



## 97 TROOP AVE., DARTMOUTH, N.S. B3B 2A7 - TEL (902) 468-6486 FAX 468-4919

Client

Nova Scotia Transportation And Infrastructure Renewal

PO Box 186, 1672 Granville Street

Halifax, Nova Scotia

**B3J 2N2** 

OurProject No.

02000061.000.001

**Client Contract No.:** 

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION: Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

FAX:

Email:

krista,ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C25F1D1

**Date Placed:** 

22-Jan-20

Supplier: Metro Casey

Formwork:

Wood

Method Of Placing:

Pump

Weather: Clear

Vibrators:

Whip

Method Of Curing:

Insulated Tarps

Specified Properties: Strength, @28 Days:

25 MPa,

Slump:

80 +/- 20 mm

Air:

6+/-1%

Load				d		Slump	Temp	(C)	Volume		#Cylds		
No.	No.	No.	Batch	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103697	39CM	13:41	14:25	14:50	1:09	2.0 / 4.7	100	19.5	-1.5	8.00	8.00	3
2	103698	32CM	13:52	14:45	15:05	1:13	1.9 / 4.5	80 / 95	18.5	-2.0	8.00	16.00	2
3	1036699	38CM	14:00	15:00	15:20	1:20	4.4	100	15.5	-2.5	8.00	24.00	

Section:

Footing

Location:

Grid Line 1 (A-D)

**Comments** NSTIR was accepting any AEA over 4% up to 7%.

Field Test results reported on site.

Record No: 29460

Standby:

0.5

Englobe Tech:

Joel DeCoste





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PHONE:

(902) 722-1207

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C25F1D1

Date Placed:

23-Jan-20

Supplier: Casey Metro

Specified Properties: Strength, @28 Days:

Formwork:

Wood

Method Of Placing: **Method Of Curing:** 

Pump

Insulated Tarps

Weather: Clear

Vibrators:

Whip

25 MPa,

Slump:

80 +/- 20 mm

Air:

4-7%

Load	Ticket	Truck			Record			Slump	Temp	(C)	Vol	ume	#Cylds
No.	No.	No.	Batch	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103725	31CM	13:21	14:10	14:25	1:04	2.9/4.5	90/100	21.0	4.0	7.45	7.45	3
2	103726	33CM	13:36	14:25	14:35	0:59	5.0	100	20.5	3.5	7.45	14.90	2
3	103727	29CM	14:08	14:50	15:05	0:57	4.9	95	21.0	4.0	7.10	22.00	

Section:

Strip Footings

Location:

Grid Line D (1-4)

**Comments** 

Field Test results reported on site.

Record No: 29476

Standby:

0.5

Englobe Tech: Joel DeCoste

PER

For testing conducted by this company, procedures are carried out in accordance with CSA-A23.2. Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on request.





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Nova Scotia Transportation And Infrastructure Renewal

PO Box 186, 1672 Granville Street

Halifax, Nova Scotia

**B3J 2N2** 

OurProject No.

02000061.000.001

Client Contract No.:

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION: Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

Specified Properties: Strength, @28 Days:

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C27F101E

Slump:

**Date Placed:** 

23-Jan-20

Supplier: Casey Metro

Formwork:

Wood

**Method Of Placing:** 

125 +/- 25 mm

excavator & buc Insulated Tarps

Weather: Clear

Vibrators:

Whip

28 MPa,

**Method Of Curing:** 

Air:

4-7 %

Load	Ticket	Truck		Time Record Batch Tested Unload Elapsed			11 (01)	Slump	Temp (C)		Vol	ume	#Cylds
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103728	38CM	14:52	15:20	15:45	0:53	4.5	145	19.0	4.0	8.00	8.00	5

Section:

**Duct Bank** 

Location:

1st Section: Pull Pit

Comments

Field Test results reported on site.

Record No: 29477

Standby:

0.5

Englobe Tech: Joel DeCoste

PER





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**B3J 2N2** 

OurProject No.

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Client Contract No.:

4600019710

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Contractor:

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ATTENTION: Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C25F1D1

Date Placed:

24-Jan-20

Supplier: Casey Metro

Specified Properties: Strength, @28 Days:

Formwork: Wood

Method Of Placing:

Pump

**Method Of Curing:** 

Insulated Tarps

Weather: Sunny

Vibrators:

Whip 25 MPa,

Slump:

80 +/- 20 mm

Air:

6 +/- 1 %

Load						Slump	Temp	(C)	Vol	ume	#Cylds		
No.	No.	No.	Batch	Fested	Unload El	lapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103762	36CM	13:08	14:01			5.2	100	19.5	3	8	8	3
2	103765	33CM	13:25	14:15			3.4/5.8	75/100	19.5	3	6.12	14.12	2
3	103766	29CM	13:32	14:34			5.4	95	19	3	6.12	20.24	0
4	103769	23CM	14:12	14:51			5.3	100	19	3	5.76	26	0

Section:

Location:

strip footiings. Line Z1 from W1 to W4 and small section at W1

Comments

Field Test results reported on site.

Record No: 29481

Standby:

Englobe Tech: Tristan Pye

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Nova Scotia Transportation And Infrastructure Renewal

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Halifax, Nova Scotia

B3J 2N2

OurProject No.

02000061,000,001

Client Contract No.:

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION: Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C25F1D1

**Date Placed:** 

27-Jan-20

Supplier: Casey Metro

103820

Formwork:

Wood

Method Of Placing:

80 +/- 20 mm

20.5

Pump

Weather: Overcast

Specified Properties: Strength, @28 Days:

28CM

14:09

14:50

Vibrators:

15:00

Whip 25 MPa,

0:51

**Method Of Curing:** 

95

Slump:

Insulated Tarps

Air:

5.5

7.70

4-7 %

23.00

Load	Ticket	Truck			Record			Slump	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103816	25CM	13:29	14:15	14:30	1:01	5.7	95	21.5	6.0	7.65	7.65	3
2	103818	31CM	13:50	14:25	14:50	1:00	6.6	100	20.0	5.5	7.65	15.30	2

5.9

Section:

Strip Footings

Location:

Grid Line: A (5-8) & Line Z1 (W1-W2)

Comments

Field Test results reported on site.

Record No: 29489

Standby:

0.5

Englobe Tech: Joel DeCoste

PER





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Nova Scotia Transportation And Infrastructure Renewal

PO Box 186, 1672 Granville Street

Halifax, Nova Scotia

**B3J 2N2** 

OurProject No.

02000061.000.001

Client Contract No.:

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION:

Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C27F101E

**Date Placed:** 

27-Jan-20

Supplier: Casey Metro

Formwork:

Wood

**Method Of Placing:** 

excavator & buc

Weather: Overcast

Vibrators:

Whip

**Method Of Curing:** 

Insulated Tarps Air:

4-7 %

Specified Properties: Strength, @28 Days:

28 MPa,

Slump:

125 +/- 25 mm

Load	Ticket	Truck			Record			Slump	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103824	38CM	14:41	15:25	15:55	1:14	6.8	140	18.5	5.0	4.50	4.50	5

Section:

**Duct Bank** 

Location:

2nd Location of Pull Pit

Comments

Field Test results reported on site.

Record No: 29490

Standby:

0.5

Englobe Tech: Joel DeCoste

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Halifax, Nova Scotia

**B3J 2N2** 

OurProject No.

02000061.000.001

Client Contract No.:

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION: Krista Ranahan, P.Eng.

PHONE:

(902) 722-1207

Specified Properties: Strength, @28 Days:

FAX:

Email:

krista.ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

C25F1D1

**Date Placed:** 

28-Jan-20

Supplier: Metro Casey

Formwork:

Wood

**Method Of Placing:** 

Pump Insulated Tarps

Weather: Cloudy

Vibrators:

Whip

25 MPa,

**Method Of Curing:** 

Slump:

80 +/- 20 mm Air:

6 +/- 1 %

Load	B-O F COLUMN						Slump	Temp	(C)	Vol	ume	#Cylds	
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	103856	36CM	14:08	14:50	15:10	1:02	6.5	100	20.5	0.0	8.03	16.06	3
2	103857	23CM	14:18	15:05	15:25	1:07	6.4	95	18.5	-1.0	8.03	24.09	2
3	103855	29CM	13:57	15:15	16:05	2:08	6.2	90	19.0	-1.5	8.03	8.03	
4	103861	38CM	14:49	16:00	16:10	1:21	6.4	95	19.5	-2.0	8.03	32.12	

Section:

Strip Footings and Box Footings

Location:

SF: Line A (8-11) BF: B2, B3, C2, C3

Comments

Field Test results reported on site.

Record No: 29492

Standby:

Englobe Tech: Joel DeCoste





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Nova Scotia Transportation And Infrastructure Renewal

PO Box 186, 1672 Granville Street

Halifax, Nova Scotia

**B3J 2N2** 

OurProject No.

02000061.000.001

Client Contract No.:

4600019710

Client P.O.:

Contractor:

Marco Maritimes

CC:

Fax

ATTENTION:

Krista Ranahan, P.Eng.

PHONE: (902) 722-1207

Specified Properties: Strength, @28 Days:

FAX:

Email:

krista ranahan@no

Project: FO1-55-02-01 - JL IIsley High School Concrete Testing

Mix No:

**Date Placed:** 

28-Jan-20

Supplier: Casey Metro

Formwork: Wood

**Method Of Placing:** 

**Method Of Curing:** 

excavator & buc Insulated Tarps

Weather: Cloudy

Vibrators:

Whip

28 MPa,

Slump:

125 +/- 25 mm

Air:

6 +/- 1 %

Load	Ticket	Truck			Record			Slump (mm)	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum	Cast
1	103867	25CM	15:35	16:20	16:40	1:05	6.2	135	17.5	-2.5	3.00	3.00	5

Section:

Comm. Entry to Building, Final Pull

Location:

**Comments** 

Field Test results reported on site.

Record No: 29493

Standby:

Englobe Tech: Joel DeCoste

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Client:

## CONCRETE **TEST REPORT**

02000061.000.001

97 TROOP AVE., DARTMOUTH, N.S. B3B 2A7 - TEL (902) 468-6486 FAX 468-4919

	a Transportation 6, 1672 Granville		cture Renewal	Client Con		460001971	0		
Halifax, Nov	•	S SIFEEL		Contractor	:	Marco Mari	times		
B3J 2N2	va ooona		CC	•			Fax		
Attn: Krist	a Ranahan, P.E	ng.							
Fax									
-	O1-55-02-01 - J esting	IL lisley High	School Concrete	Email	krista.ranah	an@novasco	otia.ca	а	
Set No:	4 No.	Of Specimens	s: 3			Date Cast: 2	0 Jar	2020	
Specimen	Date Tested	Age At Test (Days)	Average Diameter(mm)	Cyl Density kg/m <sup>3</sup>	Maximum Load (kN)	Compress Strength (M		Failure Type	
Α	27 Jan 2020	7	102	2315	195	23.9		Α	AX
В	17 Feb 2020	28	102	2330				, ,	B
С	17 Feb 2020	28	102	2324					
	pecified Proper			Test Informati			Sam	ple pickup	at Site :
	28 days(MPa):	25			np (mm) 60/				an 2020
Slump (mm	):	80 +/- 20	1	-2.5 Air(9	•			ime: 9:00	
Air (%): Max Agg Si	70 (mm):	6 +/- 1	Cast Time:	15:25 <b>Cas</b> t	t By: MTL			'd Sample ate: 21 Ja	an 2020
	upplier Informa	20 tion	Initial curi Minimum	ng Temp (CS.	<b>A: 15 - 25<sup>°</sup> C)</b> um: 20		Ti	<b>me</b> : 10:3	
Supplier:	Casey Metro		Initial Curing Co						
<b>Batch Time</b>	-		_	oox inside traile	<b>r</b>				
Truck No.:	34CM		Test samples cas						
Ticket No.:	103665			Footings	i piastio modias	<u>'</u>			
_	elivered: 25	(MPa)	Location: Grid		Y				
Mix No:	C25F1D1	3	CONTRACTOR STATE		<b>/</b>				
Load Vol: Cum Vol:	8.00 8.00	m 3							
	Additives:		Comments:						
Heat Silica fume Set Retarder Water Reduce	Superplast Flyash Air Entrainr	ment 🗹	Field	l Test results r	eported on s	ite.			
H2O Added	Authorized E	3			Extra	Airs: 1	Extra	Slumps:	1
Standby: Record No 5	1.5 50501 Engle	obe Tech:	loel #1	PER 4	5 Sept	CCIL CSA	CERT	TIFIED ORY FOR T	ESTING

**Our Project No.:** 

**Client Contract No.:** 

PER



**Client:** 

## CONCRETE TEST REPORT

02000061.000.001

97 TROOP AVE., DARTMOUTH, N.S. B3B 2A7 - TEL (902) 468-6486 FAX 468-4919

	Transportation		cture Renewal	Client Con		4600019710	)		
	6, 1672 Granville	Street		Contractor		Marco Marit	imes		
Halifax, Nov B3J 2N2	a Scotia		CC		•	maroo mari	Fax		
Attn: Krist	a Ranahan, P.E	ng.							
Fax									
	O1-55-02-01 - J esting	IL IIsley High \$	School Concrete	Email	krista.ranah	an@novasco	otia.ca		
Set No:	5 <b>No.</b>	Of Specimens	s: 5			Date Cast: 20	0 Jan	2020	
Specimen	Date Tested	Age At Test (Days)	Average Diameter(mm)	Cyl Density kg/m <sup>3</sup>	Maximum Load (kN)	Compress Strength (M		Failure Type	
Α	27 Jan 2020	7	102	2276	198	24.2		Α	AX
В	17 Feb 2020	28	102	2269					ВД
С	17 Feb 2020	28	102	2270					C
D	16 Mar 2020	AP	102						
Ε	16 Mar 2020	AP	102						EM F
S	pecified Proper	rties		Test Informat	ion		Samr	ole pickup	
Strength @	28 days(MPa):	28	Conc Temp <sup>o</sup> C	14.5 Slur	np (mm) 130	/150			an 2020
Slump (mm	):	80 +/- 20	Air Temp C:	-3.5 Air(	<b>%):</b> 4.5/6	6.4		<b>ne:</b> 9:00	
Air (%):		6 +/- 1	Cast Time:	16:25 Cas	t By: MTL			d Sample te: 21 Ja	
Max Agg Si		20	 	ing Temp (CS	A: 15 - 25 <sup>0</sup> C)		Tim		an 2020 .0
S	upplier Informa	tion	Minimum	: 12 Maxim	um: 20	l.			
Supplier:	Casey Metro		Initial Curing Co	onditions :					
Batch Time	: 15:11		Inside curing	box inside traile	Г				
Truck No.: Ticket No.:	38CM 103670		Test samples cas	st in reusable hard	d plastic moulds	·			
	elivered: 28	(MPa)	Section: Elec	trical Ductban	k				
Mix No:	20	(IVII CI)	Location: Sect	tion 5					
Load Vol:	6.00	m <sup>3</sup>							
Cum Vol:	6.00	m <sup>3</sup>	Commonts.						
	Additives:		Comments:						
Heat	✓ Superplast	icizer	Field	Test results r	eported on s	ite.			
Silica fume	Flyash				•				
Set Retarder	Air Entrain	ment 🗹							
Water Reduce		rs 🗆							
H2O Added	Authorized I	В			Extra	Airs: 1	Extra	Slumps:	1 [
Standb	1.5					144 1			
Standby: Record No 5		obe Tech: 、	Joel #3	PER\$₽	to 866	CCIL CSA	CERTI ORATO	IFIED ORY FOR T	ESTING

Our Project No.:



## CONCRETE **TEST REPORT**

97 TROOP AVE., DARTMOUTH, N.S. B3B 2A7 - TEL (902) 468-6486 FAX 468-4919

Client:				Our Projec		02000061.0		)1	
Nova Scotia	a Transportation	And Infrastru	cture Renewal	Client Con		4600019710	)		
	6, 1672 Granville	Street		Client PO.:		Mana Marit	:		
Halifax, Nov	va Scotia			Contractor	:	Marco Marit	ımes		
B3J 2N2			CC	:			Fax		
Attn: Krist	a Ranahan, P.E	ng.							
Fax									
	FO1-55-02-01 - J Testing	L IIsley High	School Concrete	Email	krista.ranah	an@novasco	tia.ca	a	
Set No:	6 <b>No.</b>	Of Specimens	s: 3			Date Cast: 22	2 Jan	2020	
Specimen	Date Tested	Age At Test (Days)	Average Diameter(mm)	Cyl Density kg/m <sup>3</sup>	Maximum Load (kN)	Compressi Strength (M		Failure Type	
Α	29 Jan 2020	7	102	2344	180 22.0			Α	AX
В	19 Feb 2020	28	102	2347				, , ,	ВЦ
С	19 Feb 2020	28	102	2343					C
									EM
									F
<u>s</u>	pecified Proper	rties	=		Sam	ple pickup	at Site :		
Strength @	28 days(MPa):	25	Conc Temp <sup>Q</sup> C 19.5 Slump (mm) 100 Date: 23 Jan 2						
Slump (mm	):	80 +/- 20	Air Temp C: -1.5 Air(%): 2.0 / 4.7 Time: 7:00						
Air (%):	()	6 +/- 1	Cast Time:	14:25 Cas	t By: MTL			d Sample ate: 23 Ja	at Lab :
Max Agg Si		20		ng Temp (CS				me: 8:30	
-	upplier Informa	tion	Minimum		um: 18.3	L			
Supplier:	Metro Casey		Initial Curing Co						
Batch Time Truck No.:	10.11		Inside curing I	oox inside traile	r				
Ticket No.:	39CM 103697		Test samples cas		l plastic moulds	i			
Strength De	elivered: 25	(MPa)	Section: Foot						
Mix No:	C25F1D1	( 4)	Location: Grid	Line 1 ( A-D )					
Load Vol:	8.00	m <sup>3</sup>							
Cum Vol:	8.00	m <sup>3</sup>	Comments:						
	Additives:		Comments.						
Heat	Superplast	icizer 🗌	Field Test results reported on site.						
Silica fume	☐ Flyash								
Set Retarder Water Reduce	☐ Air Entrainr er ☐ Accelerator								
H2O Added	☐ Authorized E	3			Evtra	Δire: 1			

For testing conducted by this company, procedures are carried out in accordance with CSA-A23.2. Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of test results is provided only on request. Project manager: Peter Salah

PER M

CCIL CSA CERTIFIED

LABORATORY FOR TESTING

0.5

Englobe Tech:

Joel #1

Standby:

Record No 50508