SECTION 205 - CONCRETE PAVEMENT

1. GENERAL

This item shall consist of a single course of non-reinforced dowel jointed (NRDJ) (AE) or welded wire reinforcement (WWR) portland cement concrete pavement conforming to the details shown on the plans, constructed on a prepared subgrade in accordance with the latest version of Section 501 of the Kansas Department of Transportation Standard Specifications or otherwise noted.

2. PLACING, JOINTING, TEXTURING, AND SEALING CONCRETE

Refer to the latest version of Section 501 of the Kansas Department of Transportation Standard Specifications.

3. WELDED WIRE REINFORCEMENT (WWR)

Unless otherwise specified, the WWR shall be 6x6–W4xW4 weighing 58 pounds per hundred (100) square foot and shall conform to the latest ASTM A1064 requirements for "Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete."

4. PLACING REINFORCEMENT

All pavement reinforcement shall be placed as shown on the plans. All marginal bars, dowel bars, and tie bars required by the plans shall be held in proper position by sufficient approved chairs, metal bar supports or pins.

All concrete pavement patches fifteen feet by sixteen and one half feet (15' x 16.5') or smaller shall be doweled at the transverse joints and jointed to split the section. Wire mesh shall be placed as near as possible to the center of the slab depth (+/- ½ inch). Laps in adjacent sheets or mats of reinforcement shall be as shown on the plans. Laps parallel to the center line of the pavement will not be permitted except for unusual widths of pavement lanes or for irregular areas. If the plans do not show dimensions for laps, the minimum lap either perpendicular or parallel to the center line of the pavement shall be twelve (12) inches. The adjacent sheets shall be fastened or tied together to hold all parts of the sheets in the same plane.

5. FINISHING

After the concrete has been spread and struck off, it shall be further struck off and consolidated by use of an approved finishing machine or vibrating screed to such an elevation that when finishing operations are completed, the surface will conform to the required grade and crown. The finishing machine shall be operated over the entire surface at least twice. A uniform roll or ridge of concrete at least two (2) inches above the pavement grade shall be maintained ahead of the finishing machine or vibrating screed for its entire length during its initial pass. Excessive tamping or finishing resulting in bringing an excess of mortar to the surface will not be permitted. Final finishing shall consist of eliminating tool marks, edging, and applying the final surface texture. Final surface texture shall be transverse broom or longitudinal wet burlap drag finish. This final finish shall not be applied until the entire surface has been straight-edged, using a ten (10) foot straight-edge, and any irregularities corrected.

Since surface texture is critical to this application and is difficult to quantify, the contractor shall construct a test section for approval by the Inspector. The test section shall be placed in one of the areas for permanent improvements designated in the plans in the event that the section passes inspection. If the test section fails to achieve the Inspector's approval, the test section shall be removed and replaced at the contractor's expense. The approved test section shall serve as the standard against which all other like improvements on the project are accepted or not accepted. Failure to gain acceptance of the test section prior to constructing additional improvements shall be the sole responsibility of the contractor.

6. CURING

Curing shall conform to Section 202, "Concrete."

7. Concrete Pavement Smoothness

The smoothness of the pavement surface shall be in accordance with KDOT Standard Specification section 503 and shall be corrected to achieve an average profile index of better than 40. Pavement smoothness shall be measured following completion of pavement construction for any project greater than 0.1 mile. All bumps shall be corrected per Table 503-1 note 2 for all pavement areas and even those less than 0.1 mile. No extra payment shall be made for an average profile index better than 30. Pavement smoothness shall not be paid for directly but shall be subsidiary to Concrete Pavement.

8. INSPECTION AND TESTING

The Contractor shall provide a Quality Control (QC) plan for approval by the Engineer prior to construction and provide qualified personnel and equipment to conduct QC testing at his own expense. At a minimum, values for percent air, slump, unit weight, and gradation must be provided to the City of Salina following the frequency chart provided below. QC tests can include aggregate gradation, slump, air content, unit weight/yield, compressive strength, flexural strength, material passing #200, percent moisture in aggregate, temperature and density of fresh concrete. If the test results from the concrete for slump, air content, and temperature conform to the specification requirements, acceptance cylinders are molded and cured for 28 days to verify compressive strength requirements have been met. All samples and tests shall comply with the test methods according to Standard Specifications Division 2500.

TESTING FREQUENCY

Test Sampling	**Location**	**QC Testing by Contractor**
Aggregate gradation	Feed bins	One test per 1000 tons
Slump, Air content, Temperature, Unit weight	Truck	One per 300 yd^3 or minimum of one per day
Thickness	Roadway (coring)	Contractor's discretion or for verification
Compressive strength	Roadway (coring)	Contractor's discretion or for verification
Profilograph	Roadway	Per KDOT Section 503 for sections greater than 0.1 mile