

## REPORT OF CONCRETE FIELD & LABORATORY TESTING

**CLIENT:** DN Tanks  
 11 Teal Road  
 Wakefield, MA 01880  
 Attn: Mr. Jake Sreca

**PROJECT:** Middletown CT  
 224 Talcott Ridge Drive  
 Middletown, CT

**DATE:** September 16, 2020

**REPORT #:** 20-07-161-006

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**General Location:** Exterior Wall and Dome Panels

**Date Cast:** 8/18/2020  
**Field Rep:** Stephen Sturges  
**Contractor:** DN Tanks  
**Concrete Supplier:** CT Ready Mix  
**Concrete Admixtures:** Mix B  
**Air Temp:** 80 °F  
**Weather:** Sunny  
**Nominal Size of Aggr:** 3/4"  
**Date Received by Lab:** 8/19/2020

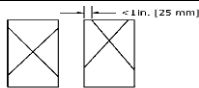
**FIELD TEST RESULTS (Sampled in accordance with ASTM C172)**

TICKET #	*# CYL	SLUMP TEST (in) (ASTM C143)	AIR CONTENT (%) (ASTM C231)	TEMPERATURE (°F) (ASTM C1064)	ELAPSED TIME		
					Batch	Final	Total (Min)
1008228	6	5.00"	6.90%	81 °F	9:32 AM	11:00 AM	88

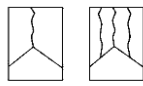
*\*Specimens molded/conditioned in accordance with ASTM C31/ASTM C1231*

**LABORATORY COMPRESSIVE STRENGTH TESTING (ASTM C39)**

Date of Test	Cylinder ID	Age	Cure	Avg Measured Diameter (in)	Cross Sectional (in <sup>2</sup> )	PSI	Max. Load	Break Type
08/22/20	1A	4	LAB	6.00"	28.26"	2,880	81,350	2
08/25/20	1B	7	LAB	6.00"	28.26"	3,200	90,540	2
08/25/20	1C	7	LAB	6.00"	28.26"	3,540	100,090	2
09/15/20	1D	28	LAB	6.00"	28.26"	4,060	114,700	2
09/15/20	1E	28	LAB	6.00"	28.26"	4,090	115,650	2
	1F		HOLD					



**Type 1**  
Reasonably well-formed cones on both ends, less than 1 in. (25 mm) of cracking through caps



**Type 2**  
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



**Type 3**  
Columnar vertical cracking through both ends, no well-formed cones



**Type 4**  
Diagonal fracture with no cracking through ends; tip with hammer to distinguish from Type 1



**Type 5**  
Side fractures at top or bottom (occur commonly with unbonded caps)



**Type 6**  
Similar to Type 5 but end of cylinder is pointed

<b>Specific Sample Location:</b>	Wall Panel WA-2		
<b>Yards Placed:</b>	37.0	<b>yards<sup>3</sup></b>	<b>Design Strength:</b> 4000 psi
<b>Density:</b>			
<b>Remarks:</b>			

**Reviewed By:**

Darlene Daniels

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**Contractor:** DN Tanks  
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**Concrete Admixtures:** Mix B  
**Air Temp:** 80 °F  
**Weather:** Sunny  
**Nominal Size of Aggr:** 3/4"  
**Date Received by Lab:** 8/19/2020

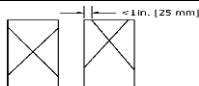
**FIELD TEST RESULTS (Sampled in accordance with ASTM C172)**

TICKET #	*# CYL	SLUMP TEST (in) (ASTM C143)	AIR CONTENT (%) (ASTM C231)	TEMPERATURE (°F) (ASTM C1064)	ELAPSED TIME		
					Batch	Final	Total (Min)
1008230	6	4.25"	5.40%	85 °F	10:30 AM	12:19 PM	109

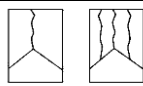
*\*Specimens molded/conditioned in accordance with ASTM C31/ASTM C1231*

**LABORATORY COMPRESSIVE STRENGTH TESTING (ASTM C39)**

Date of Test	Cylinder ID	Age	Cure	Avg Measured Diameter (in)	Cross Sectional (in <sup>2</sup> )	PSI	Max. Load	Break Type
08/22/20	2A	4	LAB	6.00"	28.26"	2,970	84,070	2
08/25/20	2B	7	LAB	6.00"	28.26"	3,170	89,570	2
08/25/20	2C	7	LAB	6.00"	28.26"	3,360	95,000	5
09/15/20	2D	28	LAB	6.00"	28.26"	4,610	130,380	2
09/15/20	2E	28	LAB	6.00"	28.26"	4,750	134,250	2
	2F		HOLD					



**Type 1**  
Reasonably well-formed cones on both ends, less than 1 in. (25 mm) of cracking through caps



**Type 2**  
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



**Type 3**  
Columnar vertical cracking through both ends, no well-formed cones



**Type 4**  
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



**Type 5**  
Side fractures at top or bottom (occur commonly with unbonded caps)



**Type 6**  
Similar to Type 5 but end of cylinder is pointed

<b>Specific Sample Location:</b>	Wall Panel WA-2		
<b>Yards Placed:</b>	37.0	<b>yards<sup>3</sup></b>	<b>Design Strength:</b> 4000 psi
<b>Density:</b>			
<b>Remarks:</b>			

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**Date Cast:** 8/18/2020  
**Field Rep:** Stephen Sturges  
**Contractor:** DN Tanks  
**Concrete Supplier:** CT Ready Mix  
**Concrete Admixtures:** Mix B  
**Air Temp:** 80 °F  
**Weather:** Sunny  
**Nominal Size of Aggr:** 3/4"  
**Date Received by Lab:** 8/19/2020

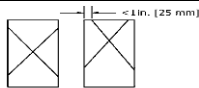
**FIELD TEST RESULTS (Sampled in accordance with ASTM C172)**

TICKET #	*# CYL	SLUMP TEST (in) (ASTM C143)	AIR CONTENT (%) (ASTM C231)	TEMPERATURE (°F) (ASTM C1064)	ELAPSED TIME		
					Batch	Final	Total (Min)
1008232	6	5.00"	6.00%	82 °F	11:37 AM	1:39 PM	122

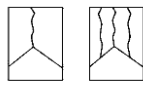
*\*Specimens molded/conditioned in accordance with ASTM C31/ASTM C1231*

**LABORATORY COMPRESSIVE STRENGTH TESTING (ASTM C39)**

Date of Test	Cylinder ID	Age	Cure	Avg Measured Diameter (in)	Cross Sectional (in <sup>2</sup> )	PSI	Max. Load	Break Type
08/22/20	3A	4	LAB	6.00"	28.26"	2,810	79,420	2
08/25/20	3B	7	LAB	6.00"	28.26"	3,390	95,870	2
08/25/20	3C	7	LAB	6.00"	28.26"	3,450	97,570	2
09/15/20	3D	28	LAB	6.00"	28.26"	4,370	123,530	2
09/15/20	3E	28	LAB	6.00"	28.26"	4,550	128,630	2
	3F		HOLD					



**Type 1**  
Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking through caps



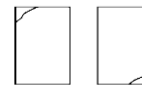
**Type 2**  
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



**Type 3**  
Columnar vertical cracking through both ends, no well-formed cones



**Type 4**  
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



**Type 5**  
Side fractures at top or bottom (occur commonly with unbonded caps)



**Type 6**  
Similar to Type 5 but end of cylinder is pointed

<b>Specific Sample Location:</b>	Wall Panel WB-2		
<b>Yards Placed:</b>	37.0	<b>yards<sup>3</sup></b>	<b>Design Strength:</b> 4000 psi
<b>Density:</b>			
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**Concrete Admixtures:** Mix B  
**Air Temp:** 80 °F  
**Weather:** Sunny  
**Nominal Size of Aggr:** 3/4"  
**Date Received by Lab:** 8/19/2020

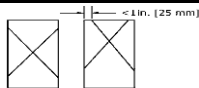
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TICKET #	*# CYL	SLUMP TEST (in) (ASTM C143)	AIR CONTENT (%) (ASTM C231)	TEMPERATURE (°F) (ASTM C1064)	ELAPSED TIME		
					Batch	Final	Total (Min)
1008235	6	5.00"	6.90%	85 °F	12:40 PM	2:23 PM	103

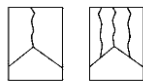
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**LABORATORY COMPRESSIVE STRENGTH TESTING (ASTM C39)**

Date of Test	Cylinder ID	Age	Cure	Avg Measured Diameter (in)	Cross Sectional (in <sup>2</sup> )	PSI	Max. Load	Break Type
08/22/20	4A	4	LAB	6.00"	28.26"	2,730	77,110	2
08/25/20	4B	7	LAB	6.00"	28.26"	3,400	96,000	2
08/25/20	4C	7	LAB	6.00"	28.26"	3,490	98,540	2
09/15/20	4D	28	LAB	6.00"	28.26"	4,430	125,070	2
09/15/20	4E	28	LAB	6.00"	28.26"	4,650	131,550	2
	4F		HOLD					



**Type 1**  
Reasonably well-formed cone on both ends, less than 1 in. (25 mm) of cracking through caps



**Type 2**  
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



**Type 3**  
Columnar vertical cracking through both ends, no well-formed cones



**Type 4**  
Diagonal fracture with no cracking through ends; top with hammer to distinguish from Type 1



**Type 5**  
Side fractures at top or bottom (occur commonly with unbonded caps)



**Type 6**  
Similar to Type 5 but end of cylinder is pointed

<b>Specific Sample Location:</b>	Wall Panel WB-2		
<b>Yards Placed:</b>	37.0	<b>yards<sup>3</sup></b>	<b>Design Strength:</b> 4000 psi
<b>Density:</b>			
<b>Remarks:</b>			

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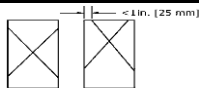
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TICKET #	*# CYL	SLUMP TEST (in) (ASTM C143)	AIR CONTENT (%) (ASTM C231)	TEMPERATURE (°F) (ASTM C1064)	ELAPSED TIME		
					Batch	Final	Total (Min)
1008239	6	4.50"	5.30%	82 °F	2:42 PM	4:23 PM	101

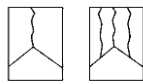
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Date of Test	Cylinder ID	Age	Cure	Avg Measured Diameter (in)	Cross Sectional (in <sup>2</sup> )	PSI	Max. Load	Break Type
08/22/20	5A	4	LAB	6.00"	28.26"	3,330	94,030	3
08/25/20	5B	7	LAB	6.00"	28.26"	3,850	108,730	2
08/25/20	5C	7	LAB	6.00"	28.26"	3,860	109,040	2
09/15/20	5D	28	LAB	6.00"	28.26"	4,860	137,250	2
09/15/20	5E	28	LAB	6.00"	28.26"	5,140	145,150	2
	5F		HOLD					



**Type 1**  
Reasonably well-formed cone; on both ends, less than 1 in. [25 mm] of cracking through caps



**Type 2**  
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end



**Type 3**  
Columnar vertical cracking through both ends, no well-formed cones



**Type 4**  
Diagonal fracture with no cracking through ends; tap with hammer to distinguish from Type 1



**Type 5**  
Side fractures at top or bottom (occur commonly with unbonded caps)



**Type 6**  
Similar to Type 5 but end of cylinder is pointed

<b>Specific Sample Location:</b>	Panel DA-2 and DB-2		
<b>Yards Placed:</b>	37.0	<b>yards<sup>3</sup></b>	<b>Design Strength:</b> 4000 psi
<b>Density:</b>			
<b>Remarks:</b>			

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