S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/15/2012 **Time Cast:** 5:15 **Date Received:** 10/16/2012

Placement Location: WALL FOOTING: A1(+6')/AA TO A4(+6') AA AND ELEVATOR PIT BASE SLAB

Placement Method: TELE BELT/20' ELEPHANT TANK

Placement Vol. (yd³): 24

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
YZPEX

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 4.5

Air Temp (°F): 6

Conc. Temp (°F) (C-1064): 72

Load Number: 2

Mixer Number: 86

Ticket Number 209137

Cubic Yards: 18

Design (psi): **3500**

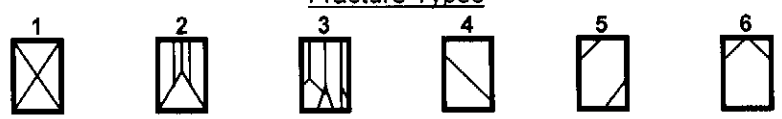
Batch 4:00

Arrive 5:00

Depart 5:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-1A		4.00	12.57	10/18/2012	Lab	**3**	4	53.8	**4280**
412-1B		4.00	12.57	10/22/2012	Lab	**7**	3	61.6	**4900**
412-1C		4.00	12.57	11/12/2012	Lab	**28**	4	78.4	**6240**
412-1D		4.00	12.57	11/12/2012	Lab	**28**	4	78.2	**6220**
412-1E				Hold	Lab				

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: DELIVERED 4000PSI

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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/26/2012 **Time Cast:** 3:45 **Date Received:** 10/27/2012

Placement Location: WALLS: AA/A4(-6') TO AA/A1 TO ELEV 89 ELEVATOR PIT TO ELEV 75
FOOTINGS:AA/A4(+6') TO AA/AS TO AC(-6')/AS (CONT IN REMARKS BELOW)

Placement Method: PUMP

Placement Vol. (yd³): 65

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 5.0

Air Temp (°F): 66

Conc. Temp (°F) (C-1064): 67

Load Number: 3

Mixer Number: 136

Ticket Number 209572

Cubic Yards: 27.5

Design (psi): **3500**

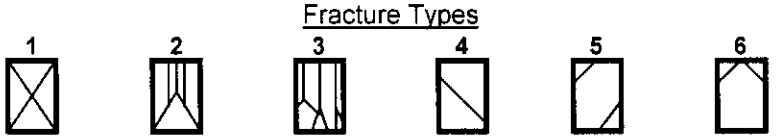
Batch 2:47

Arrive 3:14

Depart 4:01

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-2A		4.00	12.57	11/2/2012	Lab	**7**	4	58.8	**4680**
412-2B		4.00	12.57	11/23/2012	Lab	**28**	3	69.0	**5490**
412-2C		4.00	12.57	11/23/2012	Lab	**28**	4	71.2	**5670**
412-2D				Hold	Lab				
412-2E		4.00	12.57	11/2/2012	Field	**7**	4	59.4	**4730**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: INTERIOR FOOTING: AC/A4, AC/A3, AC/A1, AD/A4, AD/A2, AE/A4

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Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/3/2012 **Time Cast:** 8:44 **Date Received:** 11/5/2012

Placement Location: WALLS: AA/A4 TO AB/AS TO AD/AS INCLUDING ELEVATOR PIT TO ELEV 89'

Placement Method: PUMP

Placement Vol. (yd³): 63

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.6

Air Temp (°F): 45

Conc. Temp (°F) (C-1064): 66

Load Number: 2

Mixer Number: 86

Ticket Number 204641

Cubic Yards: 10

Design (psi): **3500**

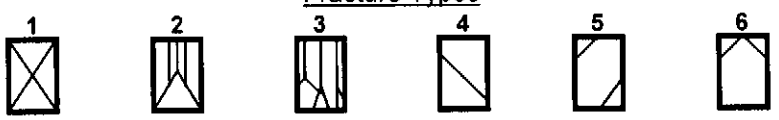
Batch 7:44

Arrive 8:15

Depart 8:57

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-3A		4.00	12.57	11/10/2012	Lab	**7**	4	48.0	**3820**
412-3B		4.00	12.57	12/1/2012	Lab	**28**	4	61.0	**4860**
412-3C		4.00	12.57	12/1/2012	Lab	**28**	4	61.2	**4870**
412-3D				Hold	Lab				
412-3E		4.00	12.57	11/10/2012	Field	**7**	4	49.3	**3920**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/3/2012 **Time Cast:** 10:17 **Date Received:** 11/5/2012

Placement Location: WALLS: AA/A4 TO AB/AS TO AD/AS INCLUDING ELEVATOR PIT TO ELEV 89'

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 63

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.9

Air Temp (°F): 48

Conc. Temp (°F) (C-1064): 67

Load Number: 5

Mixer Number: 94

Ticket Number 209695

Cubic Yards: 10

Design (psi): **3500**

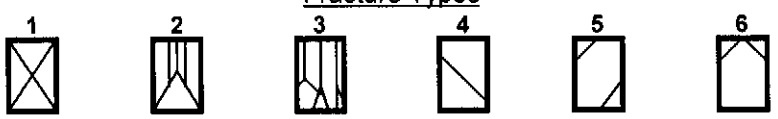
Batch 8:56

Arrive 9:32

Depart 10:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-4A		4.00	12.57	11/10/2012	Lab	**7**	4	53.7	**4270**
412-4B		4.00	12.57	12/1/2012	Lab	**28**	4	61.0	**4860**
412-4C		4.00	12.57	12/1/2012	Lab	**28**	4	60.6	**4820**
412-4D				Hold	Lab				
412-4E		4.00	12.57	11/10/2012	Field	**7**	4	48.6	**3870**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/6/2012 **Time Cast:** 5:20 **Date Received:** 11/7/2012

Placement Location: FOOTING: A13/A5 TO AB/A6 TO AE/A6

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 15

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 6.1

Air Temp (°F): 41

Conc. Temp (°F) (C-1064): 62

Load Number: 2

Mixer Number: 84

Ticket Number 211318

Cubic Yards: 7

Design (psi): **3500**

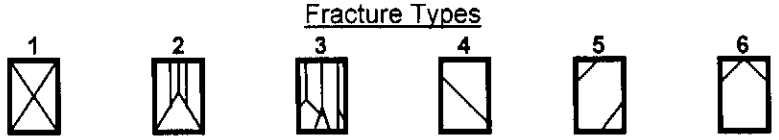
Batch 4:19

Arrive 4:45

Depart 5:28

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-5A		4.00	12.57	11/13/2012	Lab	**7**	4	54.5	**4340**
412-5B		4.00	12.57	12/4/2012	Lab	**28**	4	73.6	**5860**
412-5C		4.00	12.57	12/4/2012	Lab	**28**	4	70.0	**5570**
412-5D				Hold	Lab				
412-5E		4.00	12.57	11/13/2012	Field	**7**	3	51.2	**4080**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/9/2012 **Time Cast:** 3:20 **Date Received:** 11/12/2012

Placement Location: ELEVATOR SHAFT WALLS TO ELEV 101.5'+/- WALLS: AB/A5 TO AB/A6 TO AC.3(+6')/A6 FOOTING: NEAR AD LINE BETWEEN EXISTING AND A6

Placement Method: PUMP

Placement Vol. (yd³): 38

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 51

Conc. Temp (°F) (C-1064): 66

Load Number: 2

Mixer Number: 86

Ticket Number 211427

Cubic Yards: 9.5

Design (psi): **3500**

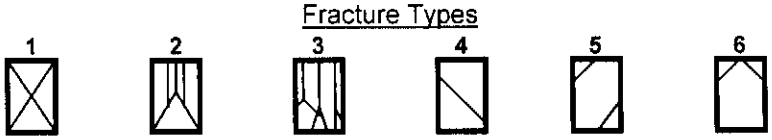
Batch 2:12

Arrive

Depart 3:40

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-6A		4.00	12.57	11/16/2012	Lab	**7**	4	56.0	**4460**
412-6B		4.00	12.57	12/7/2012	Lab	**28**	4	68.0	**5410**
412-6C		4.00	12.57	12/7/2012	Lab	**28**	4	60.6	**4820**
412-6D				Hold	Lab				
412-6E		4.00	12.57	11/16/2012	Field	**7**	4	51.4	**4090**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/17/2012 **Time Cast:** 9:50 **Date Received:** 11/19/2012

Placement Location: WALLS: AD/A5 TO AE/A5 AND AC.3(-6')/A6 TO AE/A6 AND ELEVATOR SHAFT WALLS TO ELEVATION 117

Placement Method: PUMP

Placement Vol. (yd³): 54

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 7.3

Air Temp (°F): 41

Conc. Temp (°F) (C-1064): 67

Load Number: 1

Mixer Number: 98

Ticket Number 211664

Cubic Yards: 10

Design (psi): **3500**

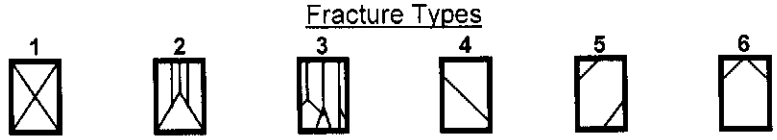
Batch 8:40

Arrive 9:15

Depart 10:00

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-7A		4.00	12.57	11/23/2012	Lab	**6**	4	42.9	**3410**
412-7B		4.00	12.57	12/15/2012	Lab	**28**	4	50.8	**4040**
412-7C		4.00	12.57	12/15/2012	Lab	**28**	4	51.8	**4120**
412-7D				Hold	Lab				
412-7E		4.00	12.57	11/23/2012	Field	**6**	4	40.4	**3220**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/17/2012 **Time Cast:** 10:50 **Date Received:** 11/19/2012

Placement Location: WALLS: AD/A5 TO AE/A5 AND AC.3(-6')/A6 TO AE/A6 AND ELEVATOR SHAFT WALLS TO ELEVATION 117

Placement Method: PUMP

Placement Vol. (yd³): 54

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 7.1

Air Temp (°F): 46

Conc. Temp (°F) (C-1064): 69

Load Number: 4

Mixer Number: 76

Ticket Number 211670

Cubic Yards: 10

Design (psi): **3500**

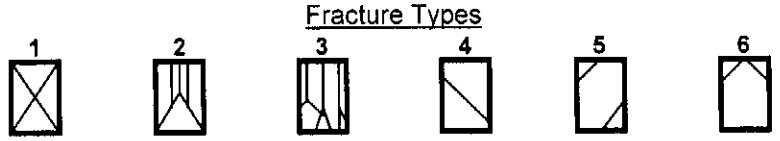
Batch 10:10

Arrive

Depart 10:55

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-8A		4.00	12.57	11/23/2012	Lab	**6**	4	40.2	**3200**
412-8B		4.00	12.57	12/15/2012	Lab	**28**	4	49.2	**3920**
412-8C		4.00	12.57	12/15/2012	Lab	**28**	4	52.4	**4170**
412-8D				Hold	Lab				
412-8E		4.00	12.57	11/23/2012	Field	**6**	3	34.2	**2720**

Fracture Types



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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/19/2012 **Time Cast:** 3:40 **Date Received:** 11/20/2012

Placement Location: UPPER ELEVATION FOOTING, NORTH OF AA-LINE AND REPLACEMENT FOOTINGS AT AC/A1 AND AD/A2

Placement Method: CRANE AND BUCKET

Placement Vol. (yd³): 10

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231) **Air WR:** 6.1

Air Temp (°F): 46

Conc. Temp (°F) (C-1064): 61

Load Number: 1

Mixer Number: 138

Ticket Number 211835

Cubic Yards: 10

Design (psi): **3500**

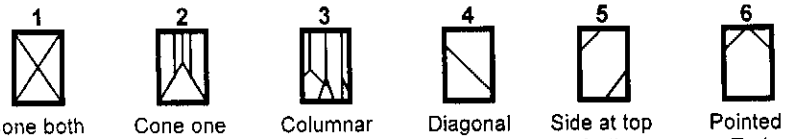
Batch 2:32

Arrive 3:00

Depart 4:45

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-9A		4.00	12.57	11/26/2012	Lab	**7**	4	52.6	**4190**
412-9B		4.00	12.57	12/17/2012	Lab	**28**	4	67.2	**5350**
412-9C		4.00	12.57	12/17/2012	Lab	**28**	4	69.2	**5510**
412-9D				Hold	Lab				
412-9E		4.00	12.57	11/26/2012	Field	**7**	4	46.4	**3690**

Fracture Types



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Remarks:

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Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/21/2012 **Time Cast:** 8:18 **Date Received:** 11/23/2012

Placement Location: SLAB ON GRADE PH I

Placement Method: PUMP

Placement Vol. (yd³): 60

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20+ (2% #10) (1% #11)

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6 3/4

Air Content (%) (C-231) **Air WR:** 3.0

Air Temp (°F): 36

Conc. Temp (°F) (C-1064): 65

Load Number: 2

Mixer Number: 99

Ticket Number 211916

Cubic Yards: 10

Design (psi): **3500**

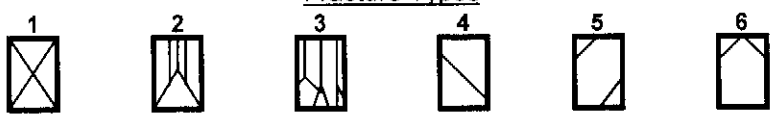
Batch 7:33

Arrive 8:05

Depart 8:18

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-10A		4.00	12.57	11/28/2012	Lab	**7**	4	65.8	**5240**
412-10B		4.00	12.57	12/19/2012	Lab	**28**	4	73.2	**5830**
412-10C		4.00	12.57	12/19/2012	Lab	**28**	4	73.8	**5870**
412-10D				Hold	Lab				
412-10E		4.00	12.57	11/28/2012	Field	**7**	4	61.0	**4860**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/21/2012 **Time Cast:** 9:33 **Date Received:** 11/23/2012

Placement Location: SLAB ON GRADE PH I

Placement Method: PUMP

Placement Vol. (yd³): 60

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20+ (2% #10) (1% #11)

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 2.8

Air Temp (°F): 37

Conc. Temp (°F) (C-1064): 65

Load Number: 5

Mixer Number: 136

Ticket Number 211923

Cubic Yards: 10

Design (psi): **3500**

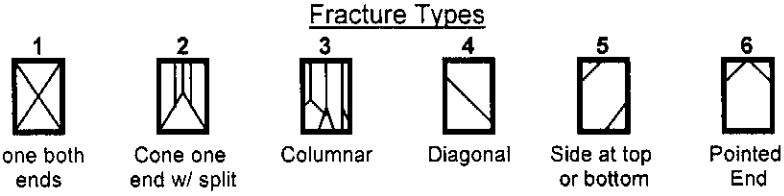
Batch 8:38

Arrive 9:08

Depart 9:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-11A		4.00	12.57	11/28/2012	Lab	**7**	4	55.4	**4410**
412-11B		4.00	12.57	12/19/2012	Lab	**28**	4	64.8	**5160**
412-11C		4.00	12.57	12/19/2012	Lab	**28**	4	63.8	**5080**
412-11D				Hold	Lab				
412-11E		4.00	12.57	11/28/2012	Field	**7**	4	51.8	**4120**

Fracture Types



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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/21/2012 **Time Cast:** 10:45 **Date Received:** 11/23/2012

Placement Location: UPPER ELEVATION WALLS N OF AA LINE

Placement Method: PUMP

Placement Vol. (yd³): 10

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZUTEC 20+

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3

Air Content (%) (C-231) **Air WR:** 6.5

Air Temp (°F): 38

Conc. Temp (°F) (C-1064): 72

Load Number: 1

Mixer Number: 99

Ticket Number 211928

Cubic Yards: 5

Design (psi): **3500**

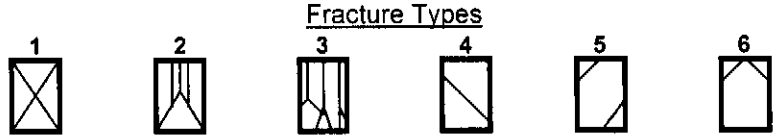
Batch 9:27

Arrive

Depart 10:55

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-12A		4.00	12.57	11/28/2012	Lab	**7**	4	50.0	**3980**
412-12B		4.00	12.57	12/19/2012	Lab	**28**	4	60.4	**4810**
412-12C		4.00	12.57	12/19/2012	Lab	**28**	4	57.6	**4580**
412-12D				Hold	Lab				
412-12E		4.00	12.57	11/28/2012	Field	**7**	4	50.8	**4040**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 12/14/2012 **Time Cast:** 10:42 **Date Received:** 12/15/2012

Placement Location: CAST IN PLACE STAIR TO FIRST LANDING

Placement Method: LINE PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 20

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3.5

Air Content (%) (C-231) **Air WR:** 2.8

Air Temp (°F): 42

Conc. Temp (°F) (C-1064): 69

Load Number: 1

Mixer Number: 118

Ticket Number 214015

Cubic Yards: 10

Design (psi): **3500**

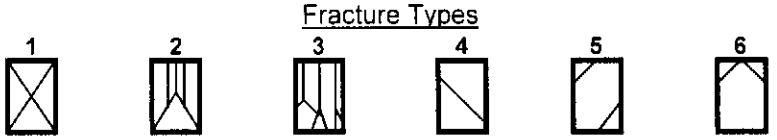
Batch 9:32

Arrive 9:56

Depart 11:16

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-13A		4.00	12.57	12/21/2012	Lab	**7**	4	45.8	**3650**
412-13B		4.00	12.57	1/11/2013	Lab	**28**	4	60.6	**4820**
412-13C		4.00	12.57	1/11/2013	Lab	**28**	3	61.6	**4900**
412-13D				Hold	Lab				
412-13E		4.00	12.57	12/21/2012	Field	**7**	4	45.7	**3640**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 1/9/2013 **Time Cast:** 9:07 **Date Received:** 1/10/2013

Placement Location: STAIRS, FLOOR SLABS + SLAB

Placement Method: PUMP

Placement Vol. (yd³): 92

Cylinders Made By: VAN TERRELL, JR.

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MRWR
2% POZZUTEC
1% POZZUTEC
NO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 1.9

Air Temp (°F): 28

Conc. Temp (°F) (C-1064): 61

Load Number: 3

Mixer Number: 96

Ticket Number 214281

Cubic Yards: 10

Design (psi): **3500**

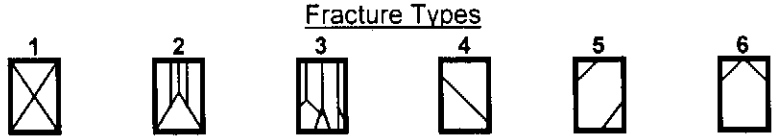
Batch 7:32

Arrive 8:09

Depart 9:01

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-14A	8.65	4.00	12.57	1/16/2013	Lab	**7**	4	45.4	**3610**
412-14B	8.65	4.00	12.57	2/6/2013	Lab	**28**	4	56.2	**4470**
412-14C	8.65	3.99	12.47	2/6/2013	Lab	**28**	4	59.6	**4780**
412-14D	8.65			Hold	Lab				
412-14E	8.65	4.00	12.57	1/16/2013	Field	**7**	4	56.6	**4510**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 1/9/2013 **Time Cast:** 10:10 **Date Received:** 1/10/2013

Placement Location: STAIRS, FLOOR SLABS + SLAB

Placement Method: PUMP

Placement Vol. (yd³): 92

Cylinders Made By: VAN TERRELL, JR.

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MRWR
2% POZZUTEC

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 1.8

Air Temp (°F): 32

Conc. Temp (°F) (C-1064): 54

Load Number: 6

Mixer Number: 78

Ticket Number 214286

Cubic Yards: 10

Design (psi): **3500**

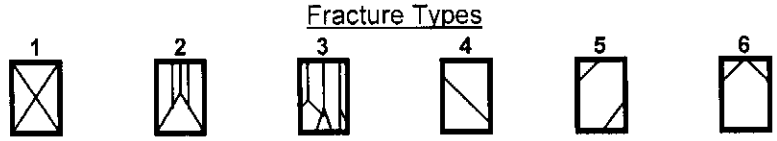
Batch 9:19

Arrive 9:47

Depart 10:08

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-15A	8.65	4.00	12.57	1/16/2013	Lab	**7**	4	54.6	**4350**
412-15B	8.65	4.02	12.66	2/6/2013	Lab	**28**	4	56.2	**4440**
412-15C	8.70	4.02	12.66	2/6/2013	Lab	**28**	4	58.8	**4650**
412-15D	8.70			Hold	Lab				
412-15E	8.70	4.00	12.57	1/16/2013	Field	**7**	4	46.0	**3660**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 1/16/2013 **Time Cast:** 2:17 **Date Received:** 1/17/2013

Placement Location: EXTERIOR PLANTER WALL CAP: NORTH OF AA FROM A1 TO A4

Placement Method: DIRECT DISCHARGE

Cylinders Made By: VAN TERRELL, JR.

Placement Vol. (yd³): 4.5

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MRWR
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 6.1

Air Temp (°F): 40

Conc. Temp (°F) (C-1064): 58

Load Number: 1

Mixer Number: 96

Ticket Number 214449

Cubic Yards: 4.5

Design (psi): **3500**

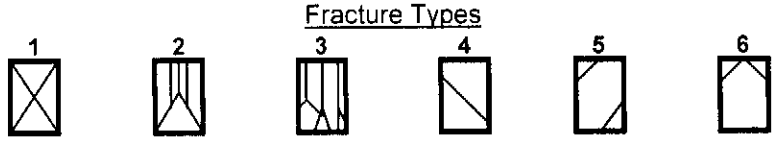
Batch 12:58

Arrive 1:30

Depart 2:25

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-16A	8.25	4.02	12.69	1/23/2013	Lab	**7**	4	44.4	**3500**
412-16B	8.20	4.03	12.76	2/13/2013	Lab	**28**	4	53.4	**4190**
412-16C	8.25	4.02	12.66	2/13/2013	Lab	**28**	4	52.0	**4110**
412-16D	8.20			Hold	Lab				
412-16E		4.05	12.88	1/23/2013	Field	**7**	4	37.3	**2900**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 1/18/2013 **Time Cast:**

Date Received: 1/21/2013

Placement Location: EXTERIOR SLAB ON GRADE

Placement Method: DIRECT DISCHARGE

Placement Vol. (yd³): 6.5

Cylinders Made By: VAN TERRELL, JR.

Aggregate Size (in): 3/8 BLEND

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MRWR W/ AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6.3

Air Temp (°F): 16

Conc. Temp (°F) (C-1064): 55

Load Number: 1

Mixer Number: 83

Ticket Number 214476

Cubic Yards: 6.5

Design (psi): **4500**

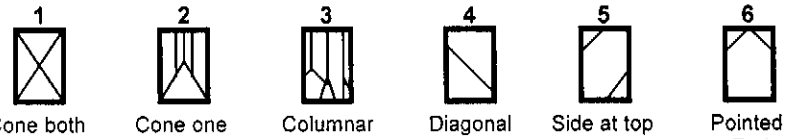
Batch 8:20

Arrive 9:00

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-17A	8.25	4.02	12.70	1/25/2013	Lab	**7**	4	42.6	**3360**
412-17B	8.25	4.01	12.60	2/15/2013	Lab	**28**	4	74.6	**5920**
412-17C	8.00	4.04	12.79	2/15/2013	Lab	**28**	3	71.8	**5620**
412-17D	8.20			Hold	Lab				
412-17E		3.98	12.47	1/25/2013	Field	**7**	4	33.4	**2680**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 5/24/2013 **Time Cast:** 7:35 **Date Received:** 5/28/2013

Placement Location: VOMITORY KNEE WALLS - BOWL AREA

Placement Method: BELL CONVEYOR

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 9

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 62 **Maximum (°F)** 76

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 2.7

Air Temp (°F): 58

Conc. Temp (°F) (C-1064): 66

Load Number: 1

Mixer Number: 136

Ticket Number 215730

Cubic Yards: 4

Design (psi): **3500**

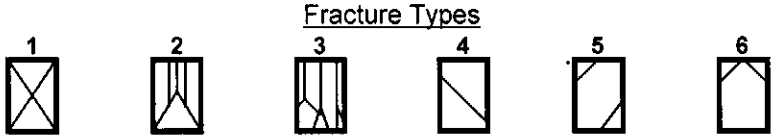
Batch 6:26

Arrive 7:00

Depart 7:55

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-18A	8.65	4.01	12.60	5/31/2013	Lab	**7**	4	45.0	**3570**
412-18B	8.65	4.02	12.71	6/21/2013	Lab	**28**	5	59.8	**4710**
412-18C	8.65	4.02	12.67	6/21/2013	Lab	**28**	3	58.2	**4600**
412-18D	8.65			Hold	Lab				
412-18E		4.00	12.57	6/4/2013	Field	**11**	4	50.0	**3980**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 6/3/2013 **Time Cast:** 8:25 **Date Received:** 6/4/2013

Placement Location: VOMITORY SLABS 3 E, 3 W, 1 S, 1 SW

Placement Method: POWER BUGGY + WHEEL BARREL

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 5.5

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 63 **Maximum (°F)** 86

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/4

Air Content (%) (C-231) **Air WR:** 2.1

Air Temp (°F): 65

Conc. Temp (°F) (C-1064): 78

Load Number: 1

Mixer Number: 118

Ticket Number 222098

Cubic Yards: 5.5

Design (psi): **3500**

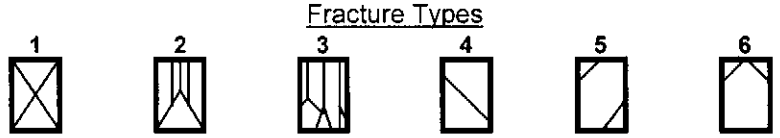
Batch 7:29

Arrive 8:02

Depart 8:44

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-19A	8.55	4.02	12.68	6/10/2013	Lab	**7**	4	41.0	**3240**
412-19B	8.55	4.02	12.68	7/1/2013	Lab	**28**	4	50.9	**4020**
412-19C	8.55	4.02	12.72	7/1/2013	Lab	**28**	4	54.0	**4250**
412-19D	8.55			Hold	Lab				

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 6/4/2013 **Time Cast:** 2:20 **Date Received:** 6/5/2013

Placement Location: MID + UPPER LEVEL COMPOSITE SLABS BETWEEN W + S PRESS BOX WALLS

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 20

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 63 **Maximum (°F)** 77

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 2.5

Air Temp (°F): 65

Conc. Temp (°F) (C-1064): 72

Load Number: 1

Mixer Number: 117

Ticket Number 222114

Cubic Yards: 10

Design (psi): **3500**

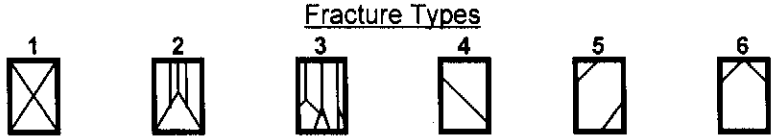
Batch 1:11

Arrive 1:50

Depart 2:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-20A	8.50	4.03	12.74	6/11/2013	Lab	**7**	3	41.6	**3270**
412-20B	8.50	4.03	12.73	7/2/2013	Lab	**28**	4	50.0	**3930**
412-20C	8.50	4.03	12.74	7/2/2013	Lab	**28**	3	52.2	**4100**
412-20D	8.50			Hold	Lab				

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 6/25/2013 **Time Cast:** 3:32 **Date Received:** 6/26/2013

Placement Location: QUAD B FOOTINGS: BA - BC X B1 - B2

Placement Method: CRANE / BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 25

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 73 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZOLITH 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 90

Conc. Temp (°F) (C-1064): 90

Load Number: 2

Mixer Number: 83

Ticket Number 216588

Cubic Yards: 8.5

Design (psi): **3500**

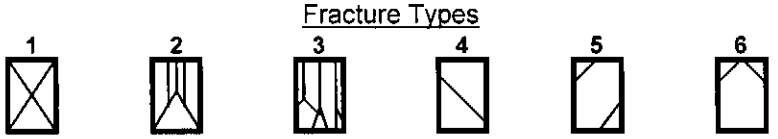
Batch 2:49

Arrive 3:15

Depart 3:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-21A	8.55	4.03	12.72	7/2/2013	Lab	**7**	3	56.8	**4470**
412-21B	8.55	4.02	12.67	7/23/2013	Lab	**28**	4	64.4	**5080**
412-21C	8.55	4.02	12.70	7/23/2013	Lab	**28**	4	68.5	**5390**
412-21D	8.55			8/20/2013	Lab	**56**			
412-21E		4.03	12.76	7/2/2013	Field	**7**	3	53.8	**4220**

Fracture Types



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Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 6/28/2013 **Time Cast:** 10:23 **Date Received:** 7/1/2013

Placement Location: QUAD B FOOTINGS: BC-CD X B1-B2

Placement Method: CRANE/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 21

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 59 **Maximum (°F)** 74

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4

Air Content (%) (C-231) **Air WR:** 5.3

Air Temp (°F): 57

Conc. Temp (°F) (C-1064): 74

Load Number: 1

Mixer Number: 97

Ticket Number 216664

Cubic Yards: 7.5

Design (psi): **3500**

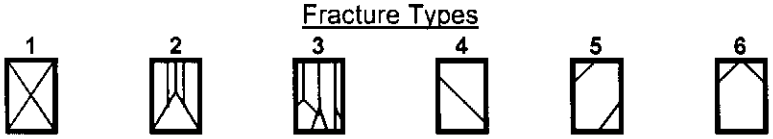
Batch 9:30

Arrive 10:00

Depart 10:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-22A	8.45	4.01	12.65	7/5/2013	Lab	**7**	3	54.2	**4290**
412-22B	8.45	4.03	12.77	7/26/2013	Lab	**28**	4	65.8	**5160**
412-22C	8.45	4.05	12.90	7/26/2013	Lab	**28**	4	66.4	**5150**
412-22D				Hold	Lab				
412-22E		4.01	12.66	7/5/2013	Field	**7**	5	53.2	**4200**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/2/2013 **Time Cast:** 2:23 **Date Received:** 7/3/2013

Placement Location: QUAD D: ELEVATOR BASE SLAB

Placement Method: TAILGATE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 14

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 68 **Maximum (°F)** 72

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
XYPEX C-500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3 3/4

Air Content (%) (C-231) **Air WR:** 4.2

Air Temp (°F): 61

Conc. Temp (°F) (C-1064): 77

Load Number: 1

Mixer Number: 118

Ticket Number 216457

Cubic Yards: 7

Design (psi): **3500**

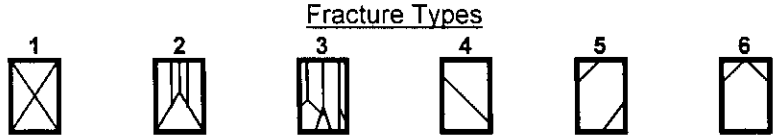
Batch 1:31

Arrive 2:05

Depart 2:36

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-23A	8.50	4.02	12.67	7/9/2013	Lab	**7**	4	48.2	**3800**
412-23B	8.50	4.02	12.70	7/30/2013	Lab	**28**	4	58.8	**4630**
412-23C	8.50	4.02	12.67	7/30/2013	Lab	**28**	4	58.8	**4640**
412-23D				Hold	Lab				
412-23E		4.02	12.71	7/9/2013	Field	**7**	4	55.2	**4340**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/9/2013 **Time Cast:** 3:30 **Date Received:** 7/10/2013

Placement Location: WALL: BW
LINE: B2 TO B1 (-10)

Placement Method: CRANE/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 13

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 65 **Maximum (°F)** 77

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5

Air Content (%) (C-231) **Air WR:** 5.3

Air Temp (°F): 69

Conc. Temp (°F) (C-1064): 81

Load Number: 1

Mixer Number: 83

Ticket Number 216536

Cubic Yards: 6.5

Design (psi): **3500**

Batch 2:28

Arrive 3:00

Depart 3:38

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-24A	8.50	4.02	12.70	7/16/2013	Lab	**7**	4	55.0	**4330**
412-24B	8.55	4.03	12.75	8/6/2013	Lab	**28**	4	67.0	**5260**
412-24C	8.65	4.01	12.65	8/6/2013	Lab	**28**	4	65.2	**5160**
412-24D	8.55			Hold	Lab				
412-24E		4.04	12.85	7/16/2013	Field	**7**	4	59.8	**4660**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/12/2013 **Time Cast:** 12:00 **Date Received:** 7/15/2013

Placement Location: WALL: BX-LINE

Placement Method: CRANE/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 33

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 82

Load Number: 2

Mixer Number: 117

Ticket Number 216370

Cubic Yards: 8.5

Design (psi): **3500**

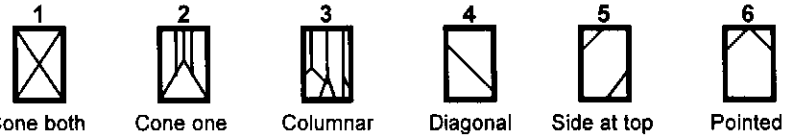
Batch 10:58

Arrive 11:42

Depart 12:08

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-25A	8.50	4.05	12.86	7/19/2013	Lab	**7**	4	52.2	**4060**
412-25B	8.50	4.01	12.63	8/9/2013	Lab	**28**	4	65.1	**5160**
412-25C	8.50	4.02	12.70	8/9/2013	Lab	**28**	4	62.4	**4910**
412-25D	8.50			Hold	Lab				
412-25E		4.04	12.80	7/19/2013	Field	**7**	4	49.0	**3830**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/15/2013 **Time Cast:** 3:45 **Date Received:** 7/16/2013

Placement Location: QUAD D: ELEVATOR WALLS TO ELEV 75' 11"

Placement Method: CRANE BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 21

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 79 **Maximum (°F)** 87

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6.5

Air Temp (°F): 90

Conc. Temp (°F) (C-1064): 89

Load Number: 3

Mixer Number: 118

Ticket Number 217617

Cubic Yards: 6.5

Design (psi): **3500**

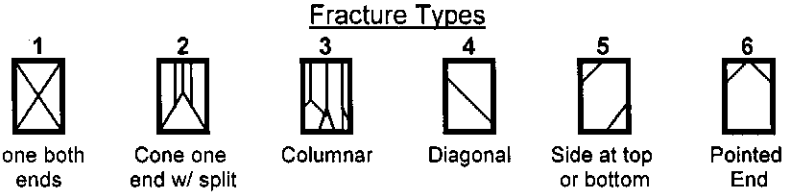
Batch 3:04

Arrive 3:35

Depart 3:55

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-26A		4.05	12.89	7/22/2013	Lab	**7**	4	55.2	**4280**
412-26B				8/12/2013	Lab	**28**			
412-26C				8/12/2013	Lab	**28**			
412-26D				Hold	Lab				
412-26E		4.01	12.63	7/22/2013	Field	**7**	4	54.0	**4280**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/17/2013 **Time Cast:** 2:05 **Date Received:** 7/18/2013

Placement Location: QUAD C ELEVATOR BASE SLAB

Placement Method: CRANE BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 15

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 74 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZOLITH 100XR
GLENIUM 7500
XYPEX

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4.5

Air Content (%) (C-231) **Air WR:** 5.2

Air Temp (°F): 86

Conc. Temp (°F) (C-1064): 89

Load Number: 1

Mixer Number: 97

Ticket Number 217665

Cubic Yards: 8

Design (psi): **3500**

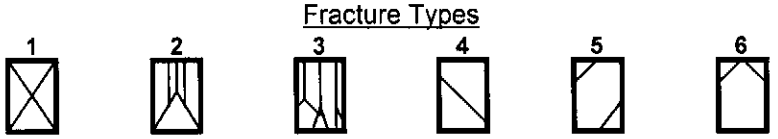
Batch 12:52

Arrive 1:33

Depart 2:15

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-27A	8.45	4.03	12.78	7/24/2013	Lab	**7**	4	56.6	**4430**
412-27B	8.40			8/14/2013	Lab	**28**			
412-27C	8.50			8/14/2013	Lab	**28**			
412-27D	8.50			Hold	Lab				
412-27E		4.04	12.81	7/24/2013	Field	**7**	4	50.4	**3930**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/18/2013 **Time Cast:** 12:05 **Date Received:** 7/19/2013

Placement Location: QUAD B: WALL AT BACK OF LOADING DOCK 16' E OF BX LINE 10' W OF CD/C2 + 5' STUB ON BZ LINE

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 17.5

Cylinders Made By: ANDREW MYERS

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 76 **Maximum (°F)** 85

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZ 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6.5

Air Temp (°F): 85

Conc. Temp (°F) (C-1064): 85

Load Number: 1

Mixer Number: 83

Ticket Number 217706

Cubic Yards: 8.75

Design (psi): **3500**

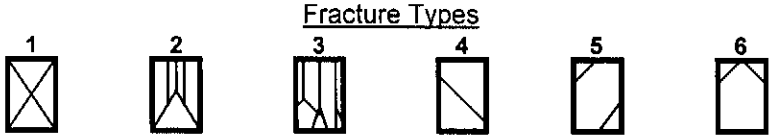
Batch 10:56

Arrive 11:23

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-28A	8.30	4.03	12.76	7/25/2013	Lab	**7**	4	41.6	**3260**
412-28B	8.30			8/15/2013	Lab	**28**			
412-28C	8.30			8/15/2013	Lab	**28**			
412-28D	8.35			Hold	Lab				
412-28E		4.04	12.83	7/25/2013	Field	**7**	4	45.0	**3510**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/19/2013 **Time Cast:** 7:00 **Date Received:** 7/22/2013

Placement Location: QUAD C MECH LEVEL AND QUAD C EVENT LEVEL SLAB INFILLS

Placement Method: PUMP

Cylinders Made By: ANDREW MYERS

Placement Vol. (yd³): 40

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 70 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: POZZ 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 2.7

Air Temp (°F): 73

Conc. Temp (°F) (C-1064): 80

Load Number: 2

Mixer Number: 86

Ticket Number 217769

Cubic Yards: 10

Design (psi): **3500**

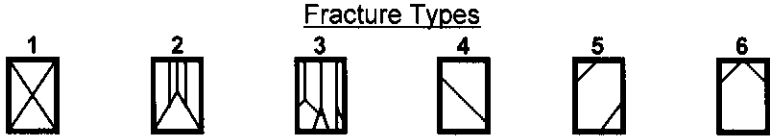
Batch 5:51

Arrive 6:24

Depart 7:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-29A	8.55	4.04	12.81	7/26/2013	Lab	**7**	4	45.0	**3510**
412-29B	8.55	4.02	12.69	8/16/2013	Lab	**28**	5	57.9	**4560**
412-29C	8.55	4.01	12.65	8/16/2013	Lab	**28**	4	56.7	**4480**
412-29D	8.65			Hold	Lab				
412-29E		4.03	12.73	7/26/2013	Field	**7**	4	50.0	**3930**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/19/2013 **Time Cast:** 2:25 **Date Received:** 7/23/2013

Placement Location: QUAD B WALL: BACK OF LOADING DOCK 10' WEST OF CD/C2 TO CD/C2 TO 20' N OF CD/C2

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 17

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 70 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR
ICE

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.4

Air Temp (°F): 93

Conc. Temp (°F) (C-1064): 84

Load Number: 1

Mixer Number: 98

Ticket Number 217796

Cubic Yards: 7

Design (psi): **3500**

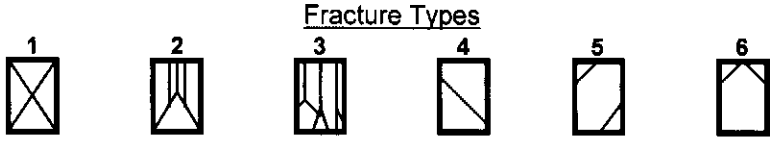
Batch 1:47

Arrive 2:15

Depart 2:32

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-30A	8.35	4.04	12.81	7/26/2013	Lab	**7**	4	47.8	**3730**
412-30B	8.40	4.02	12.70	8/16/2013	Lab	**28**	4	59.7	**4700**
412-30C	8.40	4.04	12.83	8/16/2013	Lab	**28**	5	52.5	**4090**
412-30D	8.40			Hold	Lab				
412-30E		4.11	13.28	7/26/2013	Field	**7**	4	43.0	**3240**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/22/2013 **Time Cast:** 7:45 **Date Received:** 7/23/2013

Placement Location: CONCESSION CONCOURSE AREA SLAB INFILL

Placement Method: BUGGIE

Cylinders Made By: ANDREW MYERS

Placement Vol. (yd³): 25

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 71 **Maximum (°F)** 87

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 2.2

Air Temp (°F): 70

Conc. Temp (°F) (C-1064): 78

Load Number: 1

Mixer Number: 84

Ticket Number 217801

Cubic Yards: 10

Design (psi): **3500**

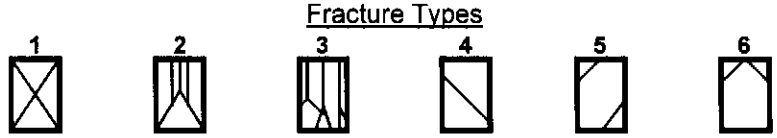
Batch 6:31

Arrive 7:05

Depart 8:05

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-31A	8.65	4.00	12.58	7/29/2013	Lab	**7**	4	42.0	**3340**
412-31B	8.70	4.03	12.77	8/19/2013	Lab	**28**	4	54.6	**4280**
412-31C	8.70	4.03	12.73	8/19/2013	Lab	**28**	4	51.4	**4040**
412-31D	8.65			Hold	Lab				
412-31E		4.03	12.73	7/29/2013	Field	**7**	4	39.8	**3130**

Fracture Types



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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/22/2013 **Time Cast:** 11:40 **Date Received:** 7/23/2013

Placement Location: QUAD D ELEVATOR SHAFT WALLS UP TO MID SUITE FLOOR

Placement Method: CRANE/BUCKET

Cylinders Made By: ANDREW MYERS

Placement Vol. (yd³): 21

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 71 **Maximum (°F)** 87

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZ 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.75

Air Content (%) (C-231) **Air WR:** 6.7

Air Temp (°F): 73

Conc. Temp (°F) (C-1064): 82

Load Number: 1

Mixer Number: 83

Ticket Number 217817

Cubic Yards: 7

Design (psi): **3500**

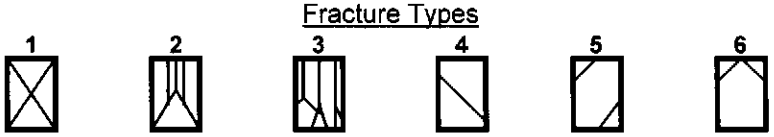
Batch 10:28

Arrive 11:09

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-32A	8.40	4.04	12.80	7/29/2013	Lab	**7**	4	45.4	**3550**
412-32B	8.50	4.03	12.78	8/19/2013	Lab	**28**	4	57.8	**4520**
412-32C	8.50	4.03	12.77	8/19/2013	Lab	**28**	4	56.2	**4400**
412-32D	8.40			Hold	Lab				
412-32E		4.02	12.69	7/29/2013	Field	**7**	4	47.2	**3720**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/25/2013 **Time Cast:** 3:45 **Date Received:** 7/26/2013

Placement Location: 8" + 16" WALL SECTIONS OFF ETR @ BW/B1 (PROPANE STORAGE AREA) INCLUDING PLANTER WALLS

Placement Method: CRANE + BUCKET

Placement Vol. (yd³): 8

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZOLITH 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.4

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 84

Load Number: 1

Mixer Number: 96

Ticket Number 218041

Cubic Yards: 8

Design (psi): **3500**

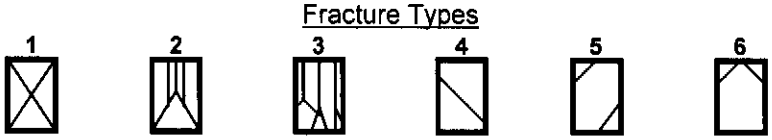
Batch 2:23

Arrive 2:56

Depart 4:00

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-33A	8.50	4.01	12.60	8/1/2013	Lab	**7**	4	49.6	**3940**
412-33B	8.50	4.05	12.91	8/22/2013	Lab	**28**	4	62.8	**4870**
412-33C	8.50	4.05	12.86	8/22/2013	Lab	**28**	4	59.2	**4610**
412-33D	8.50			Hold	Lab				
412-33E		4.02	12.70	8/1/2013	Field	**7**	4	52.0	**4090**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/27/2013 **Time Cast:** 7:25 **Date Received:** 7/29/2013

Placement Location: QUAD D ELEVATOR WALLS TO ELEV 101' 1.5"

Placement Method: CRANE & BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 21

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 66 **Maximum (°F)** 75

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6.0

Air Temp (°F): 69

Conc. Temp (°F) (C-1064): 77

Load Number: 1

Mixer Number: 98

Ticket Number 218060

Cubic Yards: 10.5

Design (psi): **3500**

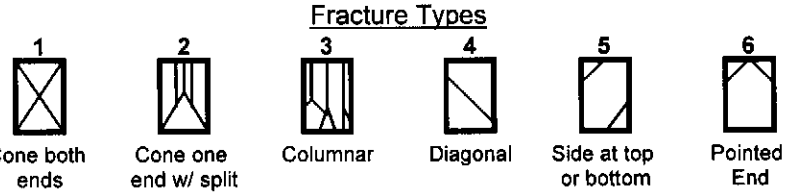
Batch 6:30

Arrive 7:00

Depart 7:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-34A	8.35	4.03	12.74	8/3/2013	Lab	**7**	4	51.4	**4040**
412-34B	8.35	4.03	12.72	8/24/2013	Lab	**28**	4	56.3	**4430**
412-34C	8.35	4.03	12.76	8/24/2013	Lab	**28**	4	57.8	**4530**
412-34D	8.35			Hold	Lab				
412-34E		4.05	12.85	8/3/2013	Field	**7**	4	51.0	**3970**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/27/2013 **Time Cast:** 8:01 **Date Received:** 7/29/2013

Placement Location: QUAD C ELEVATOR WALLS TO ELEV 63' 10"

Placement Method: CRANE & BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 26

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.1

Air Temp (°F): 69

Conc. Temp (°F) (C-1064): 77

Load Number: 2

Mixer Number: 83

Ticket Number 218061

Cubic Yards: 9

Design (psi): **3500**

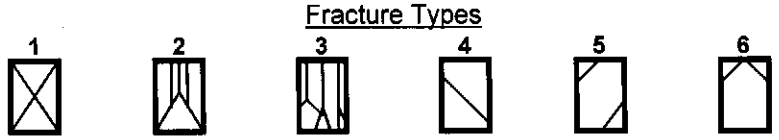
Batch 7:04

Arrive 7:30

Depart 8:25

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-35A	8.30	4.01	12.65	8/3/2013	Lab	**7**	4	51.0	**4030**
412-35B	8.30	4.02	12.66	8/24/2013	Lab	**28**	4	55.8	**4410**
412-35C	8.30	4.01	12.63	8/24/2013	Lab	**28**	4	57.3	**4540**
412-35D	8.30			Hold	Lab				
412-35E		4.01	12.61	8/3/2013	Field	**7**	4	47.6	**3780**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/30/2013 **Time Cast:** 4:48 **Date Received:** 7/31/2013

Placement Location: QUAD C MECHANICAL LEVEL FOOTINGS CA/CS TO CA/C2.8 INCLUDING ESCALATOR AND CC/C1 TO CB/C1 AND CD(-4') LINE, C2.3 LINE, CB.8(-8') LINE

Placement Method: CRANE BUCKET

Placement Vol. (yd³): 35

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 72 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/4

Air Content (%) (C-231) **Air WR:** 5.6

Air Temp (°F): 81

Conc. Temp (°F) (C-1064): 82

Load Number: 2

Mixer Number: 98

Ticket Number 218133

Cubic Yards: 8.75

Design (psi): **3500**

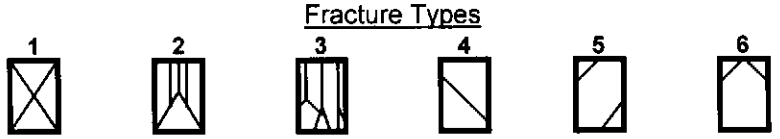
Batch 4:03

Arrive 4:30

Depart 5:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-36A	8.35	4.04	12.80	8/6/2013	Lab	**7**	4	46.6	**3640**
412-36B	8.35	4.02	12.66	8/27/2013	Lab	**28**	4	57.9	**4570**
412-36C	8.35	4.02	12.66	8/27/2013	Lab	**28**	4	52.8	**4170**
412-36D	8.35			Hold	Lab				
412-36E		4.04	12.79	8/6/2013	Field	**7**	4	43.8	**3420**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 7/31/2013 **Time Cast:** 4:08 **Date Received:** 8/2/2013

Placement Location: BZ LINE QUAD B WALL

Placement Method: CRANE & BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 16

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 71 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 1/4

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 76

Conc. Temp (°F) (C-1064): 82

Load Number: 1

Mixer Number: 98

Ticket Number 218183

Cubic Yards: 9

Design (psi): **3500**

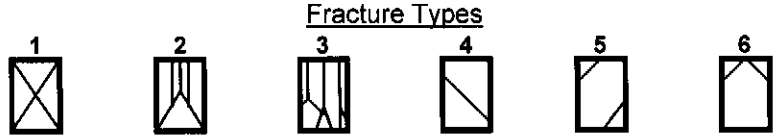
Batch 3:28

Arrive 4:00

Depart 4:25

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-37A	8.40	4.02	12.72	8/7/2013	Lab	**7**	4	50.3	**3960**
412-37B	8.40	4.01	12.61	8/28/2013	Lab	**28**	4	57.4	**4550**
412-37C	8.40	4.05	12.87	8/28/2013	Lab	**28**	4	58.2	**4520**
412-37D	8.40			Hold	Lab				
412-37E		4.02	12.72	8/7/2013	Field	**7**	4	50.7	**3990**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/2/2013 **Time Cast:** 9:18 **Date Received:** 8/5/2013

Placement Location: OLD TICKET BOOTH AREA SLAB INFILL QUAD D

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 45

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 74 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 2.2

Air Temp (°F): 66

Conc. Temp (°F) (C-1064): 78

Load Number: 2

Mixer Number: 107

Ticket Number 218245

Cubic Yards: 10

Design (psi): **3500**

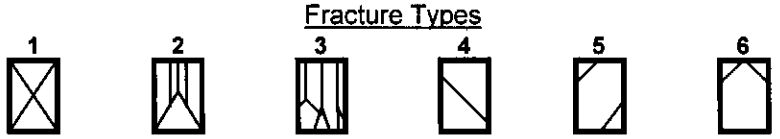
Batch 7:55

Arrive 8:50

Depart 9:28

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-38A	8.70	4.03	12.74	8/9/2013	Lab	**7**	4	55.9	**4390**
412-38B	8.75	4.01	12.63	8/30/2013	Lab	**28**	4	64.2	**5080**
412-38C	8.75	4.00	12.53	8/30/2013	Lab	**28**	4	64.2	**5120**
412-38D	8.70			Hold	Lab				
412-38E		4.02	12.70	8/9/2013	Field	**7**	4	50.9	**4010**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/2/2013 **Time Cast:** 12:18 **Date Received:** 8/5/2013

Placement Location: QUAD D ELEVATOR SHAFT TO ELEV 115 6 1/4

Placement Method: CRANE & BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 23

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 74 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 6.0

Air Temp (°F): 69

Conc. Temp (°F) (C-1064): 79

Load Number: 1

Mixer Number: 86

Ticket Number 238856

Cubic Yards: 7

Design (psi): **3500**

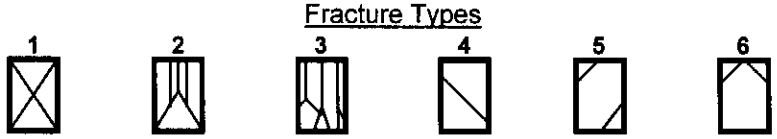
Batch 11:16

Arrive 11:48

Depart 12:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-39A	8.50	4.02	12.71	8/9/2013	Lab	**7**	4	55.2	**4340**
412-39B	8.50	4.02	12.66	8/30/2013	Lab	**28**	4	64.0	**5060**
412-39C	8.50	4.04	12.79	8/30/2013	Lab	**28**	4	64.3	**5030**
412-39D	8.50			Hold	Lab				
412-39E		4.01	12.63	8/9/2013	Field	**7**	4	55.8	**4420**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/5/2013 **Time Cast:** 12:50 **Date Received:** 8/6/2013

Placement Location: QUAD C ELEVATOR WALL TO ELEV 80 AND PIER BY/CE
PIER FOOTINGS: CB/C2.8, CB/C1.8 AND CC/C3

Placement Method: CRANE & BUCKET

Placement Vol. (yd³): 34.5

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 71 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.4

Air Temp (°F): 71

Conc. Temp (°F) (C-1064): 78

Load Number: 2

Mixer Number: 118

Ticket Number 238905

Cubic Yards: 8

Design (psi): **3500**

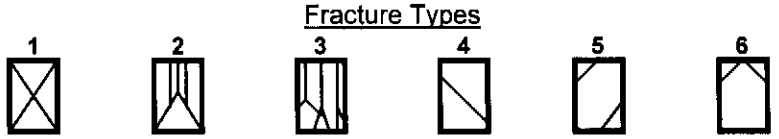
Batch 11:24

Arrive 12:40

Depart 1:08

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-40A		4.03	12.73	8/12/2013	Lab	**7**	4	49.2	**3870**
412-40B		4.00	12.56	9/2/2013	Lab	**28**	4	58.2	**4630**
412-40C		4.01	12.64	9/2/2013	Lab	**28**	4	59.2	**4680**
412-40D				Hold	Lab				
412-40E		4.05	12.90	8/12/2013	Field	**7**	5	48.4	**3750**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/7/2013 **Time Cast:** 11:45 **Date Received:** 8/8/2013

Placement Location: CMP VAULT BASE SLAB

Placement Method: CRANE BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 24

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 68 **Maximum (°F)** 75

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZOLITH 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/4

Air Content (%) (C-231) **Air WR:** 5.7

Air Temp (°F): 74

Conc. Temp (°F) (C-1064): 81

Load Number: 2

Mixer Number: 84

Ticket Number 238979

Cubic Yards: 8

Design (psi): **4000**

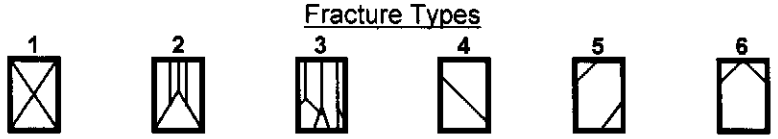
Batch 10:35

Arrive 11:28

Depart 11:52

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-41A		4.02	12.68	8/14/2013	Lab	**7**	4	59.6	**4700**
412-41B		4.01	12.60	9/4/2013	Lab	**28**	4	64.8	**5140**
412-41C		4.04	12.79	9/4/2013	Lab	**28**	4	68.2	**5330**
412-41D				Hold	Lab				
412-41E		4.03	12.77	8/14/2013	Field	**7**	4	54.6	**4280**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: SPAULDING TO RECEIVE REPORT

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/7/2013 **Time Cast:** 2:35 **Date Received:** 8/8/2013

Placement Location: QUAD C WALL: CS.3 TO C3.6 ON CA LINE

Placement Method: CRANE BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 31.5

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 72 **Maximum (°F)** 75

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 5.2

Air Temp (°F): 75

Conc. Temp (°F) (C-1064): 82

Load Number: 4

Mixer Number: 116

Ticket Number 238990

Cubic Yards: 8.25

Design (psi): **3500**

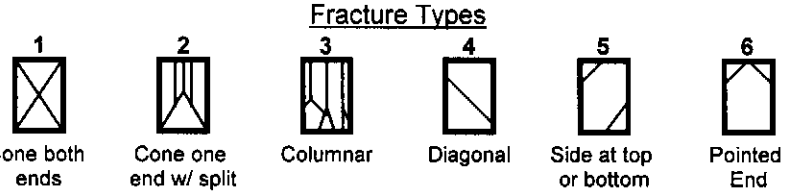
Batch 1:36

Arrive 2:12

Depart 2:55

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-42A		4.03	12.75	8/14/2013	Lab	**7**	4	59.4	**4660**
412-42B		4.00	12.53	9/4/2013	Lab	**28**	4	68.3	**5450**
412-42C		4.00	12.53	9/4/2013	Lab	**28**	4	64.2	**5120**
412-42D				Hold	Lab				
412-42E		4.06	12.96	8/14/2013	Field	**7**	4	58.8	**4540**

Fracture Types



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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/8/2013 **Time Cast:** 1:15 **Date Received:** 8/9/2013

Placement Location: QUAD C: ESCALATOR BASE SLAB QUAD C: WALL CD LINE (-4')
QUAD C: PIERS C1.8/CB PIERS C2.8/CB

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 39

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 74 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 6.0

Air Temp (°F): 75

Conc. Temp (°F) (C-1064): 82

Load Number: 3

Mixer Number: 84

Ticket Number 239011

Cubic Yards: 8

Design (psi): **3500**

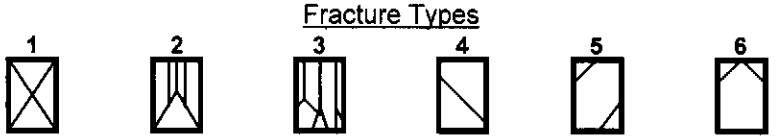
Batch 11:55

Arrive 1:00

Depart 1:32

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-43A	8.35	4.02	12.70	8/15/2013	Lab	**7**	4	50.2	**3950**
412-43B	8.35	4.02	12.69	9/5/2013	Lab	**28**	4	58.2	**4590**
412-43C	8.35	4.01	12.61	9/5/2013	Lab	**28**	4	61.6	**4880**
412-43D	8.35			Hold	Lab				
412-43E		4.03	12.78	8/15/2013	Field	**7**	4	48.0	**3760**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/14/2013 **Time Cast:** 10:40 **Date Received:** 8/15/2013

Placement Location: QUAD D: INT STRIP FOOTINGS QUAD D: CA LINE C3.6 - C2.3 INCLUDING ESCALATOR WALLS AND HIGH WALL TO ELEVATOR (CONT. SEE REMARKS BELOW)

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 77.5

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 68 **Maximum (°F)** 72

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/4

Air Content (%) (C-231) **Air WR:** 5.7

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 80

Load Number: 2

Mixer Number: 86

Ticket Number 239109

Cubic Yards: 7.5

Design (psi): **3500**

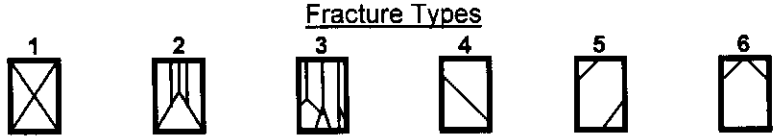
Batch 9:19

Arrive 10:25

Depart 11:10

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-44A	8.45	4.03	12.78	8/21/2013	Lab	**7**	4	51.6	**4040**
412-44B	8.45	3.99	12.47	9/11/2013	Lab	**28**	4	61.6	**4940**
412-44C	8.45	4.02	12.69	9/11/2013	Lab	**28**	4	60.7	**4780**
412-44D	8.45			Hold	Lab				
412-44E		4.03	12.77	8/21/2013	Field	**7**	4	53.4	**4180**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: QUAD B: 4 HIGH COLUMN 5 QUAD C: ELEVATOR WALLS TO 94' 11"

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/14/2013 **Time Cast:** 1:25 **Date Received:** 8/15/2013

Placement Location: QUAD D: INT STRIP FOOTINGS QUAD D: CA LINE C3.6 - C2.3 INCLUDING ESCALATOR WALLS AND HIGH WALL TO ELEVATOR (CONT. SEE REMARKS BELOW)

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 77.5

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 68 **Maximum (°F)** 72

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 5.7

Air Temp (°F): 80

Conc. Temp (°F) (C-1064): 79

Load Number: 4

Mixer Number: 96

Ticket Number 23931

Cubic Yards: 9

Design (psi): **3500**

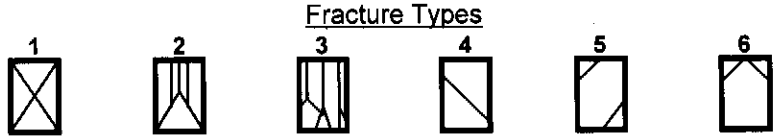
Batch 12:22

Arrive 12:55

Depart 1:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-45A	8.45	4.02	12.70	8/21/2013	Lab	**7**	4	54.2	**4270**
412-45B	8.45	4.05	12.85	9/11/2013	Lab	**28**	4	63.0	**4900**
412-45C	8.45	4.01	12.60	9/11/2013	Lab	**28**	4	62.2	**4940**
412-45D	8.45			Hold	Lab				
412-45E		4.03	12.77	8/21/2013	Field	**7**	4	54.8	**4290**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: QUAD B: 4 HIGH COLUMN 5 QUAD C: ELEVATOR WALLS TO 94' 11"

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/15/2013 **Time Cast:** 2:31 **Date Received:** 8/16/2013

Placement Location: CMP VAULT WALLS

Placement Method: CRANE/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 55

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 72 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100 XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231) **Air WR:** 6.2

Air Temp (°F): 78

Conc. Temp (°F) (C-1064): 79

Load Number: 2

Mixer Number: 97

Ticket Number 239173

Cubic Yards: 9.25

Design (psi): **4000**

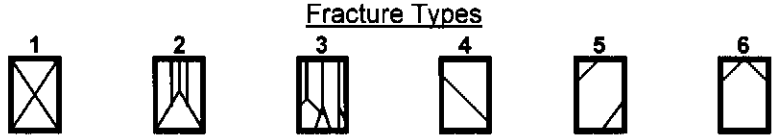
Batch 1:38

Arrive 2:12

Depart 2:48

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-46A	8.40	4.04	12.80	8/22/2013	Lab	**7**	4	50.4	**3940**
412-46B	8.40	4.02	12.66	9/12/2013	Lab	**28**	4	59.4	**4690**
412-46C	8.40	4.02	12.66	9/12/2013	Lab	**28**	4	61.9	**4890**
412-46D	8.40			Hold	Lab				
412-46E		4.03	12.74	8/22/2013	Field	**7**	4	50.8	**3990**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/15/2013 **Time Cast:** 3:45 **Date Received:** 8/16/2013

Placement Location: CMP VAULT WALLS

Placement Method: CRANE/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 55

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 72 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR
POZZOLITH 100 XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 1/2

Air Content (%) (C-231) **Air WR:** 6.1

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 81

Load Number: 4

Mixer Number: 96

Ticket Number 239178

Cubic Yards: 9.25

Design (psi): **4000**

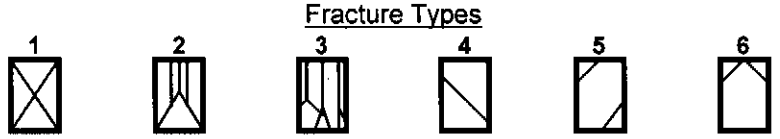
Batch 2:56

Arrive 3:30

Depart 4:00

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-47A	8.40	4.02	12.70	8/22/2013	Lab	**7**	4	51.4	**4050**
412-47B	8.40	4.02	12.66	9/12/2013	Lab	**28**	4	61.4	**4850**
412-47C	8.40	4.02	12.69	9/12/2013	Lab	**28**	3	60.0	**4730**
412-47D	8.40			Hold	Lab				
412-47E		4.02	12.71	8/22/2013	Field	**7**	4	57.6	**4530**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/16/2013 **Time Cast:** 2:15 **Date Received:** 8/19/2013

Placement Location: QUAD C 5TH LEVEL EVENT LEVEL ENTRY WALL B/T X10 8XB
QUAD C MECH LEVEL, INT WALL ON C2.3 & CC LINE MINUS 8'

Placement Method: PUMP

Placement Vol. (yd³): 44

Cylinders Made By: ANDREW MYERS

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZ 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 6.3

Air Temp (°F): 78

Conc. Temp (°F) (C-1064): 82

Load Number: 2

Mixer Number: 118

Ticket Number 239221

Cubic Yards: 9

Design (psi): **3500**

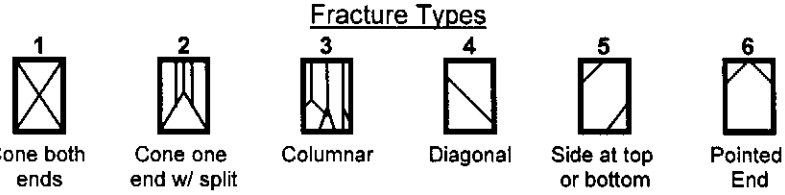
Batch 12:50

Arrive 1:23

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-48A	8.35	4.00	12.57	8/23/2013	Lab	**7**	4	49.6	**3950**
412-48B	8.35	4.04	12.81	9/13/2013	Lab	**28**	4	56.4	**4410**
412-48C	8.35	4.03	12.74	9/13/2013	Lab	**28**	4	56.6	**4440**
412-48D	8.35			Hold	Lab				
412-48E		4.04	12.84	8/23/2013	Lab	**7**	4	39.6	**3090**

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/20/2013 **Time Cast:** 3:55 **Date Received:** 8/21/2013

Placement Location: QUAD B FOOTING: CD-CE ON C1 QUAD C WALL: CB.2-CB.8 ON C1
QUAD C WALL: C2-C2.3 ON CA

Placement Method: CRANE/BUCKET

Placement Vol. (yd³): 24

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 73 **Maximum (°F)** 78

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 83

Conc. Temp (°F) (C-1064): 83

Load Number: 1

Mixer Number: 83

Ticket Number 239286

Cubic Yards: 8

Design (psi): **3500**

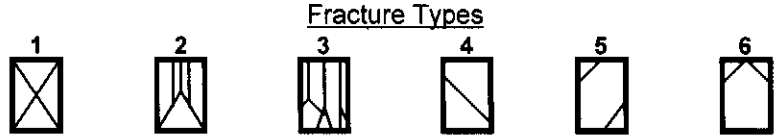
Batch 3:10

Arrive 3:40

Depart 4:05

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-49A	8.40	4.03	12.76	8/27/2013	Lab	**7**	4	46.9	**3680**
412-49B	8.40	4.03	12.76	9/17/2013	Lab	**28**	4	52.2	**4090**
412-49C	8.40	4.03	12.74	9/17/2013	Lab	**28**	4	52.2	**4100**
412-49D				Hold	Lab				
412-49E		4.03	12.72	8/27/2013	Field	**7**	4	48.1	**3780**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/22/2013 **Time Cast:** 4:00 **Date Received:** 8/23/2013

Placement Location: QUAD D: INTERIOR LOAD BEARING MASONRY WALLS
QUAD C PIERS: CB/CS, CB/CG AND CB.8/CS.3

Placement Method: BELT (QUAD D) BUGGY (QUAD C)

Placement Vol. (yd³): 6

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231) **Air WR:** 5.8

Air Temp (°F): 87

Conc. Temp (°F) (C-1064): 85

Load Number: 1

Mixer Number: 86

Ticket Number 239353

Cubic Yards: 6

Design (psi): **3500**

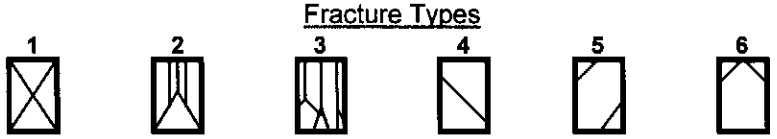
Batch 2:58

Arrive 3:28

Depart 4:05

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-50A	8.45	4.03	12.75	8/29/2013	Lab	**7**	4	49.5	**3880**
412-50B	8.45			9/19/2013	Lab	**28**			
412-50C	8.45			9/19/2013	Lab	**28**			
412-50D	8.45			Hold	Lab				
412-50E		4.03	12.76	8/29/2013	Field	**7**	4	55.5	**4350**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/23/2013 **Time Cast:** 6:32

Date Received: 8/26/2013

Placement Location: QUAD B WALLS
CD TO CE ON C1 LINE

Placement Method: BELT & CRANE/BUCKET

Placement Vol. (yd³): 45

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 68 **Maximum (°F)** 85

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 4.7

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 82

Load Number: 3

Mixer Number: 97

Ticket Number 239386

Cubic Yards: 9

Design (psi): **3500**

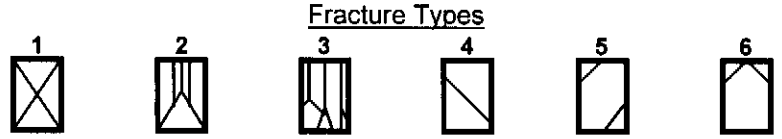
Batch 5:25

Arrive 6:19

Depart 6:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-51A	8.45	3.99	12.50	8/30/2013	Lab	**7**	4	53.4	**4270**
412-51B	8.45	4.01	12.64	9/20/2013	Lab	**28**	4	65.1	**5150**
412-51C	8.45	4.04	12.79	9/20/2013	Lab	**28**	4	64.6	**5050**
412-51D	8.45			Hold	Lab				
412-51E		4.02	12.69	8/30/2013	Field	**7**	4	58.4	**4600**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/26/2013 **Time Cast:** 1:35 **Date Received:** 8/27/2013

Placement Location: QUAD B PIER CE/C4

Placement Method: TAILGATE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 3

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 78 **Maximum (°F)** 84

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231)

Air Temp (°F): 81

Conc. Temp (°F) (C-1064): 86

Load Number: 1

Mixer Number: 86

Ticket Number 239406

Cubic Yards: 3

Design (psi): **3500**

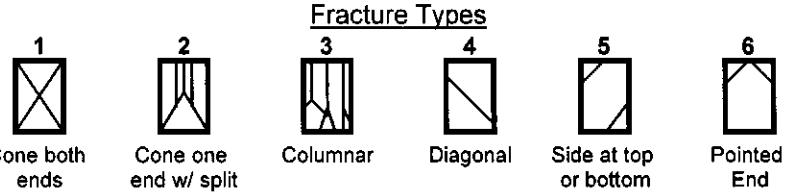
Batch 12:23

Arrive 1:00

Depart 1:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-52A	8.45	4.03	12.76	9/2/2013	Lab	**7**	4	50.2	**3940**
412-52B	8.45	4.03	12.76	9/23/2013	Lab	**28**	4	59.2	**4640**
412-52C	8.45	4.03	12.74	9/23/2013	Lab	**28**	4	58.2	**4570**
412-52D	8.45			Hold	Lab				
412-52E		4.03	12.75	9/2/2013	Field	**7**	4	47.0	**3690**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/28/2013 **Time Cast:** 10:40 **Date Received:** 8/29/2013

Placement Location: QUAD C PIER CA/C6

Placement Method: BUGGY

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 6

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 73 **Maximum (°F)** 79

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 5.8

Air Temp (°F): 73

Conc. Temp (°F) (C-1064): 81

Load Number: 1

Mixer Number: 86

Ticket Number 239461

Cubic Yards: 6

Design (psi): **3500**

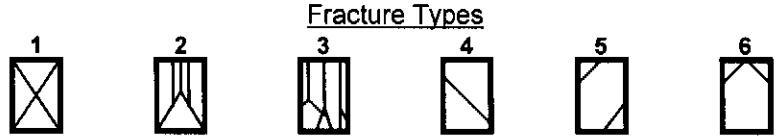
Batch 9:42

Arrive 10:15

Depart 11:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-53A	8.45	4.02	12.69	9/4/2013	Lab	**7**	3	53.2	**4190**
412-53B	8.45	4.02	12.71	9/25/2013	Lab	**28**	4	61.8	**4860**
412-53C	8.45	4.02	12.72	9/25/2013	Lab	**28**	4	63.6	**5000**
412-53D				10/23/2013	Lab	**56**			
412-53E		4.03	12.76	9/4/2013	Field	**7**	4	50.0	**3920**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/30/2013 **Time Cast:** 8:00 **Date Received:** 9/3/2013

Placement Location: QUAD C: MECHANICAL SPACE SLAB ON GRADE

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 44

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 72 **Maximum (°F)** 78

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4

Air Content (%) (C-231) **Air WR:** 2.4

Air Temp (°F): 64

Conc. Temp (°F) (C-1064): 75

Load Number: 4

Mixer Number: 136

Ticket Number 217996

Cubic Yards: 11

Design (psi): **3500**

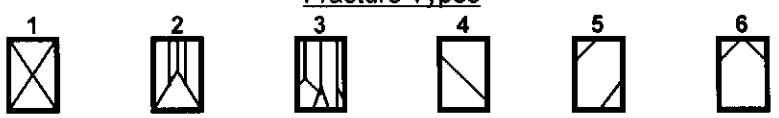
Batch 7:12

Arrive 7:40

Depart 8:10

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-54A	8.75	4.05	12.86	9/6/2013	Lab	**7**	3	56.3	**4380**
412-54B	8.70	3.99	12.50	9/27/2013	Lab	**28**	4	65.9	**5270**
412-54C	8.70	3.99	12.50	9/27/2013	Lab	**28**	4	66.8	**5340**
412-54D	8.75			Hold	Lab				
412-54E		4.02	12.71	9/6/2013	Field	**7**	4	51.4	**4050**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 8/30/2013 **Time Cast:** 11:45 **Date Received:** 9/3/2013

Placement Location: QUAD C: EXTERIOR ENTRY WALLS (NE CORNER)

Placement Method: TAILGATE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 10

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 73 **Maximum (°F)** 78.5

DELIVERY INFORMATION

Admixtures: POZZ 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 3.5

Air Content (%) (C-231) **Air WR:** 4.5

Air Temp (°F): 77

Conc. Temp (°F) (C-1064): 80

Load Number: 1

Mixer Number: 86

Ticket Number 236310

Cubic Yards: 10

Design (psi): **3500**

Batch 11:06

Arrive 11:35

Depart 12:05

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-55A	8.55	4.02	12.72	9/6/2013	Lab	**7**	3	53.4	**4200**
412-55B	8.55	4.00	12.57	9/27/2013	Lab	**28**	4	66.4	**5280**
412-55C	8.50	4.03	12.72	9/27/2013	Lab	**28**	4	65.6	**5160**
412-55D	8.50			Hold	Lab				
412-55E		4.05	12.87	9/6/2013	Field	**7**	2	51.1	**3970**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/3/2013 **Time Cast:** 3:30 **Date Received:** 9/5/2013

Placement Location: QUAD D WALLS: X2.2 & XK & XH QUAD C ENTRY WALL NE CORNER
QUAD D X__A BET XJ & X2.2 & XKA & XA PIER D2 & DD

Placement Method: TELEBELT

Placement Vol. (yd³): 50

Cylinders Made By: CHARLES CROMWELL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6.0

Air Temp (°F): 80

Conc. Temp (°F) (C-1064): 82

Load Number: 2

Mixer Number: 84

Ticket Number 236345

Cubic Yards: 10.75

Design (psi): **3500**

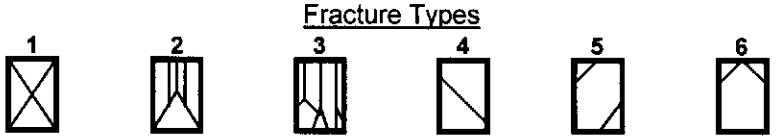
Batch 2:26

Arrive 3:00

Depart 3:38

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-56A	8.55	4.01	12.65	9/10/2013	Lab	**7**	4	50.0	**3950**
412-56B	8.55	4.02	12.70	10/1/2013	Lab	**28**	4	68.8	**5420**
412-56C	8.55	4.04	12.79	10/1/2013	Lab	**28**	4	65.4	**5110**
412-56D	8.55			Hold	Lab				
412-56E		4.03	12.74	9/10/2013	Field	**7**	4	50.4	**3960**

Fracture Types



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Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/6/2013 **Time Cast:** 12:50 **Date Received:** 9/10/2013

Placement Location: QUAD D: INTERIOR WALLS ON XKA LINE AND D1 (-5) LINE
QUAD D: FOOTINGS ON DA LINE BET X1 AND X4

Placement Method: TELEBELT

Placement Vol. (yd³): 33

Cylinders Made By: CHARLES CROMWELL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500
POZZOLITH 100XR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 64

Conc. Temp (°F) (C-1064): 77

Load Number: 2

Mixer Number: 97

Ticket Number 236455

Cubic Yards: 8.25

Design (psi): **3500**

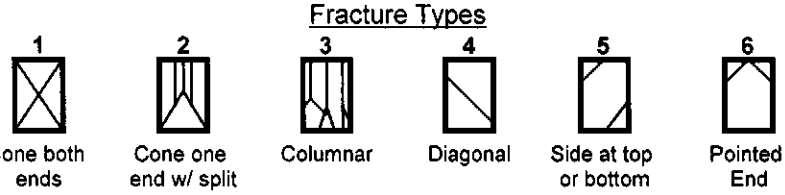
Batch 11:30

Arrive 12:30

Depart 1:00

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-57A	8.50	4.05	12.91	9/13/2013	Lab	**7**	4	54.0	**4180**
412-57B	8.55	4.05	12.86	10/4/2013	Lab	**28**	4	65.4	**5090**
412-57C	8.50	4.06	12.97	10/4/2013	Lab	**28**	4	64.8	**5000**
412-57D	8.50			Hold	Lab				
412-57E		4.02	12.71	9/13/2013	Field	**7**	4	46.6	**3670**

Fracture Types



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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/11/2013 **Time Cast:** 12:50 **Date Received:** 9/12/2013

Placement Location: QUAD B: COMPOSITE ROOF DECK SLAB

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 80

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 76 **Maximum (°F)** 83

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 5.0

Air Temp (°F): 85

Conc. Temp (°F) (C-1064): 85

Load Number: 2

Mixer Number: 83

Ticket Number 236562

Cubic Yards: 10

Design (psi): **3500**

Batch 12:11

Arrive 12:40

Depart 12:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-58A	8.56	4.03	12.76	9/18/2013	Lab	**7**	4	49.0	**3840**
412-58B	8.45	4.02	12.70	10/9/2013	Lab	**28**	4	60.6	**4770**
412-58C	8.45	4.03	12.78	10/9/2013	Lab	**28**	4	58.0	**4540**
412-58D	8.45			Hold	Lab				
412-58E		4.03	12.77	9/18/2013	Field	**7**	4	47.6	**3730**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/11/2013 **Time Cast:** 1:35 **Date Received:** 9/12/2013

Placement Location: QUAD B: COMPOSITE ROOF DECK SLAB

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 80

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 76 **Maximum (°F)** 83

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 4.5

Air Temp (°F): 88

Conc. Temp (°F) (C-1064): 86

Load Number: 4

Mixer Number: 83

Ticket Number 236565

Cubic Yards: 10

Design (psi): **3500**

Batch 12:56

Arrive 1:28

Depart 1:40

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-59A	8.50	4.03	12.77	9/18/2013	Lab	**7**	4	50.2	**3930**
412-59B	8.40	4.02	12.70	10/9/2013	Lab	**28**	4	56.4	**4440**
412-59C	8.45	4.03	12.77	10/9/2013	Lab	**28**	4	60.4	**4730**
412-59D	8.45			Hold	Lab				
412-59E		4.04	12.79	9/18/2013	Field	**7**	4	46.4	**3630**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/12/2013 **Time Cast:** 1:30 **Date Received:** 9/13/2013

Placement Location: WALLS QUAD D: D4 LINE INCLUDE ENTRY FOUNDATIONS BETWEEN X1 AND X4 LINE AND WALL SECTION ON B2 LINE

Placement Method: PUMP

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 48

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 75 **Maximum (°F)** 77

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZOLITH 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 6

Air Temp (°F): 70

Conc. Temp (°F) (C-1064): 83

Load Number: 2

Mixer Number: 84

Ticket Number 236745

Cubic Yards: 10

Design (psi): **3500**

Batch 12:11

Arrive 1:00

Depart 1:15

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-60A	8.25	4.00	12.58	9/19/2013	Lab	**7**	4	47.2	**3750**
412-60B	8.25	4.00	12.53	10/10/2013	Lab	**28**	4	60.5	**4830**
412-60C	8.25	4.03	12.76	10/10/2013	Lab	**28**	4	57.9	**4540**
412-60D	8.25			Hold	Lab				
412-60E		4.02	12.69	9/19/2013	Field	**7**	4	53.2	**4190**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/16/2013 **Time Cast:** 9:50 **Date Received:** 9/17/2013

Placement Location: QUAD D: WESTERLY LOAD BEARING MASONRY WALL TO ELEV 71' 10.5"

Batch Method: HAND/TROWEL

Product Manufacturer:

Specimens Made By: KARL GIMPEL

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) 54 **Max. Temp (°F)** 88

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 59

Mortar Temp (°F) (C-1064): 76

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	**Age (days)**	Load (kips)	**Strength (psi)**
412-61A	4.00	9/23/2013	**7**	5.9	**1480**
412-61B	4.00	9/23/2013	**7**	5.7	**1420**
412-61C	4.00	9/23/2013	**7**	5.3	**1320**
412-61D	4.00	10/14/2013	**28**	7.1	**1780**
412-61E	4.00	10/14/2013	**28**	7.0	**1750**
412-61F	4.00	10/14/2013	**28**	7.0	**1750**

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/16/2013 **Time Cast:** 3:30 **Date Received:** 9/17/2013

Placement Location: QUAD D: FOOTING DA LINE X 4 TO D3 AND REMAINDER OF D2.6 LINE

Placement Method: TAILGATE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 7

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 64 **Maximum (°F)** 67

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 64

Conc. Temp (°F) (C-1064): 76

Load Number: 1

Mixer Number: 136

Ticket Number 236827

Cubic Yards: 7

Design (psi): **3500**

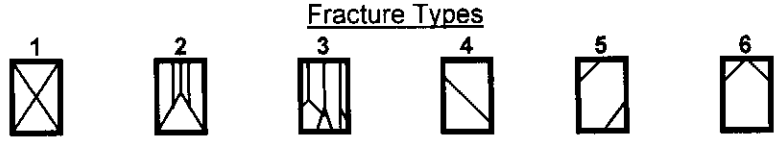
Batch 2:21

Arrive 3:10

Depart 3:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-62A	8.45	4.03	12.76	9/23/2013	Lab	**7**	4	46.2	**3620**
412-62B	8.45	4.04	12.81	10/14/2013	Lab	**28**	4	57.4	**4480**
412-62C	8.45	4.05	12.89	10/14/2013	Lab	**28**	4	61.2	**4750**
412-62D	8.45			Hold	Lab				
412-62E	8.45	4.03	12.74	9/23/2013	Field	**7**	4	45.8	**3600**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Grout Specimen Compressive Strength

ASTM C1019

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/17/2013 **Time Cast:** 10:25 **Date Received:** 9/18/2013

Placement Location: QUAD D: WESTERLY LOAD BEARING MASONRY WALL TO ELEV 71' 10.5"

Placement Method: HAND/BUCKET

Specimen Made By: KARL GIMPEL

Placement Vol. (yd³): 1.5

Aggregate Size (in): FINE

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: N/A

TEST RESULTS

Slump (in) (C-143): 10 1/4

Air Temp (°F): 61

Grout Temp (°F) (C-1064): 63

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): **2000**

Specimen Designation	Area(In)²	Date Of Test	**Age (days)**	Load (kips)	**Strength (psi)**
412-63A	11.39	9/24/2013	**7**	38.5	**3380**
412-63B	11.39	10/15/2013	**28**	52.2	**4580**
412-63C	11.39	10/15/2013	**28**	55.5	**4870**
412-63D					

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/17/2013 **Time Cast:** 1:10 **Date Received:** 9/18/2013

Placement Location: QUAD D: WESTERLY LOAD BEARING MASONRY WALL TO ELEV 74'

Batch Method: HAND/TROWEL

Product Manufacturer:

Specimens Made By: KARL GIMPEL

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) **Max. Temp (°F)**

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 65

Mortar Temp (°F) (C-1064): 64

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	**Age (days)**	Load (kips)	**Strength (psi)**
412-64A	4.00	9/24/2013	**7**	6.1	**1520**
412-64B	4.00	9/24/2013	**7**	5.7	**1420**
412-64C	4.00	9/24/2013	**7**	5.9	**1480**
412-64D	4.00	10/15/2013	**28**	7.7	**1920**
412-64E	4.00	10/15/2013	**28**	7.5	**1880**
412-64F	4.00	10/15/2013	**28**	7.6	**1900**

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/18/2013 **Time Cast:** 10:10 **Date Received:** 9/19/2013

Placement Location: QUAD C: EVENT LEVEL SLAB ON GRADE INFILL X10 TO X13

Placement Method: BELT CONVEYOR

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 18

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5

Air Content (%) (C-231) **Air WR:** 2.6

Air Temp (°F): 67

Conc. Temp (°F) (C-1064): 71

Load Number: 2

Mixer Number: 117

Ticket Number 236886

Cubic Yards: 8.5

Design (psi): **3500**

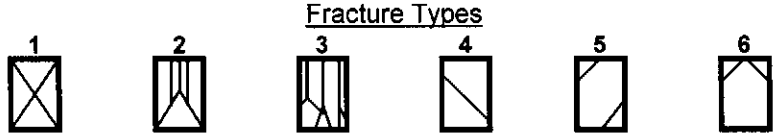
Batch 9:26

Arrive 9:55

Depart 10:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-65A	8.60	4.02	12.70	9/25/2013	Lab	**7**	4	53.6	**4220**
412-65B	8.60	4.03	12.75	10/16/2013	Lab	**28**	4	66.8	**5240**
412-65C	8.60	4.02	12.72	10/16/2013	Lab	**28**	4	67.4	**5300**
412-65D	8.60			Hold	Lab				
412-65E		4.02	12.66	9/25/2013	Field	**7**	4	47.8	**3780**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/18/2013 **Time Cast:** 12:15 **Date Received:** 9/19/2013

Placement Location: QUAD D: FOOTING: DA LINE D3 - D6 WALL: D2 - D3

Placement Method: BELT

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 27.75

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZ 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 3/4

Air Content (%) (C-231) **Air WR:** 6.3

Air Temp (°F): 73

Conc. Temp (°F) (C-1064): 72

Load Number: 2

Mixer Number: 144

Ticket Number 236893

Cubic Yards: 9.25

Design (psi): **3500**

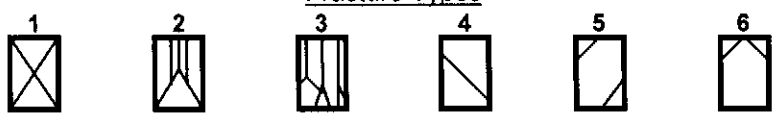
Batch 11:10

Arrive 11:55

Depart 12:45

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-66A	8.40	4.04	12.82	9/25/2013	Lab	**7**	4	47.6	**3710**
412-66B	8.40	4.03	12.78	10/16/2013	Lab	**28**	4	59.2	**4630**
412-66C	8.40	4.02	12.69	10/16/2013	Lab	**28**	4	62.2	**4900**
412-66D	8.40			Hold	Lab				
412-66E		4.02	12.69	9/25/2013	Field	**7**	4	44.2	**3480**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Grout Compressive Strength

ASTM C109

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/19/2013 **Time Cast:** 7:50 **Date Received:** 9/20/2013

Placement Location: QUAD D: EASTERLY LOAD BEARING MASONRY WALL TO ELE 71' +/-

Placement Method: HAND/BUCKET

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 1.5

Aggregate Size (in): FINE

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 62 **Maximum (°F)** 78

DELIVERY INFORMATION

Admixtures: N/A

TEST RESULTS

Slump (in) (C-143): 10

Air Temp (°F): 56

Grout Temp (°F) (C-1064): 66

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): **2000**

Cube Designation	Area(In)²	Date Of Test	Age (days)	Load (kips)	Strength (psi)
412-67A	10.97	9/26/2013	**7**	25.3	**2310**
412-67B	11.39	10/17/2013	**28**	49.5	**4350**
412-67C	11.39	10/17/2013	**28**	50.6	**4440**
412-67D					

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Mortar Compressive Strength

ASTM C109

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Masonry Contractor: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/19/2013 **Time Cast:** 10:30 **Date Received:** 9/20/2013

Placement Location: QUAD D: EASTERLY LOAD BEARING MASONRY WALL TO ELEV 74 +/-

Batch Method: HAND TROWEL

Product Manufacturer:

Specimens Made By: KARL GIMPEL

Aggregate:

INITIAL CURING CONDITIONS

Min. Temp (°F) 62 **Max. Temp (°F)** 70

MIX INFORMATION

Mortar Type: S

Admixtures:

TEST RESULTS

Air Temp (°F): 62

Mortar Temp (°F) (C-1064):

Ambient RH (%):

Flow Cone (%):

Cube Designation	Area(In)²	Date Of Test	**Age (days)**	Load (kips)	**Strength (psi)**
412-68A	4.00	9/26/2013	**7**	5.4	**1350**
412-68B	4.00	9/26/2013	**7**	6.5	**1620**
412-68C	4.00	9/26/2013	**7**	6.5	**1620**
412-68D	4.00	10/17/2013	**28**	8.5	**2120**
412-68E	4.00	10/17/2013	**28**	8.1	**2020**
412-68F	4.00	10/17/2013	**28**	7.7	**1920**

Remarks:

Note: ASTM C270 specifies mortar testing under laboratory conditions only for acceptance of mortar mixes under the property specification. Field sampling and testing of mortar is conducted under ASTM C780 and is used to verify consistency of materials and procedures, not mortar strength.

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S.W.COLE ENGINEERING, INC.

Report of Grout Specimen Compressive Strength

ASTM C1019

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Supplier: QUIKRETE

PLACEMENT INFORMATION

Date Cast: 9/20/2013 **Time Cast:** 10:00 **Date Received:** 9/23/2013

Placement Location: QUAD D: EASERLY & WESTERLY LOAD BEARING MASONRY WALLS TO BEARING ELEVATION

Placement Method: HAND/BUCKET

Placement Vol. (yd³): 2

Specimen Made By: KARL GIMPEL

Aggregate Size (in): FINE

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 60 **Maximum (°F)** 66

DELIVERY INFORMATION

Admixtures: N/A

TEST RESULTS

Slump (in) (C-143): 9 3/4

Air Temp (°F): 62

Grout Temp (°F) (C-1064): 68

Batch Number:

Mixer Number:

Ticket Number:

Design (psi): **2000**

Specimen Designation	Area(In)²	Date Of Test	**Age (days)**	Load (kips)	**Strength (psi)**
412-69A	9.15	9/27/2013	**7**	39.9	**4360**
412-69B	11.39	10/18/2013	**28**	50.9	**4470**
412-69C	10.56	10/18/2013	**28**	52.2	**4940**
412-69D					

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/20/2013 **Time Cast:** 1:20 **Date Received:** 9/23/2013

Placement Location: QUAD D WALLS: DA LINE BETWEEN D3 AND D6

Placement Method: TAILGATE

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 21

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 65 **Maximum (°F)** 76

DELIVERY INFORMATION

Admixtures: MICRO AIR
POZZ 100XR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 5.5

Air Temp (°F): 71

Conc. Temp (°F) (C-1064): 77

Load Number: 1

Mixer Number: 83

Ticket Number 229809

Cubic Yards: 10.5

Design (psi): **3500**

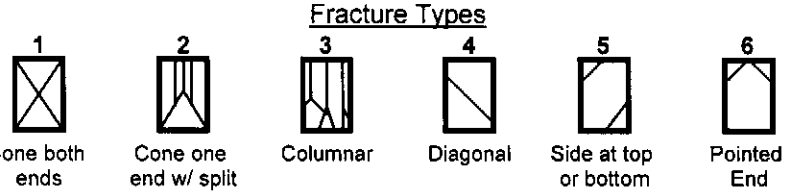
Batch 12:11

Arrive 12:47

Depart 1:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-70A	8.35	4.03	12.72	9/27/2013	Lab	**7**	4	44.2	**3470**
412-70B	8.35	4.04	12.84	10/18/2013	Lab	**28**	4	56.0	**4360**
412-70C	8.35	4.03	12.77	10/18/2013	Lab	**28**	4	54.4	**4260**
412-70D				Hold	Lab				
412-70E		4.01	12.60	9/27/2013	Field	**7**	4	44.6	**3540**

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/24/2013 **Time Cast:** 3:15 **Date Received:** 9/25/2013

Placement Location: QUAD D: FOOTING XK/D4
QUAD D: WALL X7 LINE

Placement Method: TAILGATE

Placement Vol. (yd³): 7

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 63 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 6.0

Air Temp (°F): 57

Conc. Temp (°F) (C-1064): 65

Load Number: 1

Mixer Number: 98

Ticket Number 236673

Cubic Yards: 7

Design (psi): **3500**

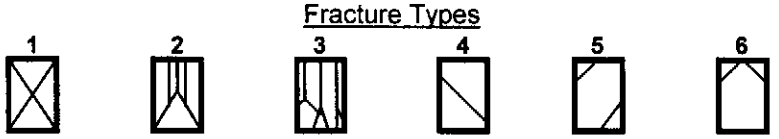
Batch 2:17

Arrive 2:48

Depart 3:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-71A	8.35	4.03	12.74	10/1/2013	Lab	**7**	4	51.4	**4030**
412-71B	8.35			10/22/2013	Lab	**28**			
412-71C	8.35			10/22/2013	Lab	**28**			
412-71D	8.35			Hold	Lab				
412-71E		4.01	12.62	10/1/2013	Field	**7**	4	51.2	**4060**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 9/24/2013 **Time Cast:** 8:28 **Date Received:** 9/25/2013

Placement Location: QUAD D: FOOTING XK/D4
QUAD D: WALL X7 LINE

Placement Method: TAILGATE

Placement Vol. (yd³): 7

Cylinders Made By: KARL GIMPEL

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 63 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: POZZOLITH 100XR
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5 3/4

Air Content (%) (C-231) **Air WR:** 2.5

Air Temp (°F): 55

Conc. Temp (°F) (C-1064): 66

Load Number: 3

Mixer Number: 99

Ticket Number 229869

Cubic Yards: 10

Design (psi): **3500**

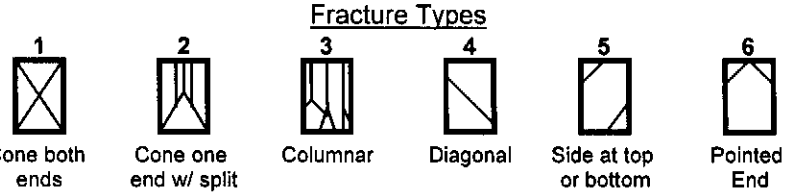
Batch 7:04

Arrive 8:20

Depart 8:35

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-72A	8.40	4.02	12.70	10/1/2013	Lab	**7**	4	48.6	**3830**
412-72B	8.40			10/22/2013	Lab	**28**			
412-72C	8.40			10/22/2013	Lab	**28**			
412-72D				Hold	Lab				
412-72E		4.02	12.70	10/1/2013	Field	**7**	4	45.0	**3550**

Fracture Types



Remarks:

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/2/2013 **Time Cast:** 8:20 **Date Received:** 10/3/2013

Placement Location: QUAD C: CONCOURSE LEVEL COMPOSITE SLAB

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 90

Aggregate Size (in): 3/8

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: NORLITE
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 7

Air Content (%) (C-231) **Air WR:** 3.5

Air Temp (°F): 62

Conc. Temp (°F) (C-1064): 68

Load Number: 2

Mixer Number: 136

Ticket Number 236708

Cubic Yards: 21

Design (psi): **3500**

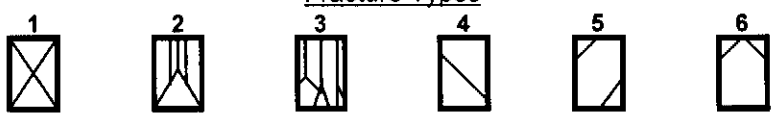
Batch 7:18

Arrive 8:08

Depart 8:25

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-73A	7.35	4.01	12.60	10/9/2013	Lab	**7**	4	63.6	**5050**
412-73B	7.35	4.00	12.59	10/30/2013	Lab	**28**	4	74.8	**5940**
412-73C	7.35	4.00	12.59	10/30/2013	Lab	**28**	4	70.2	**5580**
412-73D				Hold	Lab				
412-73E		4.03	12.76	10/9/2013	Field	**7**	4	58.4	**4580**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: 412-73F Ovendry Unit Weight-= 112.6 pcf
412-73G Ovendry Unit Weight-= 113.4 pcf

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/2/2013 **Time Cast:** 9:10 **Date Received:** 10/3/2013

Placement Location: QUAD C: CONCOURSE LEVEL COMPOSITE SLAB

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 90

Aggregate Size (in): 3/8

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: NORLITE
GLENIUM 7500
MICRO AIR

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 7 1/4

Air Content (%) (C-231) 3.5 **Air WR:** 3.2

Air Temp (°F): 63

Conc. Temp (°F) (C-1064): 71

Load Number: 5

Mixer Number: 142

Ticket Number 230715

Cubic Yards: 51

Design (psi): **3500**

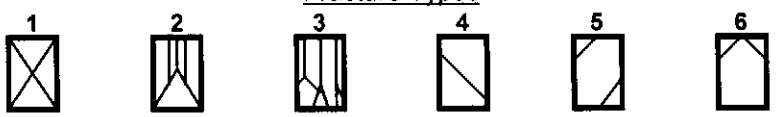
Batch 8:25

Arrive 9:00

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-74A	7.40	4.05	12.87	10/9/2013	Lab	**7**	4	64.0	**4980**
412-74B	7.40	4.01	12.63	10/30/2013	Lab	**28**	4	76.6	**6070**
412-74C	7.40	4.05	12.86	10/30/2013	Lab	**28**	4	80.4	**6250**
412-74D				Hold	Lab				
412-74E		4.01	12.63	10/9/2013	Field	**7**	4	65.0	**5150**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: 412-74F Ovendry Unit Weight = 112.7 pcf
412-74G Ovendry Unit Weight = 112.9 pcf

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/2/2013 **Time Cast:** 12:00 **Date Received:** 10/3/2013

Placement Location: QUAD C: EVENT LEVEL COMOSITE SLAB/SLAB ON GRADE CA TO CE BY C1 TO C4

Placement Method: PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³):

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 59 **Maximum (°F)** 72

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 7

Air Content (%) (C-231) **Air WR:** 5.8

Air Temp (°F): 68

Conc. Temp (°F) (C-1064): 74

Load Number: 2

Mixer Number: 97

Ticket Number 236736

Cubic Yards: 10

Design (psi): **3500**

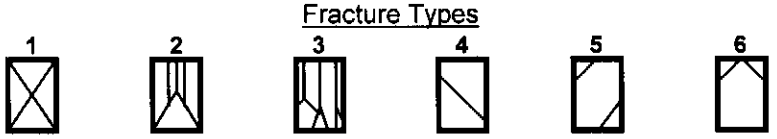
Batch 11:06

Arrive

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-75A	8.50	4.02	12.71	10/9/2013	Lab	**7**	4	60.8	**4780**
412-75B	8.50	4.02	12.68	10/30/2013	Lab	**28**	4	73.6	**5800**
412-75C	8.50	4.00	12.59	10/30/2013	Lab	**28**	4	69.4	**5510**
412-75D				Hold	Lab				
412-75E		4.03	12.77	10/9/2013	Field	**7**	4	55.4	**4340**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/9/2013 **Time Cast:** 8:40 **Date Received:** 10/10/2013

Placement Location: ELECTRICAL VAULT ROOF SLAB

Placement Method: TELEBELT

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 17

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) **Maximum (°F)**

DELIVERY INFORMATION

Admixtures: MICRO AIR
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 6

Air Temp (°F): 45

Conc. Temp (°F) (C-1064): 63

Load Number: 2

Mixer Number: 86

Ticket Number 230351

Cubic Yards: 8.5

Design (psi): **3500**

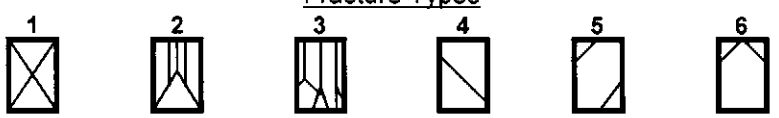
Batch 7:31

Arrive 8:04

Depart 8:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(in)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-76A	8.40	4.02	12.68	10/16/2013	Lab	**7**	4	54.4	**4290**
412-76B	8.65	4.01	12.65	10/23/2013	Lab	**14**	4	63.0	**4980**
412-76C	8.45	4.01	12.64	11/6/2013	Lab	**28**	4	66.8	**5290**
412-76D	8.50	4.05	12.89	11/6/2013	Lab	**28**	4	64.8	**5030**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/24/2013 **Time Cast:** 7:55 **Date Received:** 10/25/2013

Placement Location: QUAD D EVENT LEVEL SLAB ON GRADE

Placement Method: LINE PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 100

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 57 **Maximum (°F)** 74

DELIVERY INFORMATION

Admixtures: GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6 3/4

Air Content (%) (C-231) **Air WR:** 2.6

Air Temp (°F): 52

Conc. Temp (°F) (C-1064): 63

Load Number: 3

Mixer Number: 84

Ticket Number 225749

Cubic Yards: 10

Design (psi): **3500**

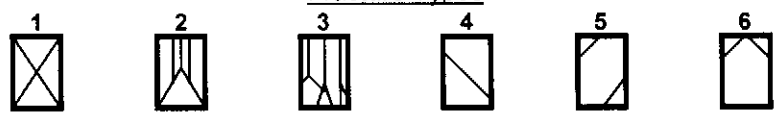
Batch 6:57

Arrive 7:35

Depart 8:15

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-77A	8.45	4.05	12.88	10/31/2013	Lab	**7**	4	42.4	**3290**
412-77B	8.45	4.00	12.57	11/21/2013	Lab	**28**	4	53.8	**4280**
412-77C	8.45	4.00	12.57	11/21/2013	Lab	**28**	4	55.4	**4410**
412-77D	8.45			Hold	Lab				
412-77E		4.01	12.65	10/31/2013	Field	**7**	4	40.2	**3180**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/24/2013 **Time Cast:** 9:20 **Date Received:** 10/25/2013

Placement Location: QUAD D EVENT LEVEL SLAB ON GRADE

Placement Method: LINE PUMP

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 100

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 57 **Maximum (°F)** 74

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 2.4

Air Temp (°F): 55

Conc. Temp (°F) (C-1064): 64

Load Number: 6

Mixer Number: 86

Ticket Number 225755

Cubic Yards: 10

Design (psi): **3500**

Batch 7:56

Arrive 8:30

Depart 9:25

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-78A	8.40	4.04	12.79	10/31/2013	Lab	**7**	4	43.8	**3430**
412-78B	8.40	4.00	12.53	11/21/2013	Lab	**28**	4	58.6	**4680**
412-78C	8.40	3.99	12.50	11/21/2013	Lab	**28**	4	59.2	**4740**
412-78D	8.40			Hold	Lab				
412-78E		4.04	12.81	10/31/2013	Field	**7**	4	40.6	**3170**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/29/2013 **Time Cast:** 7:25 **Date Received:** 10/30/2013

Placement Location: QUAD D CONCOURSE LEVEL SLAB ON GRADE AND CLUBHOUSE/MID SUITE SLABS

Placement Method: PUMP TO LINE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 45

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 65

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20+

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4 1/4

Air Content (%) (C-231) **Air WR:** 8.7

Air Temp (°F): 36

Conc. Temp (°F) (C-1064): 58

Load Number: 1

Mixer Number: 118

Ticket Number 229143

Cubic Yards: 8.5

Design (psi): **3500**

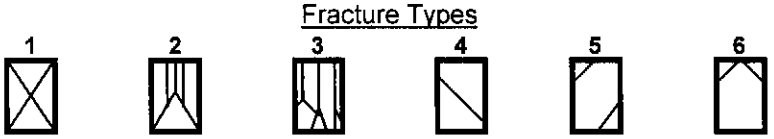
Batch 6:43

Arrive 7:15

Depart 7:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-79A	8.50	4.04	12.84	11/5/2013	Lab	**7**	4	51.0	**3970**
412-79B	8.45	4.02	12.66	11/26/2013	Lab	**28**	4	56.0	**4420**
412-79C	8.40	4.01	12.66	11/26/2013	Lab	**28**	4	54.3	**4290**
412-79D	8.45			Hold	Lab				
412-79E		4.03	12.73	11/5/2013	Field	**7**	4	40.8	**3210**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/29/2013 **Time Cast:** 9:15 **Date Received:** 10/30/2013

Placement Location: QUAD D CONCOURSE LEVEL COMPOSITE D

Placement Method: PUMP TO LINE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 90

Aggregate Size (in): 3/8

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 65

DELIVERY INFORMATION

Admixtures: GLENIUM
NORLITE
POZZUTEC

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 7

Air Content (%) (C-231) **Air WR:** 4.0

Air Temp (°F): 40

Conc. Temp (°F) (C-1064): 57

Load Number: 2

Mixer Number: 98

Ticket Number 229156

Cubic Yards: 10

Design (psi): **4000**

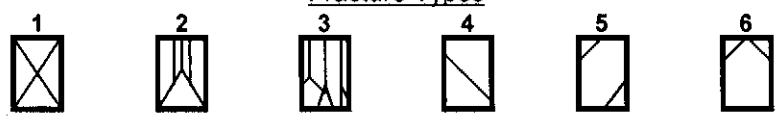
Batch 8:26

Arrive 9:10

Depart 9:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-80A	7.00	4.02	12.66	11/5/2013	Lab	**7**	4	50.4	**3980**
412-80B	7.00	4.01	12.65	11/26/2013	Lab	**28**	4	57.7	**4560**
412-80C	6.95	4.02	12.68	11/26/2013	Lab	**28**	4	58.3	**4600**
412-80D				Hold	Lab				
412-80E		4.04	12.81	11/5/2013	Field	**7**	4	48.2	**3760**
412-80F				Hold	Lab				
412-80G				Hold	Lab				

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: 412-80F Ovendry Unit Weight-= 108.2 pcf
412-80G Ovendry Unit Weight-= 108.5 pcf

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/29/2013 **Time Cast:** 9:40 **Date Received:** 10/30/2013

Placement Location: QUAD D CONCOURSE LEVEL COMPOSITE D

Placement Method: PUMP TO LINE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 90

Aggregate Size (in): 3/8

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 65

DELIVERY INFORMATION

Admixtures: GLENIUM
NORLITE
POZZUTEC

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 9 3/4

Air Content (%) (C-231)

Air Temp (°F): 45

Conc. Temp (°F) (C-1064): 58

Load Number: 3

Mixer Number: 86

Ticket Number 229158

Cubic Yards: 10

Design (psi): **4000**

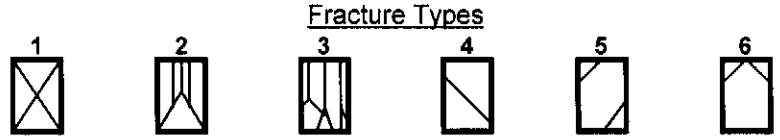
Batch 8:48

Arrive

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-81A	7.15	4.01	12.62	11/5/2013	Lab	**7**	4	44.8	**3550**
412-81B	7.25	4.02	12.66	11/26/2013	Lab	**28**	4	66.3	**5240**
412-81C	7.20	4.02	12.71	11/26/2013	Lab	**28**	4	64.7	**5090**
412-81D				Hold	Lab				
412-81E		4.03	12.77	11/5/2013	Field	**7**	4	47.0	**3680**
412-81F				Hold	Lab				
412-81G				Hold	Lab				

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: 412-81F Ovendry Unit Weight-= 105.6 pcf
412-81G Ovendry Unit Weight-= 105.7 pcf

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S.W.COLE ENGINEERING, INC.

Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 10/29/2013 **Time Cast:** 10:40 **Date Received:** 10/30/2013

Placement Location: QUAD D CONCOURSE LEVEL COMPOSITE D

Placement Method: PUMP TO LINE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 90

Aggregate Size (in): 3/8

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 61 **Maximum (°F)** 65

DELIVERY INFORMATION

Admixtures: GLENIUM
NORLITE
POZZUTEC

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 7.5

Air Content (%) (C-231) **Air WR:** 3.8

Air Temp (°F): 48

Conc. Temp (°F) (C-1064): 60

Load Number: 7

Mixer Number: 96

Ticket Number 229166

Cubic Yards: 10

Design (psi): **4000**

Batch 9:50

Arrive 10:22

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-82A	7.05	3.99	12.49	11/5/2013	Lab	**7**	4	52.2	**4180**
412-82B	7.10	4.02	12.66	11/26/2013	Lab	**28**	4	65.0	**5130**
412-82C	7.20	4.01	12.60	11/26/2013	Lab	**28**	4	63.7	**5060**
412-82D	7.10			Hold	Lab				
412-82E		4.02	12.70	11/5/2013	Field	**7**	4	53.6	**4220**
412-82F				Hold	Lab				
412-82G				Hold	Lab				

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: LOAD 2 - 121.29pcf LOAD 7 - 122.30pcf
412-82F Ovendry Unit Weight-= 108.5 pcf 412-82G Ovendry Unit Weight-= 108.7 pcf

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/1/2013 **Time Cast:** 8:10 **Date Received:** 11/4/2013

Placement Location: QUAD D SLAB ON GRADE AT LOCKER ROOM ENTRY

Placement Method: TAILGATE

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 15

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 44 **Maximum (°F)** 75

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20+ 1%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6.5

Air Content (%) (C-231) **Air WR:** 1.9

Air Temp (°F): 56

Conc. Temp (°F) (C-1064): 67

Load Number: 2

Mixer Number: 11

Ticket Number 229270

Cubic Yards: 8

Design (psi): **3500**

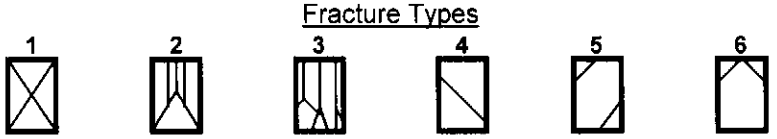
Batch 6:51

Arrive 7:15

Depart 8:20

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-83A	8.45	4.00	12.56	11/8/2013	Lab	**7**	4	39.6	**3150**
412-83B	8.45	4.01	12.63	11/29/2013	Lab	**28**	4	62.4	**4940**
412-83C	8.45	4.02	12.69	11/29/2013	Lab	**28**	4	58.4	**4600**
412-83D	8.50			Hold	Lab				
412-83E		4.03	12.78	11/8/2013	Field	**7**	4	44.2	**3460**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/1/2013 **Time Cast:** 9:50 **Date Received:** 11/4/2013

Placement Location: QUAD C CONCOURSE LEVEL RAMP

Placement Method: BUGGY

Cylinders Made By: KARL GIMPEL

Placement Vol. (yd³): 4

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 44 **Maximum (°F)** 75

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
NORLITZ
POZZUTEC 20 1%

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 2.6

Air Temp (°F): 56

Conc. Temp (°F) (C-1064): 68

Load Number: 1

Mixer Number: 117

Ticket Number 229276

Cubic Yards: 4

Design (psi): **4000**

Batch 8:56

Arrive 9:28

Depart

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-84A	7.20	4.02	12.69	11/8/2013	Lab	**7**	4	62.6	**4940**
412-84B	7.25	4.00	12.59	11/29/2013	Lab	**28**	4	79.3	**6300**
412-84C	7.30	4.02	12.66	11/29/2013	Lab	**28**	4	83.0	**6560**
412-84D	7.25			Hold	Lab				
412-84E		4.06	12.93	11/8/2013	Field	**7**	4	67.2	**5200**
412-84F				Hold	Lab				
412-84G				Hold	Lab				

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks: WET UNIT WEIGHT 125.20pcf
412-84E Ovendry Unit Weight-= 112.4 pcf 412-84F Ovendry Unit Weight-= 112.3 pcf

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/7/2013 **Time Cast:** 7:20 **Date Received:** 11/8/2013

Placement Location: QUAD B INFILL W OF BW LINE, QUAD B SLAB ON GRADE FROM BY TO BZ +12

Placement Method: PUMP

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 60

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 62 **Maximum (°F)** 78

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 6

Air Content (%) (C-231) **Air WR:** 2.5

Air Temp (°F): 50

Conc. Temp (°F) (C-1064): 73

Load Number: 1

Mixer Number: 144

Ticket Number 229420

Cubic Yards: 10

Design (psi): **3500**

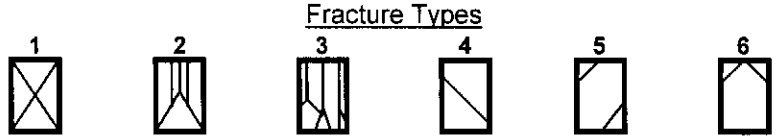
Batch 6:41

Arrive 7:12

Depart 7:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-85A	8.50	4.02	12.70	11/14/2013	Lab	**7**	4	50.0	**3940**
412-85B	8.45	4.00	12.57	12/5/2013	Lab	**28**	4	57.6	**4580**
412-85C	8.50	4.03	12.72	12/5/2013	Lab	**28**	4	56.2	**4420**
412-85D	8.50			Hold	Lab				
412-85E		4.02	12.70	11/14/2013	Field	**7**	4	40.8	**3210**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client: Cumberland County Civic Center

Client Contract Number:

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/7/2013 **Time Cast:** 9:30 **Date Received:** 11/8/2013

Placement Location: QUAD B INFILL W OF BW LINE, QUAD B SLAB ON GRADE FROM BY TO BZ +12

Placement Method: PUMP

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 60

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 62 **Maximum (°F)** 78

DELIVERY INFORMATION

Admixtures: GLENIUM 7500
POZZUTEC 20

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 2.6

Air Temp (°F): 50

Conc. Temp (°F) (C-1064): 74

Load Number: 5

Mixer Number: 97

Ticket Number 229429

Cubic Yards: 10

Design (psi): **3500**

Batch 7:55

Arrive 8:20

Depart 9:50

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-86A	8.50	4.03	12.77	11/14/2013	Lab	**7**	4	44.4	**3480**
412-86B	8.50	3.99	12.50	12/5/2013	Lab	**28**	4	56.4	**4510**
412-86C	8.45	3.98	12.41	12/5/2013	Lab	**28**	4	54.4	**4380**
412-86D	8.45			Hold	Lab				
412-86E		4.02	12.66	11/14/2013	Field	**7**	4	36.8	**2910**

Fracture Types

1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/12/2013 **Time Cast:** 8:15 **Date Received:** 11/13/2013

Placement Location: QUAD B BX-BY AND B2-B1, QUAD D SLAB FROM X1-X4 FORM DC TO DA

Placement Method: PUMP

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 46

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 60 **Maximum (°F)** 74

DELIVERY INFORMATION

Admixtures: POZZUTEC 20
GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 5.5

Air Content (%) (C-231) **Air WR:** 2.5

Air Temp (°F): 30

Conc. Temp (°F) (C-1064): 68

Load Number: 3

Mixer Number: 136

Ticket Number 229539

Cubic Yards: 9

Design (psi): **3500**

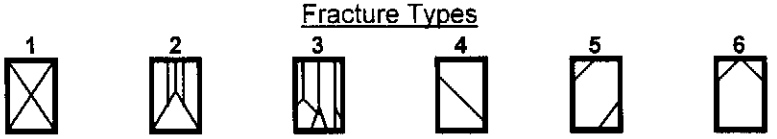
Batch 7:05

Arrive 7:45

Depart 8:30

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-87A	8.50	4.01	12.61	11/19/2013	Lab	**7**	4	58.8	**4660**
412-87B	8.45	4.01	12.63	12/10/2013	Lab	**28**	4	71.0	**5620**
412-87C	8.50	4.01	12.60	12/10/2013	Lab	**28**	4	66.0	**5240**
412-87D	8.45			Hold	Lab				
412-87E		4.01	12.64	11/19/2013	Field	**7**	4	55.0	**4350**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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Report of Concrete Compressive Strength

ASTM C-31 & C-39

Project Name: Portland ME - Cumberland County Civic Center Renovations - Construction Materials Testing

Project Number: 12-0034.1

Client Contract Number:

Client: Cumberland County Civic Center

General Contractor:

Concrete Supplier: AUBURN CONCRETE

PLACEMENT INFORMATION

Date Cast: 11/20/2013 **Time Cast:** 7:35 **Date Received:** 11/21/2013

Placement Location: QUAD B DOCKING BAY SLAB ON GRADE BETWEEN BX & BW

Placement Method: TELEBELT

Cylinders Made By: CHARLES CROMWELL

Placement Vol. (yd³): 40

Aggregate Size (in): 3/4

INITIAL CURING CONDITIONS

Temperatures

Minimum (°F) 43 **Maximum (°F)** 71

DELIVERY INFORMATION

Admixtures: POZZUTEC 20+ GLENIUM 7500

TEST RESULTS

Slump (in) (C-143): **Slump WR:** 4

Air Content (%) (C-231) **Air WR:** 2.5

Air Temp (°F): 30

Conc. Temp (°F) (C-1064): 71

Load Number: 1

Mixer Number: 97

Ticket Number 232381

Cubic Yards: 10

Design (psi): **3500**

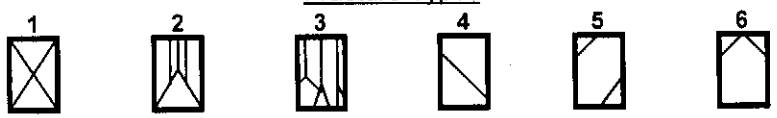
Batch 5:56

Arrive 6:23

Depart 7:45

Cylinder Designation	Cylinder Weight (lbs)	Cylinder Diameter (in)	Cross Sectional Area(In)²	Date Of Test	Cure Type	**Age (days)**	Fracture Type	Load (kips)	**Strength (psi)**
412-88A	8.50	4.01	12.64	11/27/2013	Lab	**7**	4	51.0	**4040**
412-88B	8.50	4.03	12.76	12/18/2013	Lab	**28**	4	59.4	**4660**
412-88C	8.50	4.03	12.73	12/18/2013	Lab	**28**	4	58.4	**4590**
412-88D				Hold	Lab				
412-88E		4.04	12.81	11/27/2013	Field	**7**	4	37.8	**2950**

Fracture Types



1 Cone both ends; 2 Cone one end w/ split; 3 Columnar; 4 Diagonal; 5 Side at top or bottom; 6 Pointed End

Remarks:

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