

9330000 PRESTRESSING STRAND AND BAR  
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

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Comments: (6-5-17)

1. representing a random production LOT”

→   →   → <b>933-5.2.2.2 Sampling:</b> The Engineer will select a minimum total of 42 feet from each <u>shipment, representing random production LOTs, per size of CFRP strand</u> for testing in accordance with Table 5-2. The minimum discrete sample length shall be 7 feet. Testing shall be conducted, at the Contractor's expense, by a Department approved <u>ISO 917025-accredited-independent</u> laboratory. Each test shall be replicated a minimum of three times <u>per production LOT</u> . Submit the test results to the Engineer for review and approval prior to installation. ¶
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Response: Agree. Change will be made.  
Change made.

2. Three times per project?

→   →   → <b>933-5.2.2.2 Sampling:</b> The Engineer will select a minimum total of 42 feet from each <u>shipment, representing random production LOTs, per size of CFRP strand</u> for testing in accordance with Table 5-2. The minimum discrete sample length shall be 7 feet. Testing shall be conducted, at the Contractor's expense, by a Department approved <u>ISO 917025-accredited-independent</u> laboratory. Each test shall be replicated a minimum of <u>three times</u> <u>per production LOT</u> . Submit the test results to the Engineer for review and approval prior to installation. ¶
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Response: The intent of the statement is to specify the number of specimens to be tested per sample; “per sample” has been added to the end of the sentence.  
Change made.

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Comments: (7-5-17)

**933-5.2.2.2, 933-5.3, 933-5.4:** “LOTs” should not be all caps.

Response: If the Department defines what constitutes a “LOT” for an item, all letters are to be in caps.  
Subarticle 933-5.2.2 defines what a production lot is in regards to CFRP.

→ → **933-5.2.2. Carbon Fiber Reinforced Polymer (CFRP) Strands:** Producers shall submit to the State Materials Office (SMO), a test report of the physical and mechanical property requirements in Table 5-1. Qualification testing shall be conducted by an independent laboratory approved by the Department for performing the FRP test methods. Three production LOTS shall be randomly sampled at the production facility by a designee of the SMO. The minimum number of specimens per production LOT shall be as indicated in Table 5-1. The coefficient of variation (COV) for each test result shall be less than 6%. Outliers shall be subject to further investigation in accordance with ASTM E178. If the COV exceeds 6%, the number of test specimens per production LOT may be doubled a maximum of two times, to meet the COV requirement. Otherwise, the results shall be rejected. A production LOT is defined as a LOT of CFRP strand produced from start to finish with the same constituent materials used in the same proportions without changing any production parameter, such as cure temperature or line speed.¶

No change made.

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