OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION
FOR
FINGER TYPE EXPANSION DEVICE

These special provisions amend and where in conflict, supersede applicable sections of the 2009 Standard Specifications for Highway Construction, English and Metric.

(Add the following:)

504.01 DESCRIPTION

This work consist of fabricating, furnishing, and installing finger type expansion devices in accordance with the details shown on the Plans, these special provisions, and the recommendations of the manufacturer. The devices shall seal the deck surface as indicated on the Plans and prevent water from seeping through the superstructure slab.

504.02 MATERIALS

Provide metallic elements made of aluminum alloy with triangular teeth. Place the aluminum alloy elements end to end and strongly fixed to the structure by means of prestressed anchorages put under controlled tension.

Insert an elastomeric membrane, continuous on the width of the roadway, without splices, between two metallic elements that are anchored to the slab.

Provide a manufactured finger type expansion device system and all its component parts, including the elastomeric membrane, anchorages, and aluminum alloy elements. The manufacturer shall certify that all components comply with the manufacturer's current literature. Furnish two (2) copies of the current published literature containing pertinent materials and installation data for the finger type expansion device supplied to the Bridge Engineer for approval at the same time shop drawings are sent for review.

504.04. CONSTRUCTION METHODS

Do not install the materials in the work prior to the Engineer's approval. Prior to ordering the device, submit to the Bridge Engineer for approval shop drawings showing:

- Complete details of the device, including deminsions.
- Designation of each material to be used in fabrication of the device.
- The manufacturer's recommendations for the installation of the device.
- The joint opening for an ambient temperature of 60°F and necessary adjustment for temperature variations.

Measure the structure temperature by recording the surface temperature of the concrete and steel with a surface thermometer. Record the temperature of the underside of the concrete slab at each side of the superstructure element adjacent to the expansion joint. In addition, record the surface temperature of the shaded portion of the girder web at each location. Use the average of the readings of the concrete and steel with the temperature chart.

Install the device in accordance with the manufacturer's recommendations, and to the lines, elevations, and opening shown on the Plans. Adequately brace the device in a manner approved by the Engineer to fit conditions existing at time of installation. Ensure the device is free to move with temperature variations as soon as the concrete has set.

For acceptance, a watertight integrity test will be performed as directed by the Engineer. At no cost to the Department, correct any seepage of water through the joint to the satisfaction of the Engineer. The joint shall accommodate expansion movements while maintaining a smooth riding surface.

504.05. METHOD OF MEASUREMENT

The finger type expansion device will be measured by the linear foot between the edges of the deck along the centerline of the joint, completely installed and accepted.

504.06. BASIS OF PAYMENT

Accepted quantities of finger type expansion device, measured as provided above, will be paid for at the contract unit price for:

Pay Item:	**Pay Unit:**
FINGER TYPE EXPANSION DEVICE	Linear Foot [Meter]

Payment is considered full compensation for all work necessary to complete the specified items including furnishing all materials, installing the device and hardware, and furnishing all tools, equipment, labor, and incidentals necessary to complete the work in accordance with the Plans and this special provision.