



### 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:

C30F1D1

**Date Placed:** 

19-Feb-20

Supplier: Casey Metro

Formwork:

Wood

Method Of Placing:

Weather: Clear

Whip

Method Of Curing:

Insulated Tarps

Specified Properties: Strength, @28 Days:

Vibrators:

30 MPa,

Slump:

80 +/- 20 mm

Air:

Pump

6 +/- 1 %

Load Ticket		Truck			Record			Slump	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch '	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	104245	22CM	12:54	13:45	14:45	1:51	2.9 / 5.5	80 / 95	22.5	5.0	7.65	7.65	3
2	104248	39CM	13:40	14:40	15:00	1:20	5.4	95	19.5	3.5	7.65	15.00	2

Section:

Footings, Wall and Pier

Location:

Strip Footing: Line X1.5 (Y3 - Y1) - 2.8, Footing C9+, Wall: Line Z1 (W2 - W4), Pier Z1 (W5) B9, C9

Comments

Field Test results reported on site.

Record No: 29636

Standby:

0.5

Englobe Tech:

Joel DeCoste

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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Client

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Client P.O.:

Contractor:

Marco Maritimes

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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:** 

20-Feb-20

Supplier: Casey Metro

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	Ticket	Truck			Record		A in (0()	Slump	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	104285	36CM	13:02	13:40	14:25	1:23	2.9/3.3/5.1	60/85/95	20.5	-8.0	6.12	6.12	3
2	104286	23CM	13:08	13:50	14:35	1:27	3.3 / 5.2	85 / 100	15.0	-8.0	6.12	12.24	2
3	104287	25CM	13:10	14:40	15:15	2:05	2.9 / 5.3	70 / 95	15.5	-7.0	6.12	18.36	
4	104288	21CM	13:26	15:05	15:55	2:29	3.3 / 5.1	85 / 100	13.5	-7.0	5.64	24.00	

Section:

Footings and Wall

Location:

Footing Pads: B13 & YZ13, Strip Footings: X1.5 - to Step at Y1 and Line Y1 (X1.5 - X4), Wall: Line 14

(B + 4.4m - Y4)

Comments

Field Test results reported on site.

Record No: 29637

Standby:

0.5

Englobe Tech:

Joel DeCoste





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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:

C30F1D1

**Date Placed:** 

20-Feb-20

Supplier: Casey Metro

Formwork:

Wood

Method Of Placing:

excavator & buc

Weather: Clear

Vibrators:

Whip

**Method Of Curing:** 

Insulated Tarps

Specified Properties: Strength, @28 Days:

30 MPa,

Slump:

80 +/- 20 mm

Air:

6 +/- 1 %

Load	Ticket	Truck	Time Record Batch Tested Unload Elapsed				Slump	Temp (C)		Volume		#Cylds	
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	104289	22CM	14:03	15:30	16:10	2:07	2.5 / 5.4	70 / 95	15.0	-6.0	4.00	4.00	5

Section:

Piers

Location:

(W1-D) and (C9+)

Comments

Field Test results reported on site.

Record No: 29639

Standby:

0.5

Englobe Tech:

Joel DeCoste





#### 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:** 

21-Feb-20

Supplier: Casey Metro

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	Ticket	1 1		Time Record Batch Tested Unload Elapsed				Slump	Temp (C)		Volume		#Cylds
No.	No.	No.	Batch <sup>-</sup>	Tested	Unload	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	104302	38CM	12:53	13:55	14:25	1:32	5.2	90	16.5	-2.0	8.00	8.00	5

Section:

Footings and Wall

Location:

Footing Pads: B10 & C10, Wall: Line X1 (Corner of Z1)

Comments

Field Test results reported on site.

Record No: 29645

Standby:

Englobe Tech: Joel DeCoste PER





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:

C30F1D1

Date Placed:

21-Feb-20

Supplier: Casey Metro

Formwork:

Wood

**Method Of Placing:** 

Pump

Weather: Clear

Vibrators:

Whip

**Method Of Curing:** 

Insulated Tarps

Specified Properties: Strength, @28 Days:

30 MPa,

Slump:

80 +/- 20 mm

Air:

6 +/- 1 %

Load	Ticket	Truck	Time Record Batch Tested Unload Elapsed				Slump	Temp (C)		Volume		#Cylds	
No.	No.	No.	Batch	Tested I	Jnload I	Elapsed	Air (%)	(mm)	Conc	Air	Load	Cum.	Cast
1	104306	25CM	14:16	15:10	15:30	1:14	5.3	95	19.5	-1.5	6.50	6.50	5

Section:

Piers

Location:

(D13)&(Y7,13+)

**Comments** 

Field Test results reported on site.

Record No: 29646

Standby:

Englobe Tech:

Joel DeCoste



**Client:** 

## **CONCRETE TEST REPORT**

LABORATORY FOR TESTING

02000061.000.001

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

PO Box 186 Halifax, Nov	a Transportation 3, 1672 Granville va Scotia		cture Renewal	Client Con Client PO.: Contractor		4600019710	0			
B3J 2N2			CC	:			Fax			
	a Ranahan, P.E	ng.								
Fax										
	O1-55-02-01 - J esting	IL IIsley High \$	School Concrete	Email	krista.ranah	an@novasco	otia.ca	а		
Set No:	9 <b>No.</b>	Of Specimens	s: 3		l	Date Cast: 2	4 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	31 Jan 2020	7	102	2334	2334 183			Α	AX	
В	21 Feb 2020	28	102	2321	244	29.9		A	BU	
С	21 Feb 2020	28	102	2315	242	29.6				
			ę.					A		
	pecified Proper			Test Informat 19.5 Slur	<b>ion</b> np (mm) 100		Sam	ple pickup	at Site :	
	28 days(MPa): 、	25	Conc Temp <sup>o</sup> C							
Slump (mm	):	80 +/- 20 6 +/- 1	Air Temp°C : 3 Air(%): 5.2					'd Sample	at Lah ·	
Air (%): Max Agg Si	ze (mm):	20	Cast Time: 14:01 Cast By: Englobe				Date :			
200	upplier Informa		Initial curing Temp (CSA: 15 - 25 C) Time :  Minimum: Maximum:							
Supplier:	Casey Metro		Initial Curing Co		uiii.					
Batch Time	-		_	box inside traile	r					
Truck No.:	36CM		_							
Ticket No.:	103762		Test samples cas	st in reusable narc	plastic modics	C				
Strength De	elivered: 25	(MPa)	Location: strip	footiings Line	71 from \\/	1 to \/// and a	المصما	acetion o	+ \^/1	
Mix No:	C25F1D1		Location: Strip	100tilligs. Lille	5 Z 1 110111 VV	i to vv4 and s	Siliali	Section a	LVVI	
Load Vol:	8	m <sup>3</sup>								
Cum Vol:	8	m	Comments:							
	Additives:									
Heat	Superplast	icizer	Field Test results reported on site.							
Silica fume	☐ Flyash									
Set Retarder Water Reduce	Air Entrainr  Accelerator									
H2O Added		• _								
Standby:	0				0/ 7/	CCII/ CSA	CERT	TIEIED		

**Our Project No.:** 

Englobe Tech:

TP1

Record No 50540



Standby:

Record No 50560

0.5

Englobe Tech:

Joel #1

### CONCRETE TEST REPORT

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

Client:				Our Project No.: 02000061				01	
Nova Scotia	a Transportation	And Infrastru	cture Renewal	Client Con	tract No.:	4600019710	)		
	6, 1672 Granville			Client PO.:					
Halifax, Nov				Contractor	:	Marco Marit	imes		
B3J 2N2			cc	:			Fax		
Attn: Krist	a Ranahan, P.E	na.							
Fax	, -								
Project: F	:O1-55-02-01 <sub>-</sub> .	II IIslev High S	School Concrete						
-	esting	it holey riight		Email	krista.ranah	an@novasco	tia.ca	а	
Set No:	10 <b>No</b> .	Of Specimens	: 3			Date Cast: 27	7 Jan	2020	
Specimen	Date	Age At Test		Cyl Density	Maximum	Compressi	ssive Fail		
	Tested	(Days)	Diameter(mm)	kg/m <sup>3</sup>	Load (kN)	Strength (M	Pa)	Туре	
Α	03 Feb 2020	7	102	2282	166	20.3		Α	AX
В	24 Feb 2020	28	102	2287	220	26.9		A	ВД
С	24 Feb 2020	28	102	2297	226	27.7		A	C
								^	
									EM
									F
S	pecified Proper	rties		Test Informat	ion		Sam	ple pickup	
Strength @	28 days(MPa):	25	_		np (mm) 95				an 2020
Slump (mm	):	80 +/- 20	Air Temp <sup>o</sup> C :	· · · · · · · · · · · · · · · · · · ·					
Air (%):		4 - 7	Cast Time:	14:15 Cast	t By: MTL			'd Sample	
Max Agg Siz	ze (mm):	20	   Initial curi	ing Temp (CS	A: 15 - 25 C)				an 2020
Sı	upplier Informa	tion	Minimum	: 11.8 <b>Maxim</b>	um: 20.5		111	me: 10:1	5
Supplier:	Casey Metro		Initial Curing Co	onditions :					
Batch Time	: 13:29		Inside curing I	box inside traile	r				
Truck No.:	25CM		Test samples cas	st in reusable hard	l plastic moulds	e:			
Ticket No.:	103816		Section: Strip	Footings					
Strength De		(MPa)	Location: Grid	Line : A ( 5-8	) & Line Z1 (	W1-W2)			
Mix No:	C25F1D1	3		`	,	,			
Load Vol: Cum Vol:	7.65 7.65	m m							
	Additives:		Comments:						
Heat	Superplast	isizor	Field	l Taak waa lka		:4_			
Silica fume	Flyash		Field	l Test results r	eported on s	site.			
Set Retarder	Air Entrain	ment 🔽							
Water Reduce		_							
H2O Added									

PER W

CCIL CSA CERTIFIED

LABORATORY FOR TESTING



# **CONCRETE TEST REPORT**

97 TROOP AV	E., DARTMOUTH, I	N.S. B3B 2A7 - T	EL (902) 468-6486	FAX 468-4919					
Client:				Our Projec	t No.:	02000061.0	0.00	01	
Nova Scotia	a Transportation	And Infrastru	cture Renewal	Client Con	tract No.:	460001971	0		
	6, 1672 Granville			Client PO.:					
Halifax, Nov	•			Contractor	•••	Marco Mari	times	5	
B3J 2N2			cc	•			Fax		
Attn: Krist	a Ranahan, P.E	ng.							
Fax		J							
Project: F	O1-55-02-01 - J	L IIslev High S	School Concrete						
	esting	,g		Email	krista.ranah	an@novasco	otia.ca	а	
Set No:	11 No.	Of Specimens	: 5			Date Cast: 27 Jan 2020			
Specimen	Date	Age At Test	-   -		Maximum	Compress	ive	Failure	
	Tested	(Days)	Diameter(mm)	ameter(mm) kg/m³ Load (kN)		Strength (M	1Pa)	Туре	
Α	03 Feb 2020	7	102	2275	204	25.0		А	AX
В	24 Feb 2020	28	102	2282	32 264 32.			A	ВД
С	24 Feb 2020	28	102	2285	257	31.5		A	C
D	23 Mar 2020	AP	102	2282					
E	23 Mar 2020	AP	102	2275					EM
									F
<u>s</u>	pecified Proper	rties	-	Test Informati	ion		Sam	ple pickup	
Strength @2	28 days(MPa):	28	Conc Temp <sup>o</sup> C	Comp Town 00 40 = 01 - 01 - 01 - 01 - 01 - 01 - 01 - 0					an 2020
Slump (mm	):	125 +/- 25	Air Temp <sup>o</sup> C:	5.0 <b>Air</b> (9	<b>%):</b> 6.8			ime: 9:30	
Air (%):		4 - 7	Cast Time:	15:25 Cast	t By: MTL			'd Sample	
Max Agg Siz	ze (mm):	20	Initial curi	ng Temp (CS	A: 15 - 25 C)			<b>ate</b> : 28 Ja <b>me:</b> 10:1	an 2020
Sı	upplier Informa	tion	Minimum	11.8 Maximi	um: 20.5		• • •	ine. 10.1	<b>0</b>
Supplier:	Casey Metro		Initial Curing Co	onditions :					
Batch Time:	14:41		Inside curing I	oox inside traile	r				
Truck No.: Ticket No.:	38CM		Test samples cas	t in reusable hard	plastic moulds	•/			
	103824 livered: 28	(MDa)	Section: Duct	bank					
Mix No:		(MPa)	Location: 2nd	Location of Pu	ıll Pit				
Load Vol:	C27F101E	3							
Cum Vol:	LO <b>ad Voi:</b> 4.50 m <sub>3</sub>								
Additives:			Comments:						
Heat ✓ Superplasticizer ✓			Field Test results reported on site.						
Silica fume				Oot roounts r	oportou on a				
Set Retarder	Air Entrainn	ment 🗹							
Water Reduce	r Accelerator	, []							

Standby:

0.5

Record No 50562

H2O Added Authorized B

Englobe Tech:

Joel #3

CCIL CSA CERTIFIED LABORATORY FOR TESTING



Client:

CONCRETE **TEST** REPORT

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

Client:				Our Projec	t No.:	02000061.00	00.001		
Nova Scotia	a Transportation	And Infrastru	cture Renewal	Client Con	tract No.:	4600019710	ı		
	6, 1672 Granville			Client PO.:					
Halifax, No				Contractor	<b>'</b>	Able Equipm	nent		
B3J 2N2			CC	:			Fax		
Attn: Krist	a Ranahan, P.E	ng.							
Fax									
	O1-55-02-01 - J esting	JL IIsley High	School Concrete	Email	krista.ranah	an@novascot	ia.ca		
Set No:	32 <b>No</b> .	Of Specimens	======================================			Date Cast: 14	Feb 2020		
Specimen	Date Tested	Age At Test (Days)	Average Diameter(mm)	Cyl Density Maximum kg/m³ Load (kN)		Compressiv Strength (MF			
А	21 Feb 2020	7	102		258	31.6		AX	
В	13 Mar 2020	28	102			01.0	A	國	
c	13 Mar 2020	28	102						
D	10 Apr 2020	AP	102						
E	10 Apr 2020	AP	102					EM	
				1					
<u>s</u>	pecified Proper	rties		Test Informati	ion		Sample nickun		
Strength @	28 days(MPa):	30	Conc Temp <sup>o</sup> C	1 1010					
Slump (mm	):	80 +/- 20	Air Temp C: -9 Air(%): 2.7 Time: 12:00						
Air (%):		No AEA	Cast Time: 14:05 Cast By: Englobe Rec'd Sample at						
Max Agg Siz		20	Initial curi	ng Temp (CS	A: 15 - 25 <sup>0</sup> C)		Date: 15 F	eb 2020	
	upplier Informa	tion	Minimum	: 5 Maximi	um: 17		111101 14.0	,0	
Supplier: Batch Time	Casey Metro		Initial Curing Co	onditions :					
Truck No.:	10.00		Inside curing t	oox inside traile	r				
Ticket No.:	38CM 104213		Test samples cas	t in reusable hard	plastic moulds				
Strength De		(MPa)	Section:						
Mix No:	C30F1D1	` ,	Location: 4 pie	ers on footings	:7-B, 7-C, 8-	B, 8-C			
Load Vol:	2.0	m <sup>3</sup>							
Cum Vol:	2.0	m <sup>3</sup>	Comments:						
4	Additives:		comments.						
Heat	Superplasti	icizer	Field	Test results r	eported on s	ite.			
Silica fume	☐ Flyash								
Set Retarder	☐ Air Entrainn	_							
Water Reduce									
nzU Added	H2O Added  Authorized B								
Standby:	0					phone in the same of the same			
Record No 5	0753 Englo	be Tech: T	P1	PER	In Selh	CCIL CSA C	ERTIFIED RATORY FOR T	ESTING	



## CONCRETE **TEST REPORT**

97 TROOP AV	E., DARTMOUTH, I	N.S. B3B 2A7 - T	EL (902) 468-6486	FAX 468-4919					
Client:				Our Projec	t No.:	02000061.0	00.00	01	
Nova Scotia	a Transportation	And Infrastru	cture Renewal	Client Con	tract No.:	4600019710	)		
	6, 1672 Granville			Client PO.:					
Halifax, Nov	va Scotia			Contractor	:	Able Equipr	ment		
B3J 2N2			cc	:			Fax		
Attn: Krista	a Ranahan, P.E	ng.							
Fax									
Project: F	O1-55-02-01 - J	L IIslev High S	School Concrete						
	esting			Email	krista.ranah	an@novasco	tia.ca	<b>a</b>	
Set No:	33 No.	Of Specimens	: 5			Date Cast: 14	4 Feb	2020	
Specimen	Date	Age At Test	Average	erage Cyl Density Maximum		Compressive		Failure	
	Tested	(Days)	Diameter(mm)			Strength (M		Туре	
Α	21 Feb 2020	7	102		216	26.4		Α	AX
В	13 Mar 2020	28	102						ВЦ
c	13 Mar 2020	28	102						C
D	10 Apr 2020	AP	102				- 1		
Е	10 Apr 2020	AP	102						
	·			1					F
S	pecified Proper	ties		Test Informat	ion		Sam	nlo niekun	OPERATOR STATE
Strength @2	28 days(MPa):	25	Conc Temp <sup>©</sup> C		mp (mm) 90			ple pickup ate: 15 F	eb 2020
Slump (mm)	):	80 +/- 20	Air Temp <sup>o</sup> C:	-9 <b>Air</b> (	<b>%):</b> 5.5		Ti	me: 12:0	
Air (%):		6 +/- 1	Cast Time:	14:20 Cas	t By: Engl	obe	Rec'	d Sample	
Max Agg Siz	e (mm):	20	Initial curi	ng Temp (CS	A: 15 25 C)				eb 2020
St	ipplier Informa	<u>tion</u>	Minimum	:5 Maxim	um: 7	L	lir	me: 14:3	0
Supplier:	Casey Metro		Initial Curing Co	nditions :					
Batch Time:	13:39		Inside curing t	oox					
Truck No.:	20CM		Test samples cas	at in reusable hard	l plastic moulds				
Ticket No.:	104216		Section:		- pilotio illouido				
	livered: 25	(MPa)	Location: Elev	ator walls Stri	n footing on	line X-1 betwe	een 7	7-1 and Y	-7
Mix No:	C25F1D1	3		on line 14 pila			0011 2	- rana r	. 0
Load Vol:	7.0 7.0	m 3	, and the place of						
	Cum voi: 7.0 m								
	Additives:								
Silica fume	Heat Superplasticizer			Field Test results reported on site.					
Set Retarder	☐ Flyash☐ Air Entrainn	nent 🗹							
Water Reduce									

Standby:

0

Record No 50754

H2O Added Authorized B

Englobe Tech: TP2

CCIL CSA CERTIFIED LABORATORY FOR TESTING