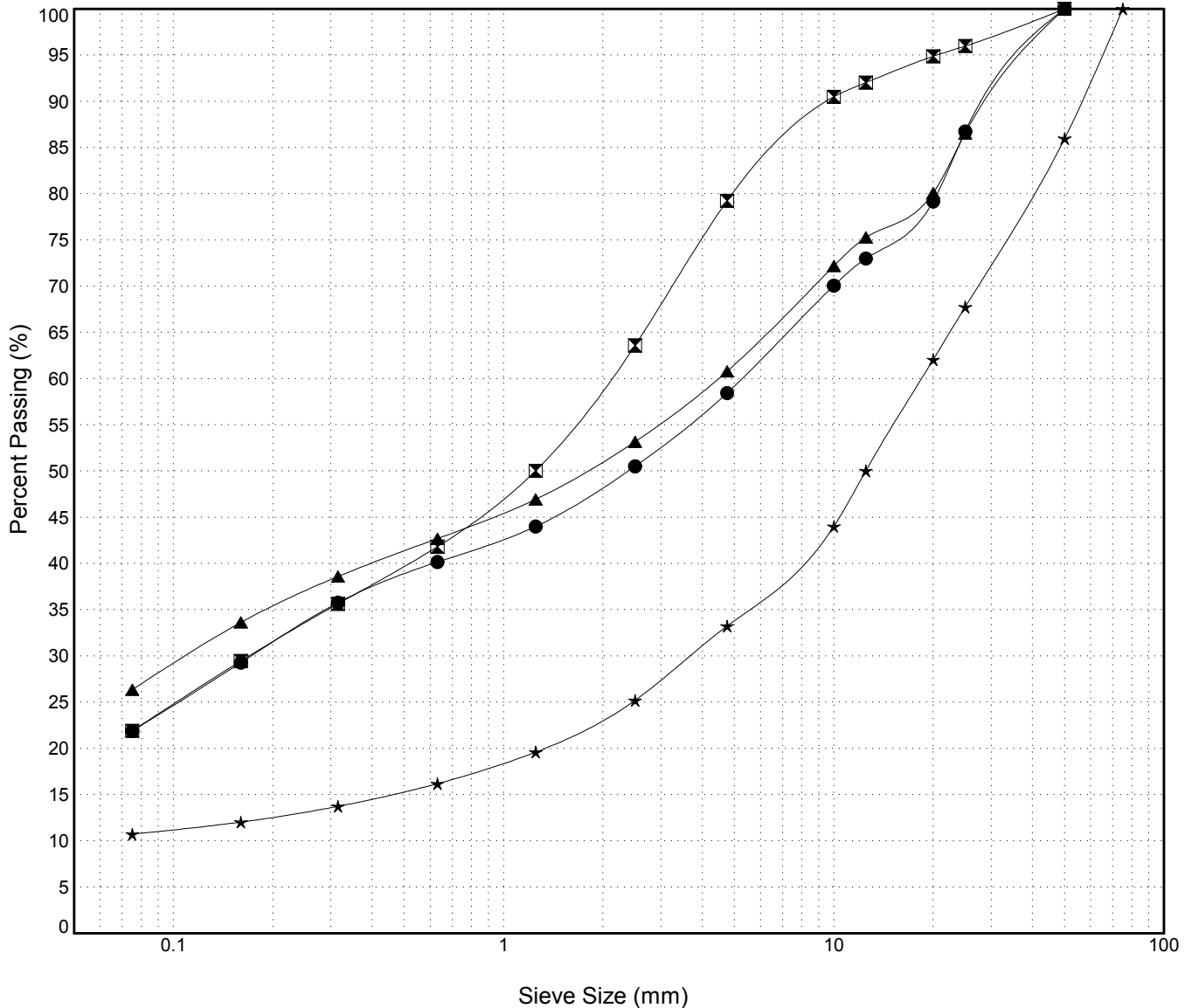
GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4633
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727385.181m E488934.0624m	ELEVATION: 709.5m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 034	1205	0.5 to 0.9	SILTY GRAVEL with SAND(GM)	8.0	NP	NP	NP		
☒ 035	1206	2.0 to 2.5	SILTY SAND with GRAVEL(SM)	6.4	NP	NP	NP		
▲ 036	1207	3.0 to 3.5	SILTY GRAVEL with SAND(GM)	8.1	NP	NP	NP		
★ 037	1208	4.0 to 4.2	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.5	NP	NP	NP	14.7	372.9

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
● 034	1205	100.0	100.0	100.0	100.0	86.7	79.2	73.0	70.1	58.4	50.5	44.0	40.2	35.8	29.3	21.9	41.6	36.6	21.9
☒ 035	1206	100.0	100.0	100.0	96.0	94.9	92.0	90.5	79.2	63.6	50.0	41.8	35.6	29.5	21.9	20.8	57.3	21.9	
▲ 036	1207	100.0	100.0	100.0	86.5	80.1	75.3	72.2	60.8	53.2	46.9	42.7	38.6	33.6	26.4	39.2	34.4	26.4	
★ 037	1208	100.0	100.0	86.0	67.8	62.1	50.0	44.0	33.2	25.2	19.6	16.2	13.7	12.0	10.7	66.8	22.5	10.7	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



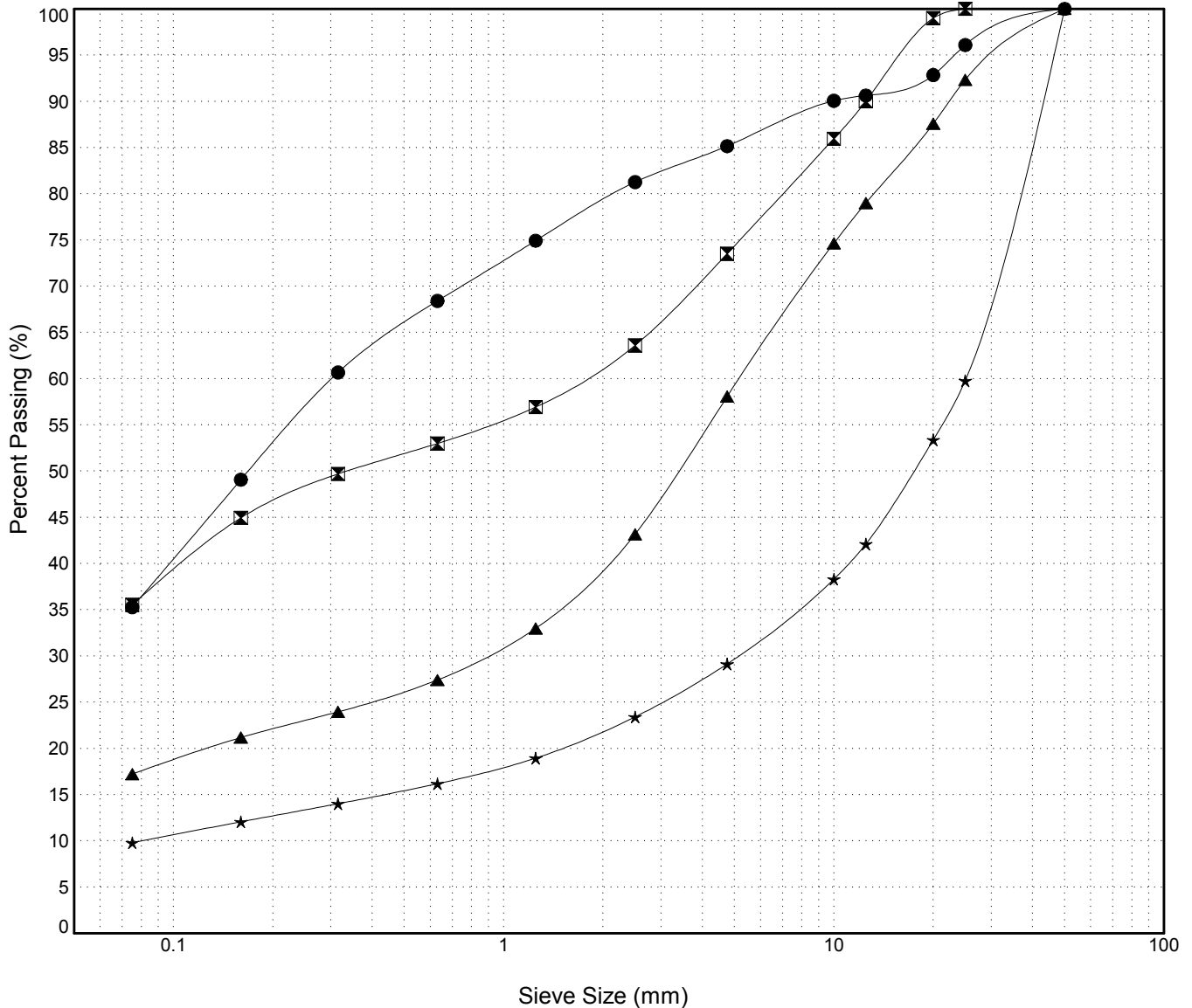
GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4634
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727324.131m E488902.5183m	ELEVATION: 704.4m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 038	1209	0.5 to 1.0	SILTY SAND(SM)	4.8	NP	NP	NP		
☒ 039	1210	2.0 to 2.4	SILTY SAND with GRAVEL(SM)	8.6	NP	NP	NP		
▲ 040	1211	3.1 to 3.6	SILTY GRAVEL with SAND(GM)	4.8	NP	NP	NP		
★ 041	1212	4.0 to 4.3	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.6	NP	NP	NP	12.9	312.3

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
● 038	1209	100.0	100.0	100.0	100.0	96.1	92.8	90.6	90.1	85.2	81.3	74.9	68.4	60.7	49.1	35.3	14.8	49.9	35.3
☒ 039	1210	100.0	100.0	100.0	100.0	99.0	90.0	86.0	73.5	63.6	56.9	53.0	49.7	44.9	35.5	26.5	38.0	35.5	
▲ 040	1211	100.0	100.0	100.0	92.3	87.6	79.0	74.6	58.1	43.2	33.0	27.4	24.0	21.2	17.2	41.9	40.8	17.2	
★ 041	1212	100.0	100.0	100.0	59.8	53.4	42.1	38.3	29.1	23.4	18.9	16.2	14.0	12.1	9.8	70.9	19.3	9.8	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

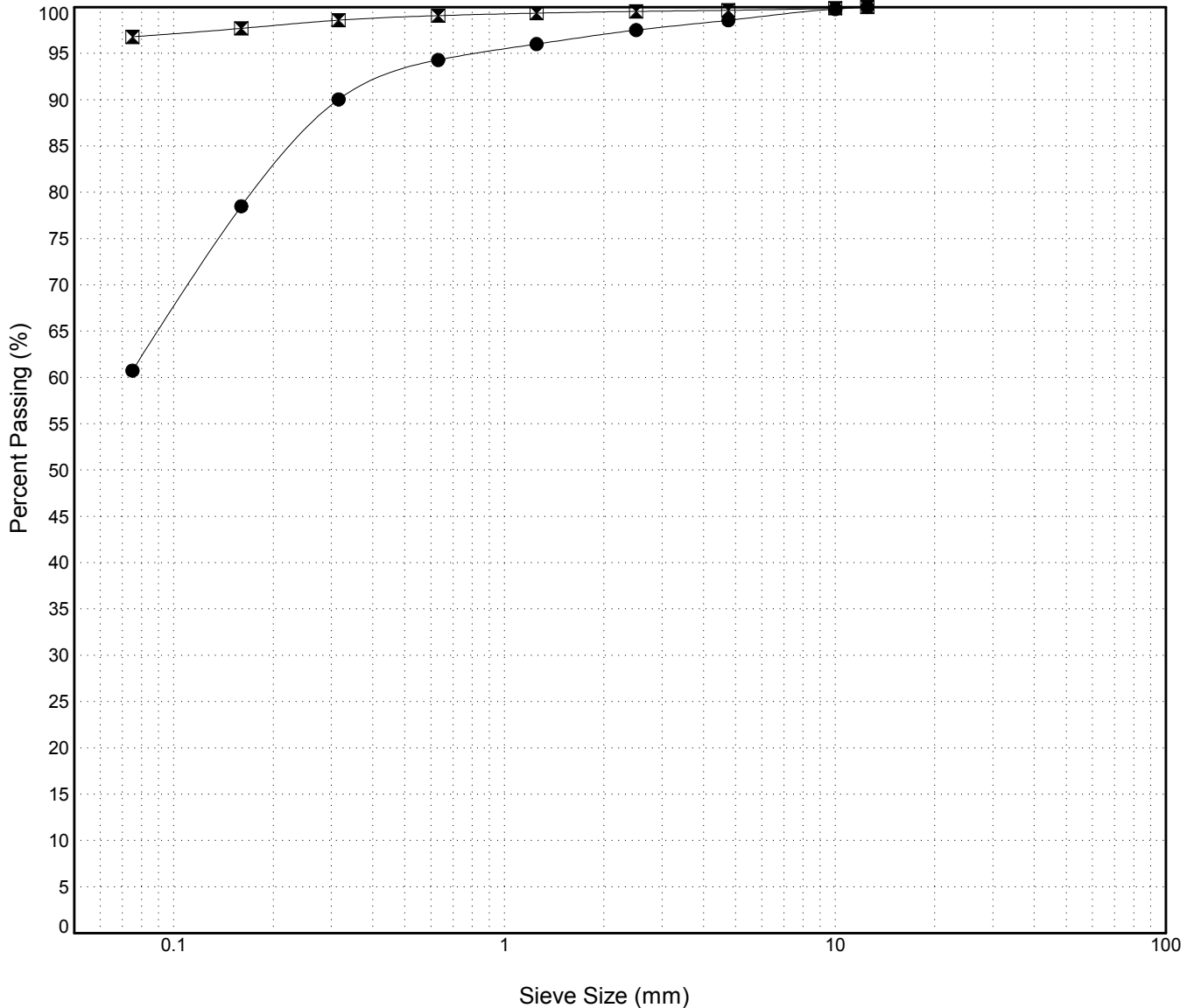


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4635
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727226.874m E488873.9201m	ELEVATION: 708.9m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 042	1213	0.6 to 1.0	SANDY SILT (ML)	15.3	NP	NP	NP													
☒ 043	1214	3.0 to 3.4	SILT (ML)	35.2	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				
● 042	1213	100.0	100.0	100.0	100.0	100.0	100.0	99.8	98.6	97.5	96.0	94.3	90.0	78.5	60.8	Gravel	Sand	Silt	Clay	
☒ 043	1214	100.0	100.0	100.0	100.0	100.0	100.0	99.9	99.7	99.5	99.4	99.1	98.6	97.7	96.8	0.3	2.9	96.8		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



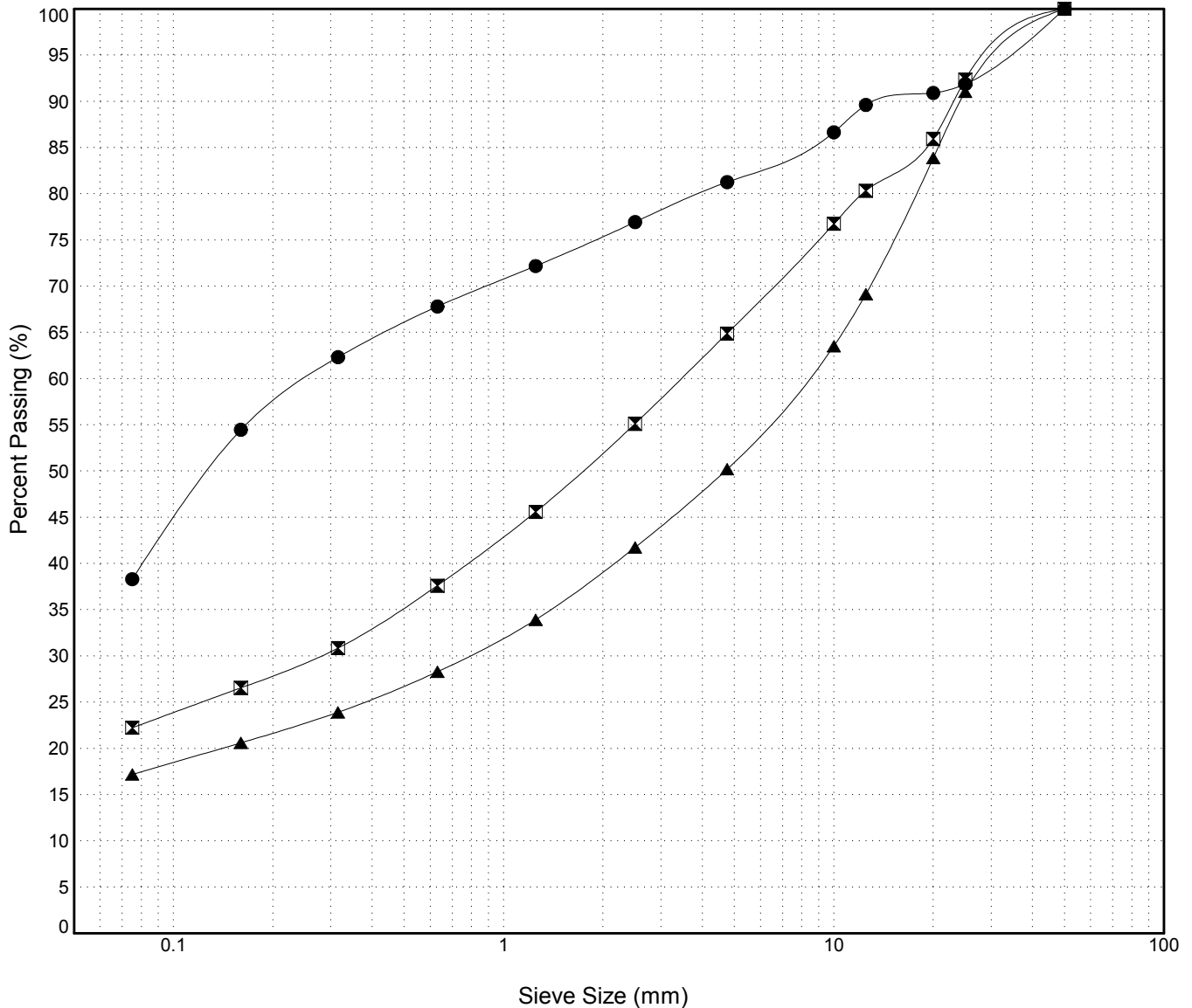
GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4636
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727400.813m E489030.3612m	ELEVATION: 737.8m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu
● 044	1215	0.5 to 1.0	SILTY SAND with GRAVEL(SM)	7.9	NP	NP	NP		
☒	1216	1.8 to 2.2	SILTY SAND with GRAVEL(SM)	6.2	NP	NP	NP		
▲ 046	1217	3.0 to 3.4	SILTY GRAVEL with SAND(GM)	5.0	NP	NP	NP		

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
● 044	1215	100.0	100.0	100.0	100.0	91.9	90.9	89.6	86.7	81.3	76.9	72.2	67.8	62.3	54.5	38.3	18.7	43.0	38.3	
☒	1216	100.0	100.0	100.0	92.4	85.9	80.3	76.7	64.9	55.1	45.6	37.6	30.8	26.5	22.2	35.1	42.7	22.2		
▲ 046	1217	100.0	100.0	100.0	91.0	83.9	69.1	63.5	50.2	41.7	33.9	28.3	23.9	20.6	17.2	49.8	33.0	17.2		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

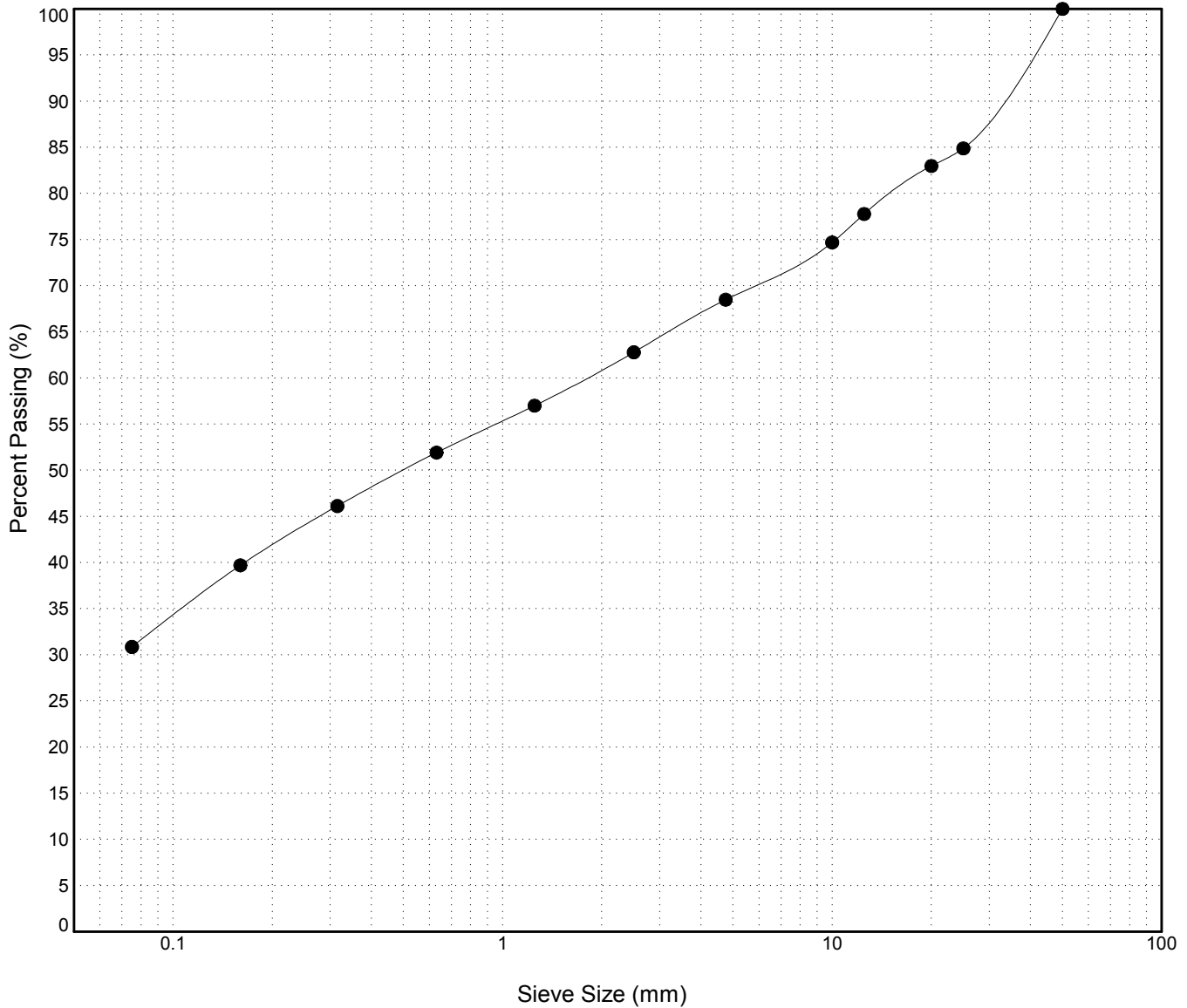


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4637
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727341.394m E489048.0971m	ELEVATION: 744.4m

Master Revised July 2013

Field #	Lab #	Depth	Classification											%H2O	LL	PL	PI	Cc	Cu
● 047	1218	0.4 to 0.8	SILTY SAND with GRAVEL(SM)											6.2	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			
● 047	1218	100.0	100.0	100.0	84.9	83.0	77.8	74.7	68.5	62.8	57.0	51.9	46.1	39.7	30.9	Gravel	Sand	Silt	Clay
																31.5	37.6	30.9	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

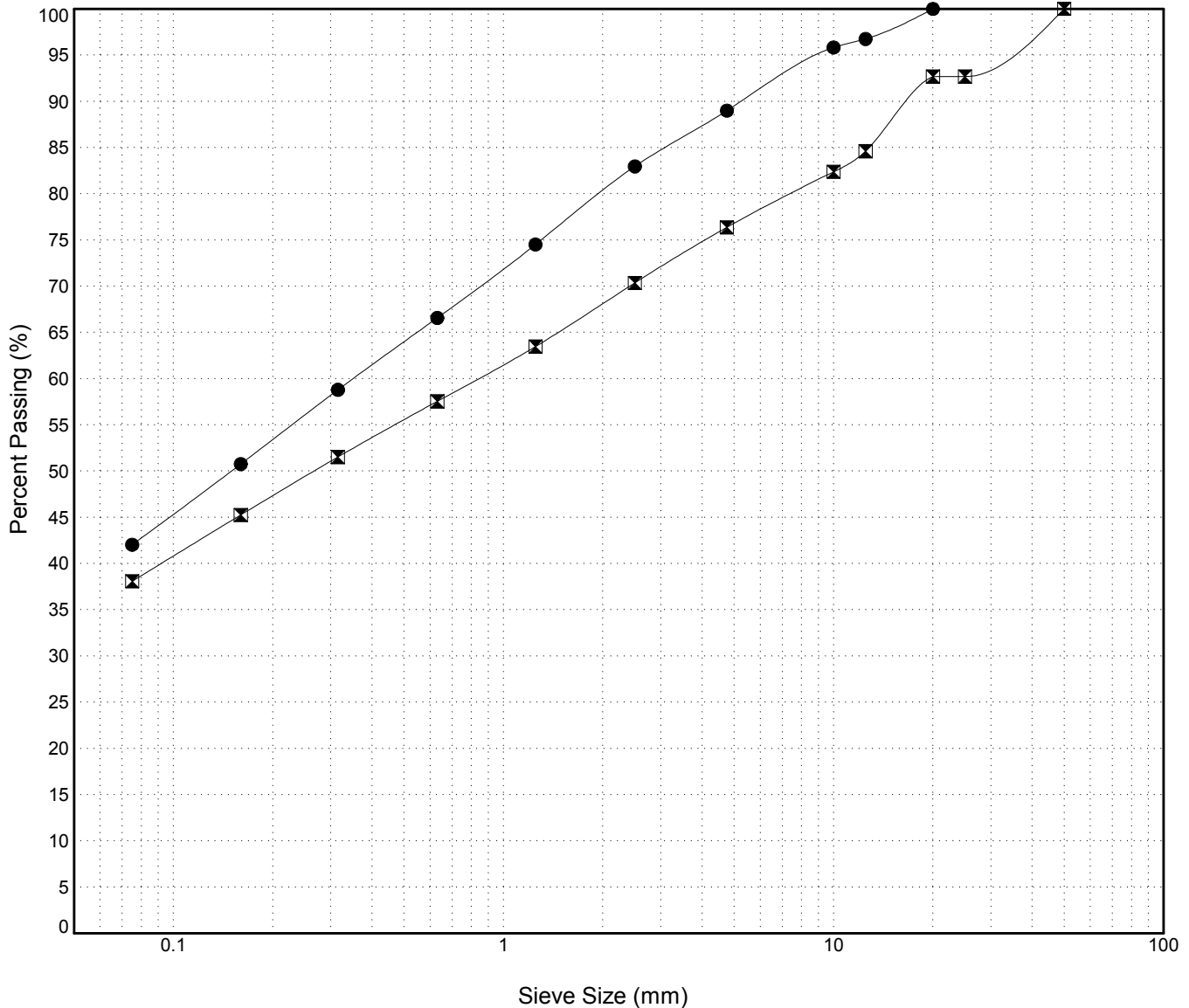


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4638
J.Magun	km 81.6	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727431.612m E489084.3705m	ELEVATION: 734m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H ₂ O	LL	PL	PI	C _c	C _u											
● 048	1219	0.5 to 0.8	SILTY SAND(SM)	12.6	NP	NP	NP													
☒ 049	1220	2.0 to 2.4	SILTY SAND with GRAVEL(SM)	8.7	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				
● 048	1219	100.0	100.0	100.0	100.0	100.0	96.7	95.8	89.0	83.0	74.5	66.6	58.8	50.8	42.0	Gravel	Sand	Silt	Clay	
☒ 049	1220	100.0	100.0	100.0	92.7	92.7	84.6	82.4	76.4	70.4	63.5	57.5	51.5	45.3	38.1	23.6	38.3	38.1		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

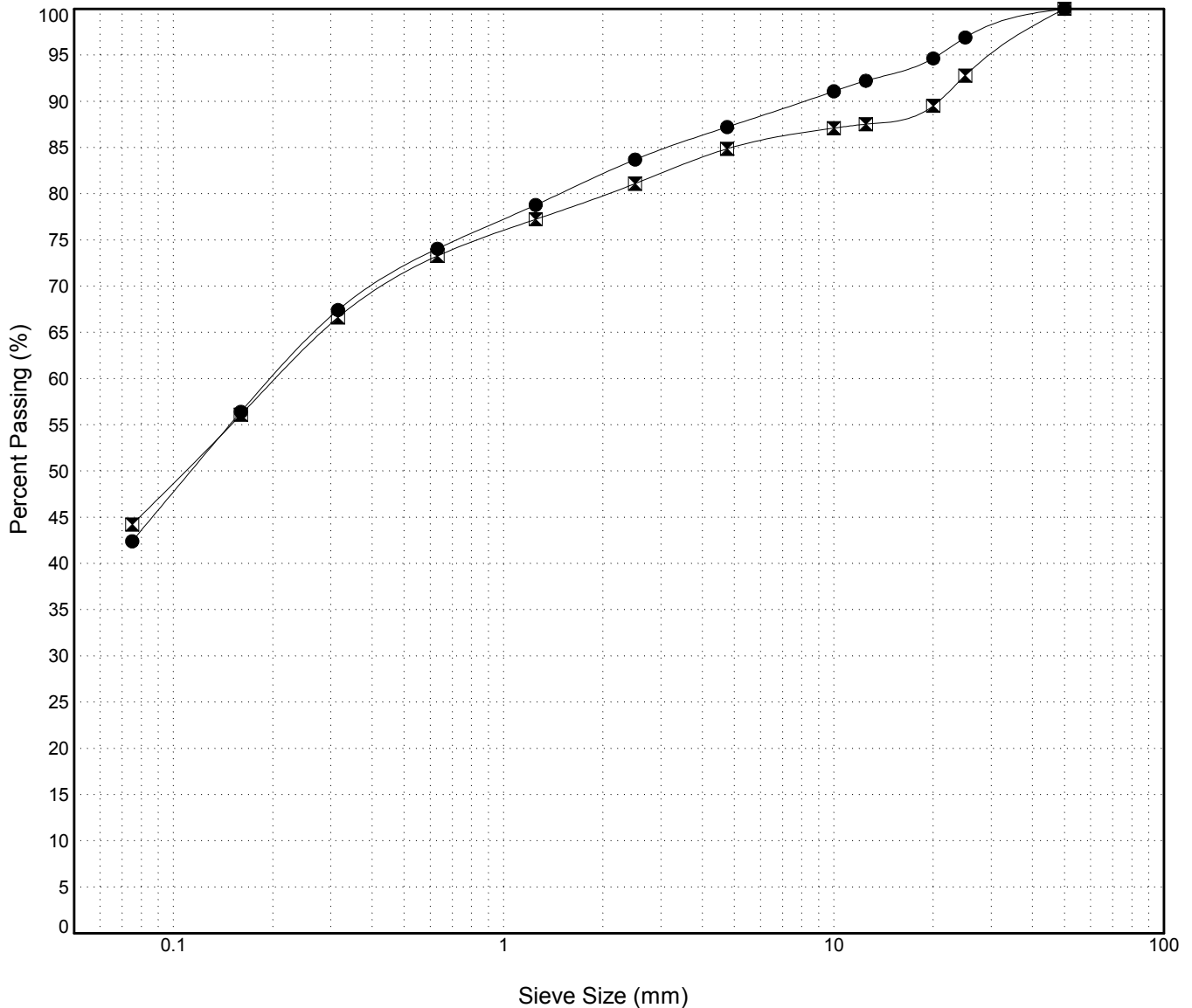


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4639
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728038.655m E488752.6218m	ELEVATION: 715.3m

Master Revised July 2013

Field #	Lab #	Depth	Classification										%H2O	LL	PL	PI	Cc	Cu		
● 050	1221	0.5 to 0.9	SILTY SAND(SM)										14.5	NP	NP	NP				
☒ 051	1222	3.0 to 3.5	SILTY SAND with GRAVEL(SM)										11.7	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			
● 050	1221	% PASSING	100.0	100.0	100.0	96.9	94.6	92.2	91.1	87.2	83.7	78.8	74.1	67.4	56.4	42.4	12.8	44.8	42.4	
☒ 051	1222		100.0	100.0	100.0	92.8	89.5	87.5	87.1	84.9	81.1	77.2	73.3	66.6	56.1	44.2	15.1	40.6	44.2	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

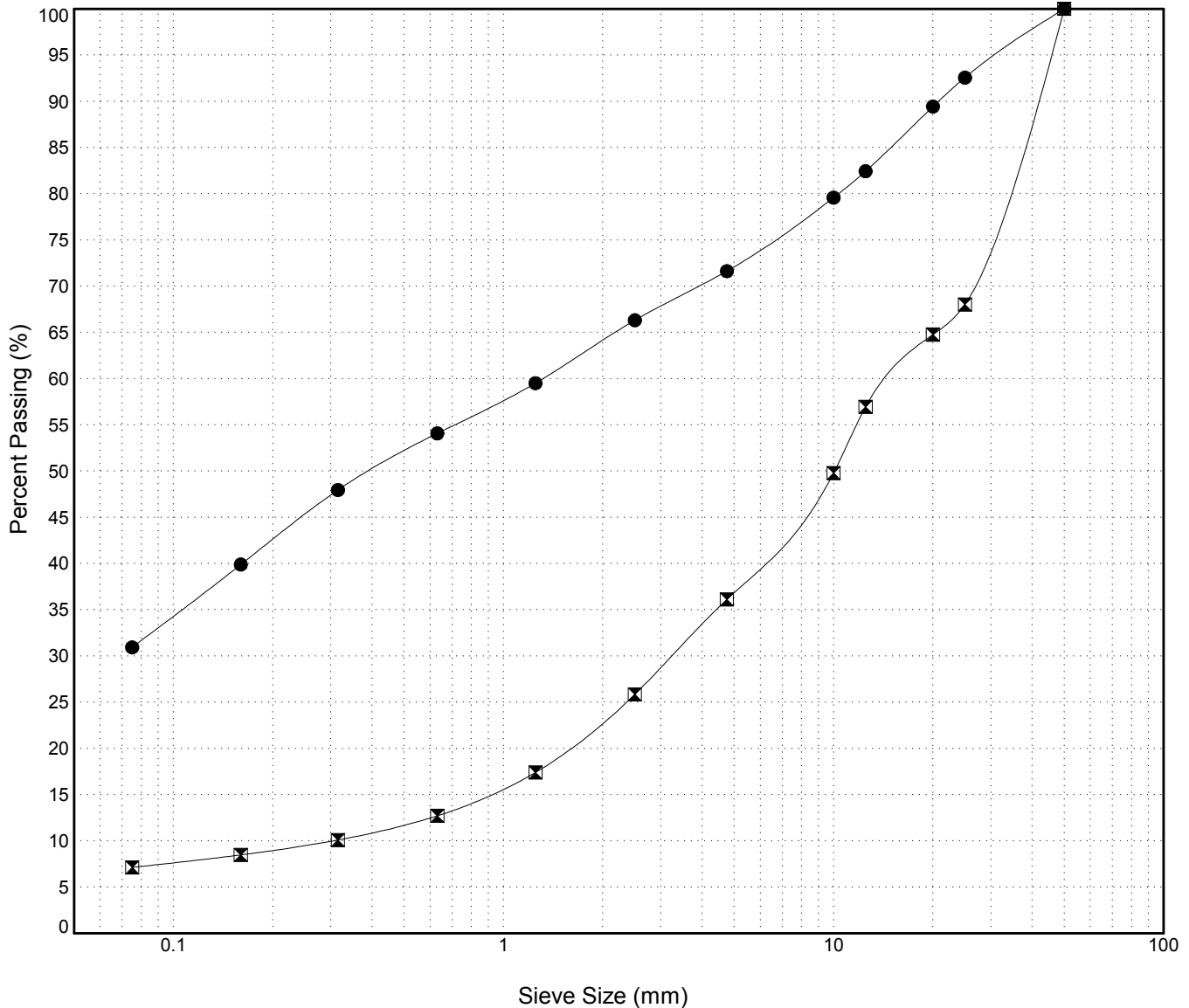


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4640
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728039.765m E488825.21m	ELEVATION: 721.9m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 052	1223	0.6 to 1.0	SILTY SAND with GRAVEL(SM)	5.0	NP	NP	NP													
☒ 053	1224	1.6 to 2.0	WELL-GRADED GRAVEL with SILT and SAND(GW-GM)	1.8	NP	NP	NP	2.3	49.5											
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				
● 052	1223	100.0	100.0	100.0	92.6	89.4	82.4	79.6	71.6	66.3	59.5	54.1	48.0	39.9	30.9	Gravel	Sand	Silt	Clay	
☒ 053	1224	100.0	100.0	100.0	68.0	64.8	56.9	49.8	36.1	25.8	17.4	12.7	10.1	8.5	7.1	63.9	29.0	7.1		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

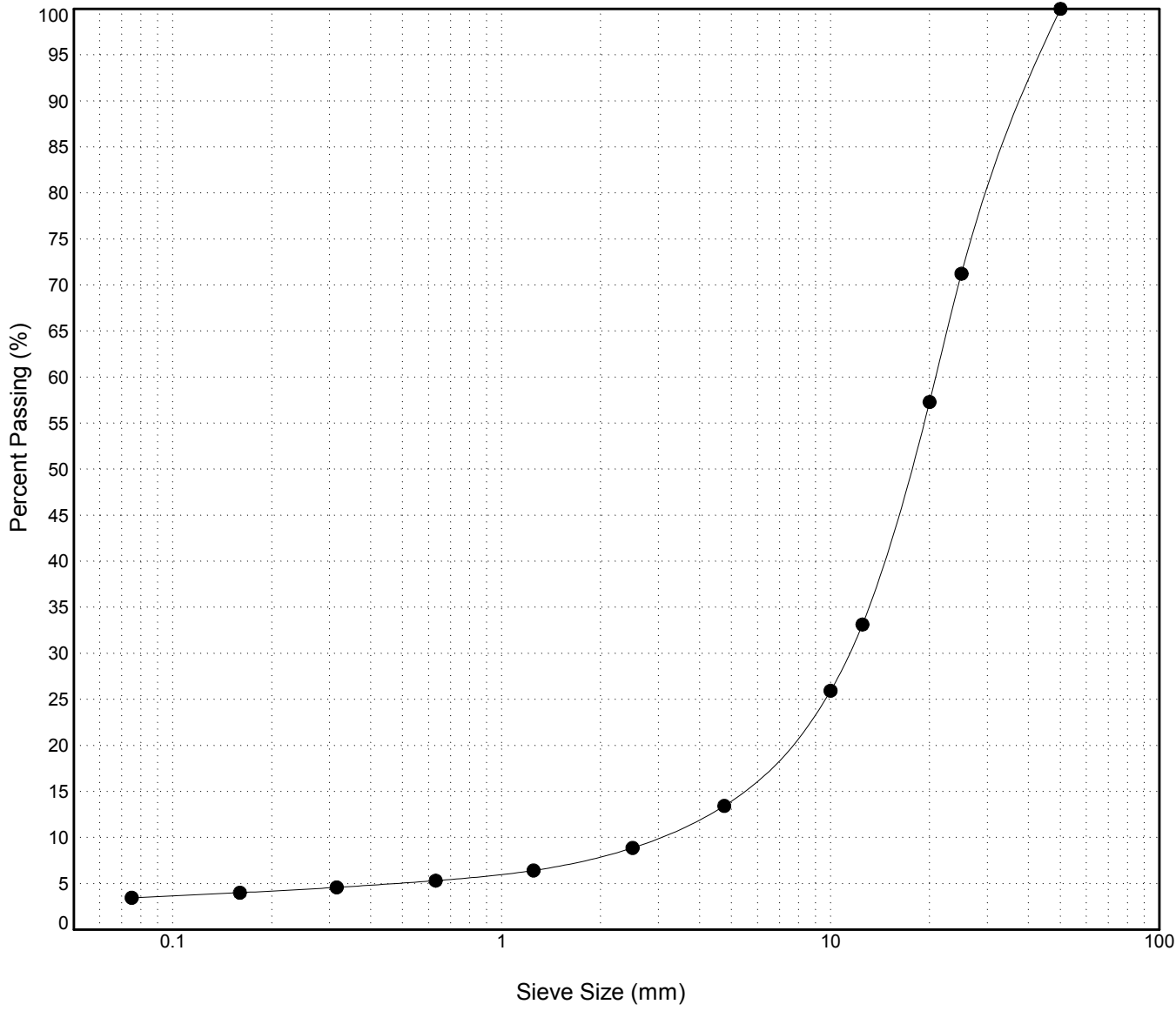


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4677
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728043.966m E488907.0378m	ELEVATION: 723.2m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu										
● 054	1225	0.3 to 0.5	WELL-GRADED GRAVEL(GW)	2.1	NP	NP	NP	2.1	7.1										
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			
● 054	1225	100.0	100.0	100.0	71.2	57.3	33.1	25.9	13.4	8.9	6.4	5.3	4.6	4.0	3.5	Gravel	Sand	Silt	Clay
																86.6	10.0	3.5	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

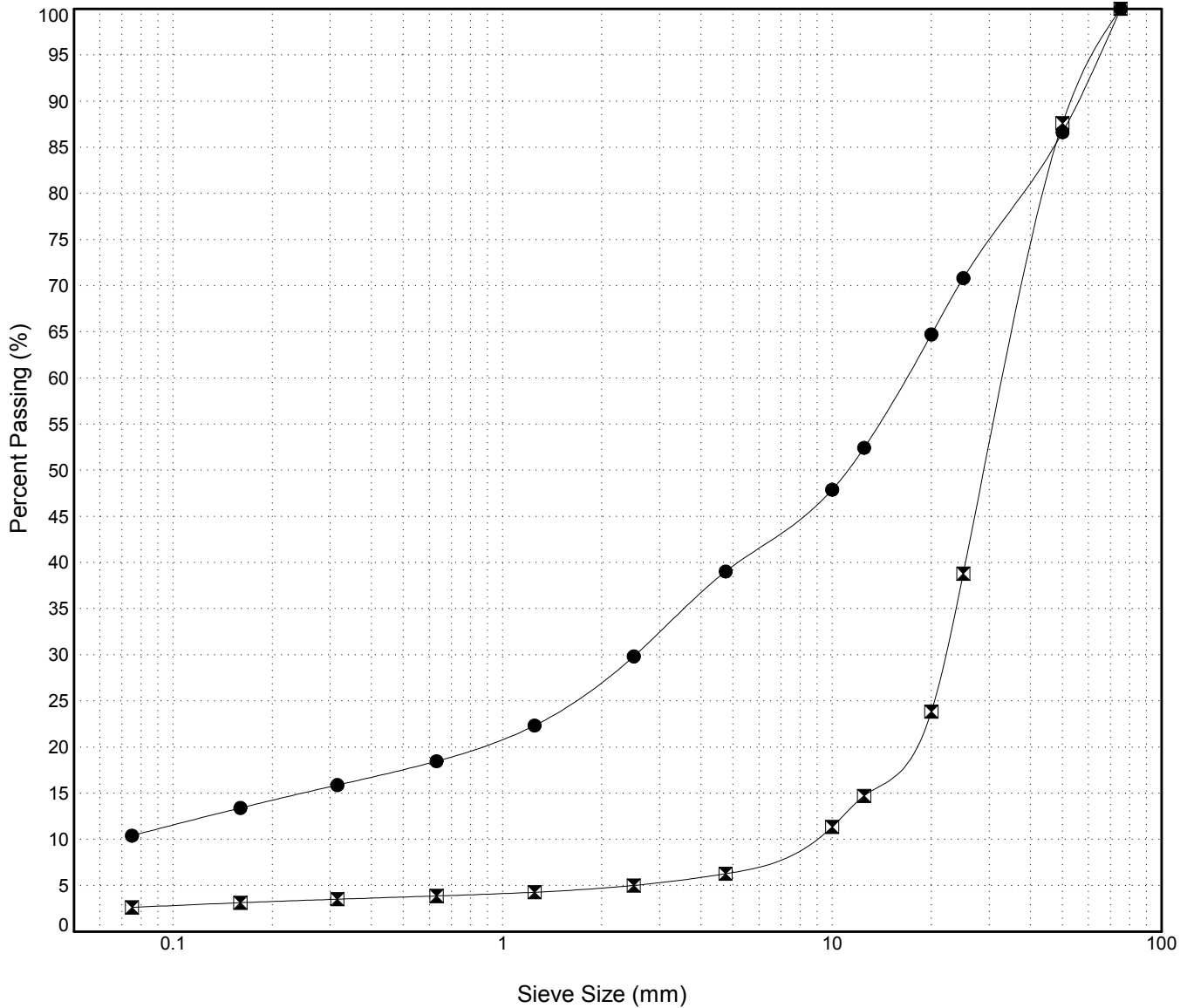


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4678
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728010.754m E488949.7545m	ELEVATION: 712.4m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu										
● 055	1226	0.4 to 0.7	POORLY GRADED GRAVEL with SILT and SAND(GP-GM)	3.5	NP	NP	NP	5.7	246.4										
☒ 056	1227	1.4 to 1.8	WELL-GRADED GRAVEL(GW)	0.3	NP	NP	NP	1.7	4.1										
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
● 055	1226	100.0	100.0	86.6	70.8	64.7	52.4	47.9	39.0	29.8	22.3	18.5	15.9	13.4	10.4	61.0	28.6	10.4	
☒ 056	1227	100.0	100.0	87.6	38.8	23.8	14.7	11.3	6.3	5.0	4.3	3.9	3.5	3.1	2.6	93.7	3.6	2.6	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

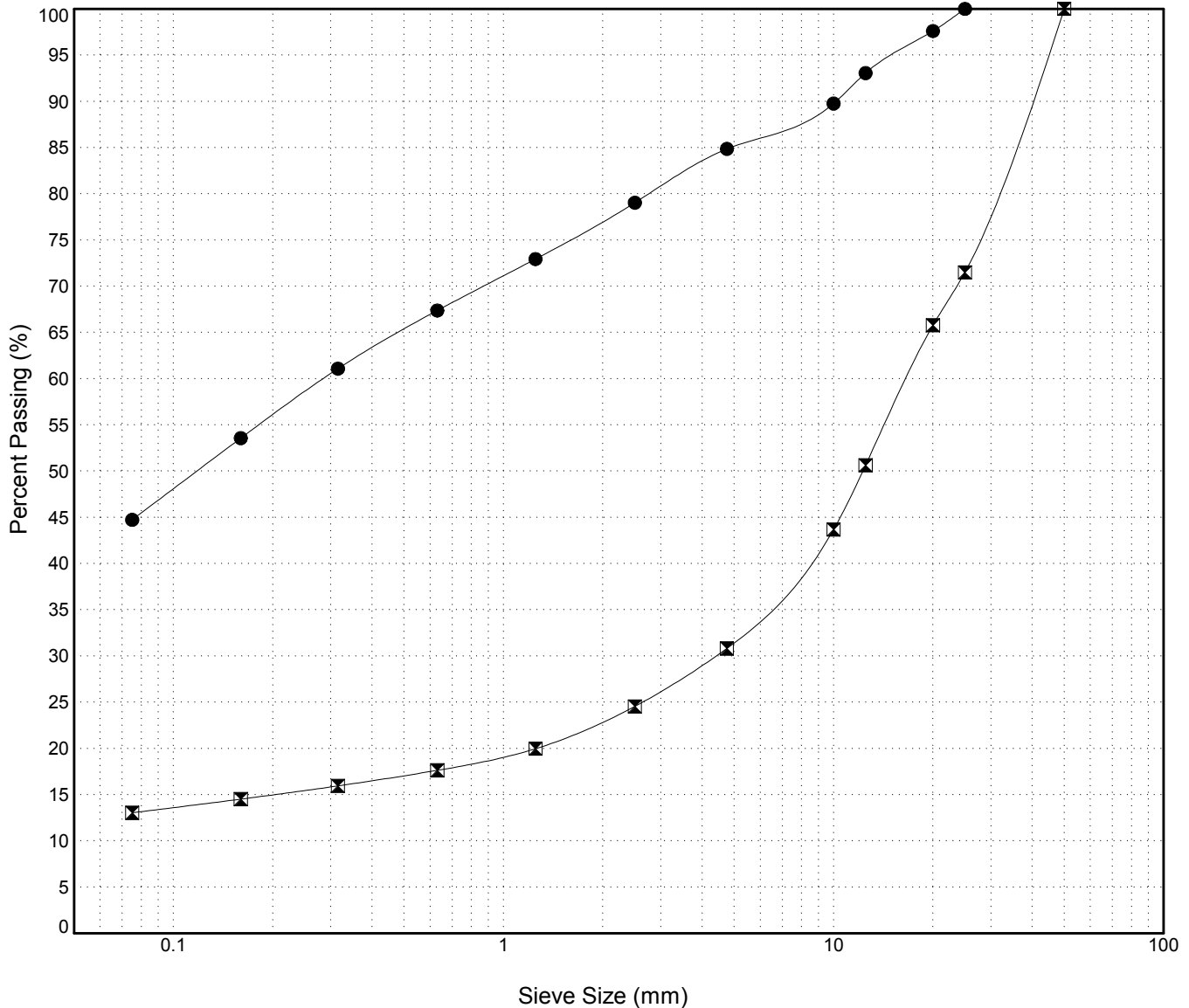


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4679
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6727958.372m E488924.6877m	ELEVATION: 697.1m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu										
● 057	1228	0.5 to 0.8	SILTY SAND with GRAVEL(SM)	10.4	NP	NP	NP												
☒ 058	1229	2.0 to 2.4	SILTY GRAVEL with SAND(GM)	3.8	NP	NP	NP												
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
● 057	1228	100.0	100.0	100.0	100.0	97.6	93.1	89.8	84.9	79.0	72.9	67.4	61.1	53.6	44.7	15.1	40.1	44.7	
☒ 058	1229	100.0	100.0	100.0	71.5	65.8	50.6	43.7	30.8	24.5	20.0	17.6	15.9	14.5	13.0	69.2	17.8	13.0	

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

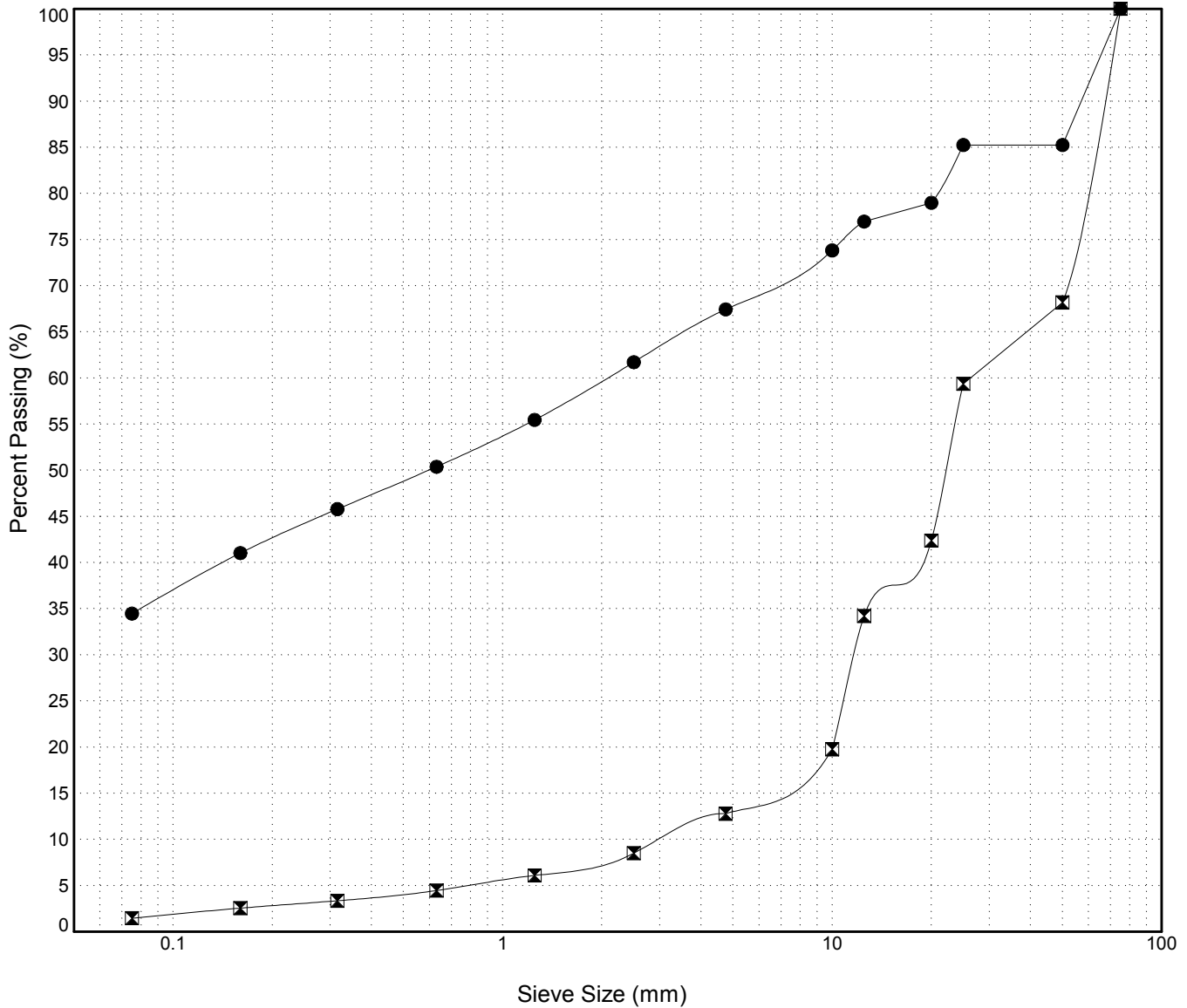


GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4680
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728111.495m E488896.5967m	ELEVATION: 693.9m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 059	1230	0.4 to 0.8	SILTY SAND with GRAVEL(SM)	9.2	NP	NP	NP													
☒ 060	1231	1.8 to 2.0	WELL-GRADED GRAVEL(GW)	2.5	NP	NP	NP	1.7	8.4											
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	
● 059	1230	100.0	100.0	85.2	85.2	79.0	77.0	73.8	67.4	61.7	55.5	50.4	45.8	41.0	34.5	32.6	33.0	34.5		
☒ 060	1231	100.0	100.0	68.2	59.4	42.4	34.2	19.8	12.8	8.5	6.1	4.5	3.3	2.5	1.5	87.2	11.3	1.5		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse



GRAIN SIZE ANALYSIS	Campbell Highway Gravel Search km 70-90	SOURCE/TP#: 823-4681
J.Magun	km 82.4	PROJECT NO: 552-202104-2035-0661-5
Hitachi 200 LC	Coordinates:Z09 N6728083.677m E488780.2344m	ELEVATION: 674.3m

Master Revised July 2013

Field #	Lab #	Depth	Classification	%H2O	LL	PL	PI	Cc	Cu											
● 061	1232	0.6 to 1.0	SILTY SAND(SM)	9.3	NP	NP	NP													
☒ 062	1233	2.0 to 2.4	SANDY SILT(ML)	8.6	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				
● 061	1232	100.0	100.0	100.0	97.7	97.7	93.8	92.2	86.3	80.3	70.3	62.3	54.8	45.3	34.0	Gravel	Sand	Silt	Clay	
☒ 062	1233	100.0	100.0	100.0	100.0	100.0	99.1	98.3	93.8	90.4	86.1	81.8	76.2	68.2	53.0	6.2	40.8	53.0		

Silt	Sand			Gravel	
	Fine	Medium	Coarse	Fine	Coarse

