

PENNSYLVANIA DOT
State Report Questions

April 26-28, 2011 TTCC/NCC Meeting

- 1) Summarize your state's current QC/QA requirements for pavements.

During placement we perform Slump, Plastic Air content, and Plastic Concrete Temperature. We require a Concrete Technician to perform the testing and to prepare a QC plan. On a lot by lot basis test cylinders are made to test the compressive strength. Cores samples are also taken to determine compressive strength and pavement depth. Other requirements include straight edge testing and surface corrections, surface texturing, curing, installing and sealing joints, weather restrictions, surface tolerances, and or evaluation of concrete pavement ride quality and payment of incentive specifications.

- 2) Identify any differences in QC/QA requirements on projects with accelerated schedules.

None

- 3) Summarize the requirements for allowable time between batching and placement for agitated and non-agitated concrete mixes.

Agitated trucks- Deliver the mixed concrete to the work site and discharge within 1 1/2 hours after completion of mixing. Agitate, but do not mix the concrete en-route to the work site.

Non-agitated- Do not use concrete that has exceeded 45 minutes without agitation.

- 4) Summarize acceptance and payment adjustment clauses related to QC/QA requirements.

3. Multiple Characteristic Formula. The lot payment will be determined according to the following formula:

$$L_p = C_p \left[\frac{(2P_s + 2P_d + P_a)}{500} \right]$$

where:

- L_p = Lot Payment
- C_p = Contract price per lot (contract price times lot size)
- P_s = Characteristic Percentage of Compressive Strength—(Table B)
- P_d = Characteristic Percentage for Depth—(Table A)
- P_a = Characteristic Percentage for Air Content—(Table B)

Adjustment for Deficient Pavement. Where a deficiency exists, as determined by cores, the Department will pay as follows:

Deficiency in Depth Determined by Cores mm (inches)	Proportional Part of Contract Price Allowed
0.0 to 6.5 (0.0 to 0.25)	100%
6.6 to 7.7 (0.26 to 0.30)	95%
7.8 to 8.9 (0.31 to 0.35)	85%
9.0 to 10.1 (0.36 to 0.40)	75%
10.2 to 11.3 (0.41 to 0.45)	50%
11.4 to 12.5 (0.46 to 0.50)	25%

Defective Pavement Left in Place- the Department will not pay for defective pavement left in place, unless otherwise directed in writing by the District Executive. When the District Executive directs that defective pavement be left in place, final payment for this pavement will be at 5% of the contract price

RPS Paving

Characteristic Percentages for Concrete Pavement Cores (Pd) Relative to Specification Limits

15-inch Design Thickness

Characteristic Average Core Thickness, inches	Percentage Pd
15.00 or greater	100.0
14.90 - 14.99	97.1
14.80 - 14.89	94.4
14.70 - 14.79	91.4
14.60 - 14.69	88.0
14.50 - 14.59	86.4
Less than 14.50	*

14-inch Design Thickness

Characteristic Average Core Thickness, inches	Percentage Pd
14.00 or greater	100.0
13.90 - 13.99	96.7
13.80 - 13.89	93.6
13.70 - 13.79	90.3
13.60 - 13.69	86.5
13.50 - 13.59	84.6
Less than 13.50	*

13-inch Design Thickness

Characteristic Average Core Thickness, inches	Percentage Pd
13.00 or greater	100.0
12.90 - 12.99	96.3
12.80 - 12.89	92.8
12.70 - 12.79	89.2
12.60 - 12.69	85.0
12.50 - 12.59	82.8
Less than 12.50	*

12-inch Design Thickness

Characteristic Average Core Thickness, inches	Percentage Pd
12.00 or greater	100.0
11.90 - 11.99	95.9
11.80 - 11.89	92.0
11.70 - 11.79	88.1
11.60 - 11.69	84.5
11.50 - 11.59	81.0
Less than 11.50	*

11-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
11.00 or greater	100.0
10.90 - 10.99	95.5
10.80 - 10.89	91.2
10.70 - 10.79	87.0
10.60 - 10.69	83.0
10.50 - 10.59	79.2
Less than 10.50	*

10-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
10.00 or greater	100.0
9.90 - 9.99	95.1
9.80 - 9.89	90.4
9.70 - 9.79	85.9
9.60 - 9.69	81.5
9.50 - 9.59	77.4
Less than 9.50	*

9-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
9.00 or greater	100.0
8.90 - 8.99	94.0
8.80 - 8.89	89.3
8.70 - 8.79	84.4
8.60 - 8.69	79.6
8.50 - 8.59	75.1
Less than 8.50	*

8-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
8.00 or greater	100.0
7.90 - 7.99	93.9
7.80 - 7.89	88.1
7.70 - 7.79	82.6
7.60 - 7.69	77.3
7.50 - 7.59	72.4
Less than 7.50	*

7-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
7.00 or greater	100.0
6.90 - 6.99	93.7
6.80 - 6.89	87.4
6.70 - 6.79	80.8
6.60 - 6.69	75.1
6.50 - 6.59	69.7
Less than 6.50	*

6-inch Design Thickness	
Characteristic	Percentage Pd
Average Core Thickness, inches	
6.00 or greater	100.0
5.90 - 5.99	93.4
5.80 - 5.89	86.8
5.70 - 5.79	78.7
5.60 - 5.69	72.6
5.50 - 5.59	66.8
Less than 5.50	*

Characteristic Percentages for Concrete Pavement Compressive Strength (Ps) or Air Content (Pa) Relative to Specification Limits	
Percent Within Specification Limits	Characteristic Percentage
90 - 100	100
85 - 89	99
75 - 84	94
65 - 74	83
55 - 64	66
Below 55	*