SECTION 508 -- JOINT SEALING - ASPHALT TO CONCRETE

508.01 -- Description

This work shall consist of sealing joints between asphaltic concrete surfacing and portland cement concrete pavement.

508.02 -- Material Requirements

1. Rubber-asphalt joint filler shall be a blend of new or reclaimed synthetic or natural rubber, paving grade asphalt cement, and other additives. The joint sealing material shall be submitted to the NDR's Materials and Tests Laboratory for approval.

2. The blend, when heated in accordance with the supplier's instructions, shall produce an easily applied, flexible, and adhesive compound that will effectively seal joints between portland cement concrete and the asphaltic concrete under typical Nebraska climatic conditions.

3. The joint filler shall contain no solvents, shall not be self-leveling, and shall cure upon cooling to a consistency that will not be tracked by traffic.

4. The joint filler shall be suitable for melting and application with a conventional melter-applicator unit.

5. a. The safe heating temperature is the highest temperature to which the joint filler can be heated and still conform to all requirements of this specification.

b. A maximum of 11°C higher than the manufacturer's minimum recommended application temperature is considered the safe heating temperature.

c. For testing purposes, the pouring temperature for specimen preparation is the safe heating temperature recommended by the manufacturer.

d. Laboratory testing may begin only after the testing agency has received the safe heating temperature. All containers must maintain their safe heating temperature when in use.

e. The joint filler shall meet the following requirements:

(1) Softening Point: Minimum temperature of 65.5°C.

(2) Cone Penetration: At 25 ± 0.1°C, using a 150 g for 5 s, shall not exceed 70 units. At 4 ± 0.1°C, using 200 g for 60 s, the minimum shall be 15 units.

(3) Resilience: At 25 ± 0.1°C, resilience shall be at least 30 percent recovery.

(4) Asphalt Compatibility: There shall be no failure in adhesion, nor formation of an oily exudate at the interface between the joint filler and the asphaltic concrete

specimen, nor softening or other deleterious effects on the asphaltic concrete or joint filler when tested at 60°C for 72 hours.

6. If granulated rubber is used, it shall not contain wire, fabric, or other contaminating materials.

7. Acceptance of the manufactured material will be based on a Certificate of Compliance for each lot or batch furnished by the supplier. The Certificate of Compliance shall state the type of rubber used and that material is in compliance with these *Specifications*. Random samples may be tested to verify compliance with these *Specifications*.

8. The rubber-asphalt joint filler shall be packaged in meltable (149°C) polyethylene bags contained in cardboard boxes. Each cardboard box shall contain two 11 kg packages of the rubber-asphalt joint filler. The net mass shall be 22 kg per box. The use of metal staples or fasteners of any kind will be prohibited for closing the lids of the boxes. Tape or other like material is acceptable. Boxed material shall be furnished on pallets with an approximate mass of 900 kg. Pallets shall be covered with clear plastic and banded.

9. The concrete to asphalt joint sealant shall meet requirements in ASTM D 5078.

508.03 -- Construction Methods

1. The Contractor shall prepare and construct the joint between the concrete pavement and asphaltic concrete to the dimensions of the typical sections shown in the plans. The full depth of the cut shall be cleaned by routing or any other method which results in a clean cut.

2. The Contractor shall apply sealant in accordance with the sealant manufacturer's recommended procedures.

508.04 -- Method of Measurement

1. Longitudinal joint sealing will be measured by the station along the roadway centerline for each joint between the beginning and ending points of the work.

2. Transverse and all other joints are measured by the meter along the joint, and the total length is converted to an equivalent number of stations.

508.05 -- Basis of Payment

1.

Pay Item	Pay Unit
Joint Sealing - Asphalt to Concrete	Station (StaM)

2. Payment is full compensation for all work prescribed in this Section.