McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

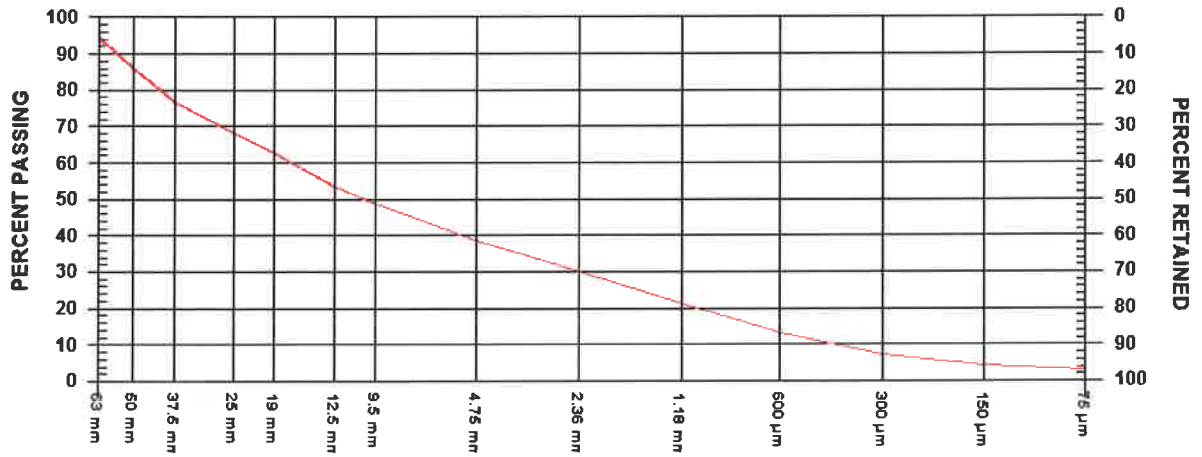
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 1 DATE RECEIVED 17/Nov/2016 DATE TESTED 28/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-3
SOURCE SA 4: 1.0 m to 5.0 m Depth
SPECIFICATION
MATERIAL TYPE Gravel and Sand with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	94.2	
50 mm	85.9	
37.5 mm	76.7	
25 mm	68.2	
19 mm	62.5	
12.5 mm	53.2	
9.5 mm	48.4	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	38.4	
2.36 mm	30.1	
1.18 mm	21.2	
600 µm	13.3	
300 µm	7.2	
150 µm	4.3	
75 µm	2.9	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

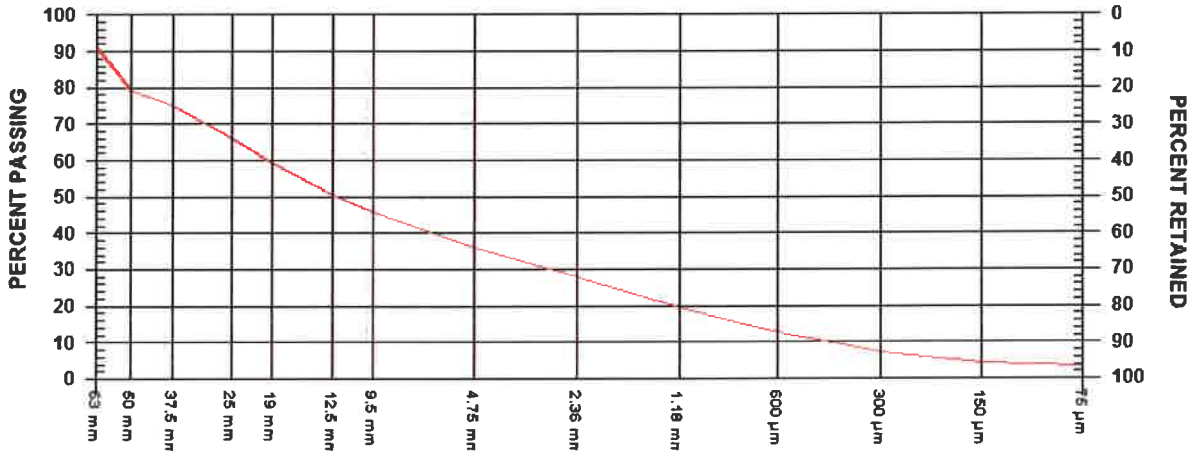
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 2 DATE RECEIVED 17/Nov/2016 DATE TESTED 29/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-5
SOURCE SA 6: 1.0 m to 4.5 m Depth
SPECIFICATION
MATERIAL TYPE Sandy Gravel with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	90.9	
50 mm	79.0	
37.5 mm	74.8	
25 mm	65.8	
19 mm	59.0	
12.5 mm	50.1	
9.5 mm	45.8	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	36.0	
2.36 mm	27.9	
1.18 mm	19.4	
600 µm	12.7	
300 µm	7.2	
150 µm	4.4	
75 µm	3.3	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

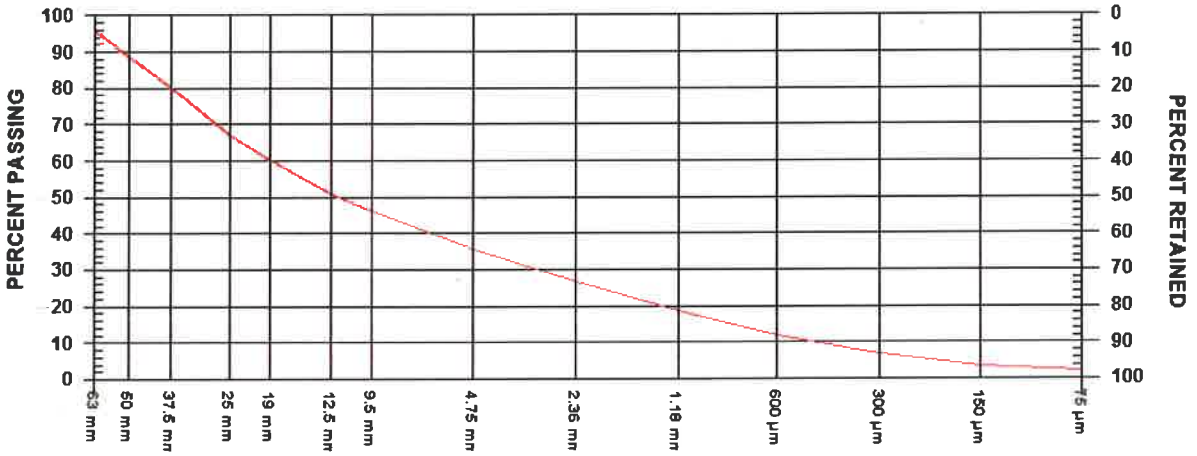
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 3 DATE RECEIVED 17/Nov/2016 DATE TESTED 29/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-04
SOURCE SA 5: 1.5 m to 5.0 m Depth
SPECIFICATION
MATERIAL TYPE Sandy Gravel with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	95.6	
50 mm	88.2	
37.5 mm	79.8	
25 mm	66.8	
19 mm	60.1	
12.5 mm	50.9	
9.5 mm	46.1	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	35.5	
2.36 mm	26.6	
1.18 mm	18.4	
600 µm	11.9	
300 µm	6.6	
150 µm	3.5	
75 µm	2.2	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

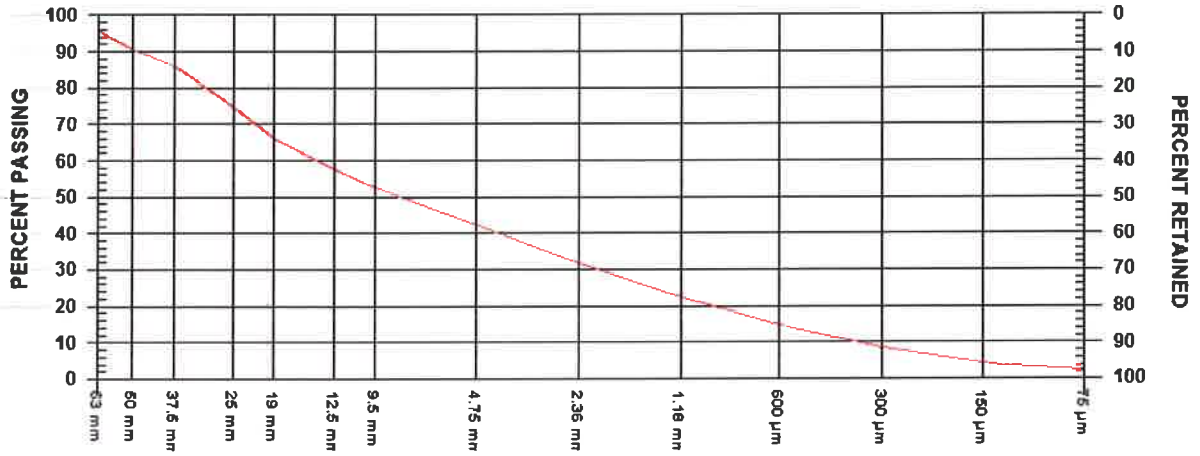
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 4 DATE RECEIVED 17/Nov/2016 DATE TESTED 28/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-6
SOURCE SA 7: 1.0 m to 4.5 m Depth
SPECIFICATION
MATERIAL TYPE Gravel and Sand with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	95.6	
50 mm	90.3	
37.5 mm	85.6	
25 mm	74.3	
19 mm	66.1	
12.5 mm	57.3	
9.5 mm	52.4	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	42.1	
2.36 mm	31.5	
1.18 mm	22.4	
600 µm	14.9	
300 µm	8.4	
150 µm	4.4	
75 µm	2.6	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

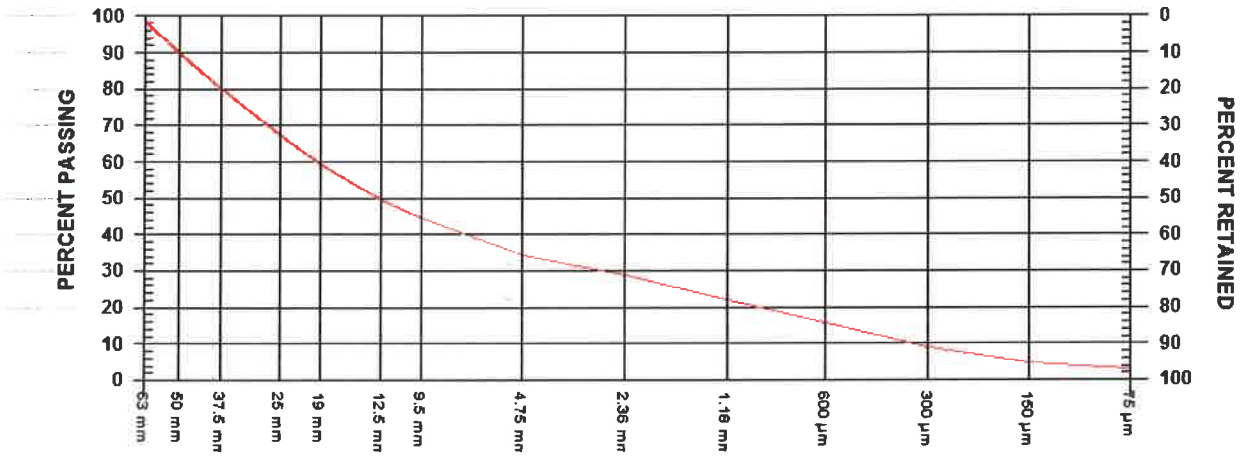
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 5 DATE RECEIVED 17/Nov/2016 DATE TESTED 29/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-07
SOURCE SA 9: 1.5 m to 4.5 m Depth
SPECIFICATION
MATERIAL TYPE Sandy Gravel with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	98.5	
50 mm	89.7	
37.5 mm	79.7	
25 mm	67.0	
19 mm	59.0	
12.5 mm	49.3	
9.5 mm	44.5	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	34.4	
2.36 mm	28.7	
1.18 mm	22.1	
600 µm	15.8	
300 µm	9.0	
150 µm	4.7	
75 µm	2.9	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

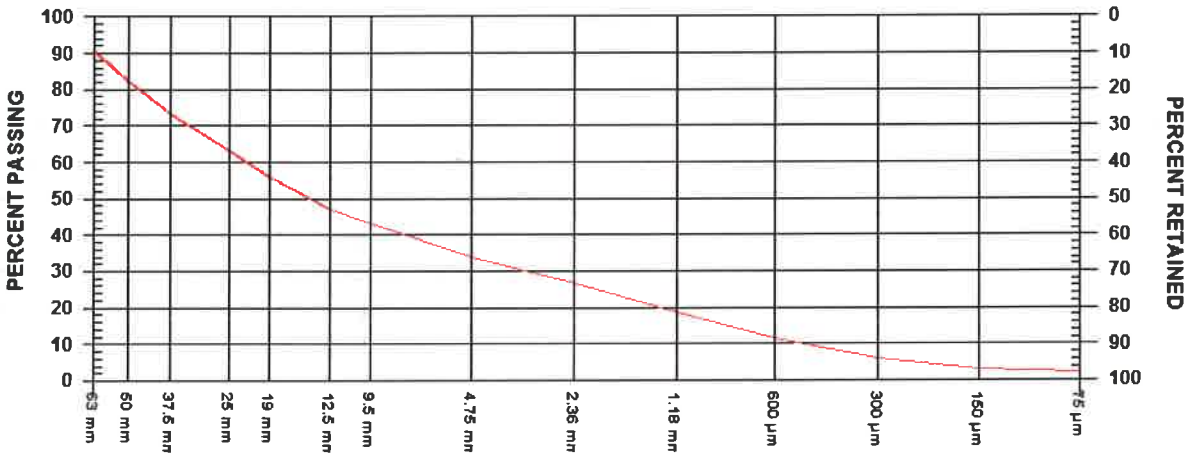
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 6 DATE RECEIVED 17/Nov/2016 DATE TESTED 28/Nov/2016 DATE SAMPLED 16/Nov/2016

SUPPLIER TP16-10
SOURCE SA 14: 1.0 m to 4.5 m Depth
SPECIFICATION
MATERIAL TYPE Sandy Gravel with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	90.3	
50 mm	81.8	
37.5 mm	73.3	
25 mm	62.8	
19 mm	55.9	
12.5 mm	47.1	
9.5 mm	43.0	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	33.9	
2.36 mm	26.8	
1.18 mm	18.8	
600 µm	11.6	
300 µm	5.7	
150 µm	3.1	
75 µm	2.0	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

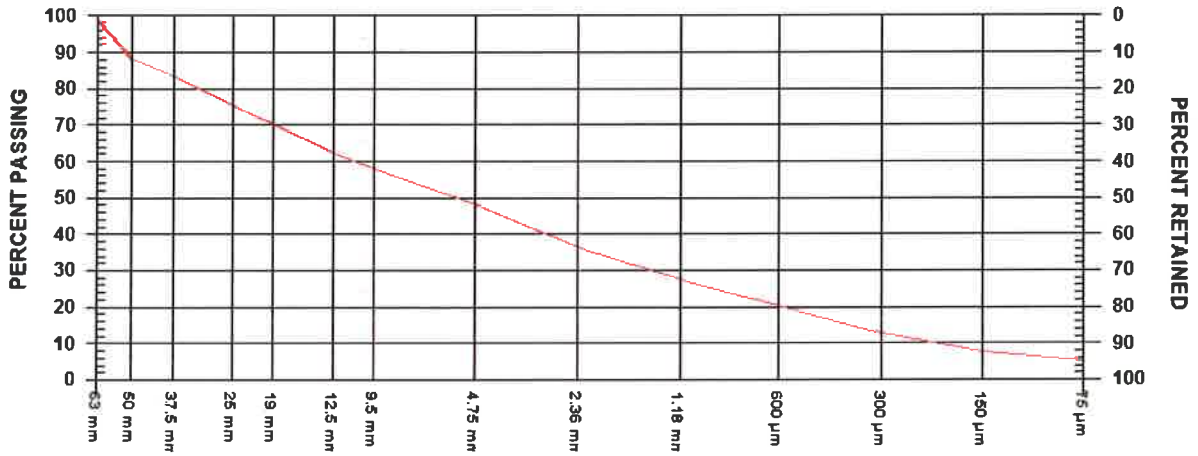
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 7 DATE RECEIVED 17/Nov/2016 DATE TESTED 28/Nov/2016 DATE SAMPLED 17/Nov/2016

SUPPLIER TP16-12
SOURCE SA 16: 1.0 m to 5.0 m Depth
SPECIFICATION
MATERIAL TYPE Gravel and Sand with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	98.3	
50 mm	87.9	
37.5 mm	83.2	
25 mm	75.4	
19 mm	70.0	
12.5 mm	62.0	
9.5 mm	57.9	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	48.1	
2.36 mm	36.4	
1.18 mm	27.6	
600 µm	20.1	
300 µm	12.7	
150 µm	7.5	
75 µm	5.0	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

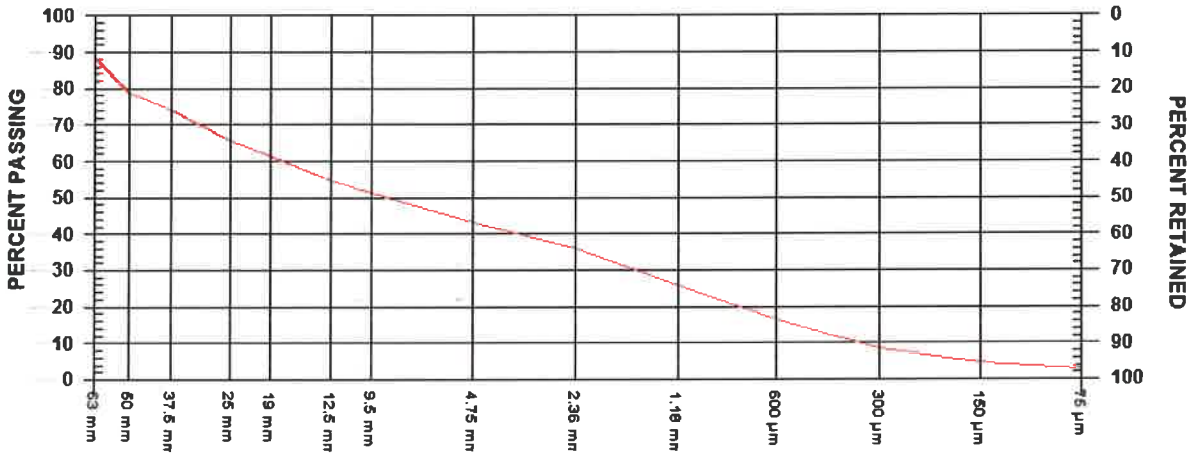
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 8 DATE RECEIVED 17/Nov/2016 DATE TESTED 28/Nov/2016 DATE SAMPLED 17/Nov/2016

SUPPLIER TP16-13
SOURCE SA 17: 1.2 m to 5.0 m Depth
SPECIFICATION
MATERIAL TYPE Gravel and Sand with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	88.3	
50 mm	78.7	
37.5 mm	74.0	
25 mm	65.7	
19 mm	61.3	
12.5 mm	54.5	
9.5 mm	51.2	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	43.1	
2.36 mm	35.9	
1.18 mm	25.8	
600 µm	16.3	
300 µm	8.6	
150 µm	4.5	
75 µm	2.8	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER.

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC V0J 2N0

SIEVE ANALYSIS REPORT
63mm SERIES

PROJECT NO. 2331-20126-13
CLIENT Ministry of Transportation
C.C.

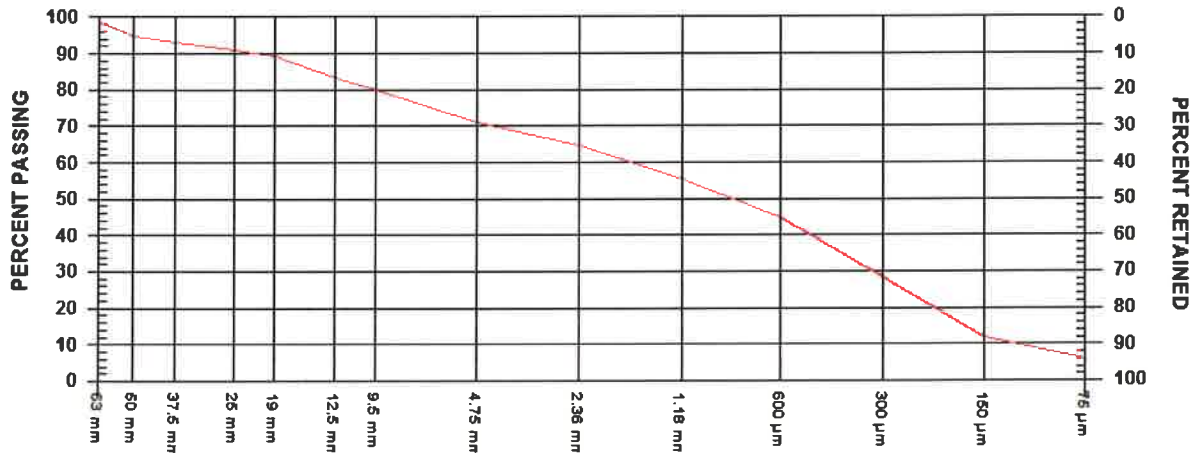
TO
Ministry of Transportation
#213 - 1011 4th Avenue
Prince George, BC
V2L 3H9

PROJECT MoTI Aggregate
Boulder Pit
CONTRACTOR

SIEVE TEST NO. 9 DATE RECEIVED 17/Nov/2016 DATE TESTED 30/Nov/2016 DATE SAMPLED 17/Nov/2016

SUPPLIER TP16-19
SOURCE SA 24: 1.5 m to 4.0 m Depth
SPECIFICATION
MATERIAL TYPE Gravelly Sand with Trace Fines

SAMPLED BY L.Bell
TESTED BY L.Bell
TEST METHOD WASHED



GRAVEL SIZES	PERCENT PASSING	GRADATION LIMITS
63 mm	98.3	
50 mm	94.5	
37.5 mm	93.1	
25 mm	91.0	
19 mm	89.0	
12.5 mm	83.1	
9.5 mm	79.9	

SAND SIZES AND FINES	PERCENT PASSING	GRADATION LIMITS
4.75 mm	71.2	
2.36 mm	64.7	
1.18 mm	55.3	
600 µm	44.9	
300 µm	28.3	
150 µm	12.0	
75 µm	5.7	

COMMENTS
Percent Passing 75 mm Sieve = 100%. Tested as per ASTM C117 and C136 Standards.

 02/Dec/2016 McElhanney Consulting Services Ltd. PER. _____

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Coarse Micro-Deval
Laboratory Analysis Report
ASTM D6928

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 5.0 m Depth
TEST PIT:	TP16-03	**SAMPLE:**	4
DATE SAMPLED:	16-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Grading Used: A [X] B [ ] C [ ]

Max Size Aggregate Used 19 mm

Passing	Retained			"A" Grading (3/4"-)		"B" Grading (1/2"-)		"C" Grading (3/8"-)	
mm	Inches	mm	Inches	Required	Actual	Required	Actual	Required	Actual
19.0	3/4	16.0	5/8	375 g	375.4				
16.0	5/8	12.5	1.2	375 g	374.8				
12.5	1/2	9.5	3/8	750 g	750.1	750 g	-		
9.5	3/8	6.7	0.265			375 g	-	750 g	-
6.7	0.265	4.75	# 4			375 g	-	750 g	-
				Total	1500.3		0.0		0.0

Intital Sample Weight + Pan (A) 1935.8
Final Sample Weight + Pan (C) 1758.7
Pan Weight (B) 435.5
Percent Loss **11.80%**

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Coarse Micro-Deval
Laboratory Analysis Report
ASTM D6928

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 4.5 m Depth
TEST PIT:	TP16-06	**SAMPLE:**	7
DATE SAMPLED:	16-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Grading Used: A [X] B [ ] C [ ]

Max Size Aggregate Used 19 mm

Passing	Retained			"A" Grading (3/4"-)		"B" Grading (1/2"-)		"C" Grading (3/8"-)	
mm	Inches	mm	Inches	Required	Actual	Required	Actual	Required	Actual
19.0	3/4	16.0	5/8	375 g	375.3				
16.0	5/8	12.5	1.2	375 g	375.2				
12.5	1/2	9.5	3/8	750 g	750.7	750 g	-		
9.5	3/8	6.7	0.265			375 g	-	750 g	-
6.7	0.265	4.75	# 4			375 g	-	750 g	-
				Total	1501.2		0.0		0.0

Intital Sample Weight + Pan (A) 1943.1

Final Sample Weight + Pan (C) 1805.0

Pan Weight (B) 441.9

Percent Loss **9.20%**

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Coarse Micro-Deval
Laboratory Analysis Report
ASTM D6928

CCIL

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 5.0 m Depth
TEST PIT:	TP16-12	**SAMPLE:**	16
DATE SAMPLED:	17-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Grading Used: A [X] B [ ] C [ ]

Max Size Aggregate Used 19 mm

Passing	Retained			"A" Grading (3/4"-)		"B" Grading (1/2"-)		"C" Grading (3/8"-)	
mm	Inches	mm	Inches	Required	Actual	Required	Actual	Required	Actual
19.0	3/4	16.0	5/8	375 g	374.2				
16.0	5/8	12.5	1.2	375 g	375.4				
12.5	1/2	9.5	3/8	750 g	749.5	750 g	-		
9.5	3/8	6.7	0.265			375 g	-	750 g	-
6.7	0.265	4.75	# 4			375 g	-	750 g	-
				Total	1499.1		0.0		0.0

Intital Sample Weight + Pan (A) 1909.1

Final Sample Weight + Pan (C) 1744.9

Pan Weight (B) 410.0

Percent Loss **10.95%**

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC
Canada V0J 2N0

Tel 250 847 4040

www.mcelhanney.com

Sand Equivalent Value
Laboratory Analysis Report
ASTM D2419

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 5.0 m Depth
TEST PIT:	TP16-03	**SAMPLE:**	4
DATE SAMPLED:	16-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Trial Number	1	2	3	4	Average
Clay Height (mm)	129.5	139.7	127.0	127.0	130.8
Sediment Period	20 min.	20 min.	20 min.	20 min.	
Sand Height (mm)	83.8	83.8	81.3	81.3	82.6
Sand Equivalent	64.7	60.0	64.0	64.0	63.1

Calculations Sand Equivalent = (Sand Height/Clay Height) x 100

Interpretation of Results

Sand Equivalent	50	40	30	20	
	Absence of Plastic Fines		Possible Plastic Material		Plastic Material

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC
Canada V0J 2N0

Tel 250 847 4040

www.mcelhanney.com

Sand Equivalent Value
Laboratory Analysis Report
ASTM D2419

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 4.5 m Depth
TEST PIT:	TP16-06	**SAMPLE:**	7
DATE SAMPLED:	16-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Trial Number	1	2	3	4	Average
Clay Height (mm)	114.3	116.8	116.8	119.4	116.8
Sediment Period	20 min.	20 min.	20 min.	20 min.	
Sand Height (mm)	86.4	88.9	88.9	88.9	88.3
Sand Equivalent	75.6	76.1	76.1	74.5	75.5

Calculations Sand Equivalent = (Sand Height/Clay Height) x 100

Interpretation of Results

Sand Equivalent	50	40	30	20
	Absence of Plastic Fines		Possible Plastic Material	Plastic Material

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue
Smithers, BC
Canada V0J 2N0

Tel 250 847 4040

www.mcelhanney.com

Sand Equivalent Value
Laboratory Analysis Report
ASTM D2419

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 5.0 m Depth
TEST PIT:	TP16-12	**SAMPLE:**	16
DATE SAMPLED:	17-Nov-16	**SAMPLED BY:**	L.Bell
DATE TESTED:	29-Nov-16	**TESTED BY:**	L.Bell

Trial Number	1	2	3	4	Average
Clay Height (mm)	165.1	170.2	177.8	185.4	174.6
Sediment Period	20 min.	20 min.	20 min.	20 min.	
Sand Height (mm)	76.2	76.2	78.7	78.7	77.5
Sand Equivalent	46.2	44.8	44.3	42.5	44.4

Calculations Sand Equivalent = (Sand Height/Clay Height) x 100

Interpretation of Results

Sand Equivalent	50	40	30	20	
	Absence of Plastic Fines		Possible Plastic Material		Plastic Material

Comments:

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Relative Density And Absorption of Aggregate Laboratory Analysis Report

ASTM C127 and C128

PROJECT NAME:	MoTI As a& When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Sandy Gravel with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.5 m to 5.0 m Depth
TEST PIT:	TP16-04	**SAMPLE:**	5
DATE SAMPLED:	11/16/2016	**SAMPLED BY:**	L.Bell
DATE TESTED:	11/30/2016	**TESTED BY:**	L. Bell

Bulk Relative Density of Aggregate

Coarse Aggregate

Bulk Relative Density	2.57
Percent Water Absorption	1.8%

Fine Aggregate

Bulk Relative Density	2.38
Percent Water Absorption	4.4%

Preparation Method: Apparent Moisture.

Comments:

S.S.D = Saturated Surface Dry condition

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Relative Density And Absorption of Aggregate Laboratory Analysis Report

ASTM C127 and C128

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Sandy Gravel with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.0 m to 4.5 m Depth
TEST PIT:	TP16-10	**SAMPLE:**	14
DATE SAMPLED:	11/16/2016	**SAMPLED BY:**	L.Bell
DATE TESTED:	11/30/2016	**TESTED BY:**	L. Bell

Bulk Relative Density of Aggregate

Coarse Aggregate

Bulk Relative Density	2.57
Percent Water Absorption	2.1%

Fine Aggregate

Bulk Relative Density	2.39
Percent Water Absorption	4.2%

Preparation Method: Apparent Moisture.

Comments:

S.S.D = Saturated Surface Dry condition

Signature

McElhanney

McElhanney Consulting Services Ltd.
3907 4th Avenue Tel 250 847 4040
Smithers, BC
Canada V0J 2N0 www.mcelhanney.com

Relative Density And Absorption of Aggregate Laboratory Analysis Report

ASTM C127 and C128

PROJECT NAME:	MoTI As & When		
PROJECT NO.	2331-20126 T2013	**MATERIAL TYPE:**	Gravel and Sand with Trace Fines
CLIENT:	MoTI	**SOURCE:**	1.2 to 5.0 m Depth
TEST PIT:	TP16-13	**SAMPLE:**	17
DATE SAMPLED:	11/17/2016	**SAMPLED BY:**	L.Bell
DATE TESTED:	11/30/2016	**TESTED BY:**	L. Bell

Bulk Relative Density of Aggregate

Coarse Aggregate

Bulk Relative Density	2.54
Percent Water Absorption	2.2%

Fine Aggregate

Bulk Relative Density	2.41
Percent Water Absorption	4.1%

Preparation Method: Apparent Moisture.

Comments:

S.S.D = Saturated Surface Dry condition

Signature