

**OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
FOR
FIBER REINFORCEMENT FOR
PORTLAND CEMENT CONCRETE**

These Special Provisions revise, amend, and where in conflict, supersede applicable sections of the Standard Specifications for Highway Construction, English, Edition of 1988, and the Supplement thereto, Edition of 1991, the Standard Specifications for Highway Construction, Edition of 1996, or the Standard Specifications for Highway Construction, Edition of 1999 as applicable. Units of measurement are provided in the subsections in both English and Metric equivalents. The units applicable for this project will be those specified in the project plans.

(add the following:)

701.17 FIBER REINFORCEMENT FOR PORTLAND CEMENT CONCRETE.

- (1) **Materials Covered.** These Specifications cover the addition of fiber reinforcement to portland cement concrete. This work shall consist of adding fiber reinforcement to portland cement concrete as described in Section 701.
- (2) **General Requirements.** The fibers shall be engineered, synthetic fibers that are 100 percent virgin polypropylene or polyolefin, collated, fibrillated fibers which have been specifically manufactured to graduated lengths of equal proportions for use as a secondary reinforcement in portland cement concrete. The fibers shall have the following material properties:

Specific Gravity	0.90 to 0.91
Modulus of Elasticity	500 KSI (3500 MPa), minimum
Tensile Strength	70 KSI (480 MPa), minimum
Length	½ To 1½ inch (12mm to 37mm)
Absorption Rate	nil
Ultimate Elongation	15%
Ignition Point	1100°F (593°C)
Melt Point	320°F (160°C)
Electrical Conductivity	Low

- (3) **Application.** The fibers shall be added to the portland cement concrete at the rate of 3 lbs/yd³ for pavements (1.78 Kg/m³) and 1.5 lbs/yd³ for bridge decks (0.89 Kg/m³), or at the manufacturer's suggested rate. Batch tickets will include the weight of the fibers added for each batch. The concrete will be mixed sufficiently to distribute the fiber uniformly. The fiber will not be paid for separately, but will be included in the unit price for the designated concrete.