

ITEM 01502.9101 M - TRANSVERSE HINGE JOINTS IN PORTLAND CEMENT CONCRETE (PCC) PAVEMENT

DESCRIPTION. Construct a transverse hinge joint in a PCC pavement where indicated in the contract documents.

MATERIALS.

Hinge Joint Support Assembly. Obtain the assembly from a supplier appearing on the Approved List for §705-15, Transverse Joint Supports. Do not use aluminum in the assembly. Use 600 mm long, 19 mm, deformed, epoxy coated, Grade 420 bar reinforcement fabricated into an assembly such that, when positioned, the:

- Longitudinal axes of adjacent bars are spaced 75 - 450 mm apart on center.
- Entire longitudinal axis of each bar is located at the mid depth of the pavement slab (± 25 mm).
- Longitudinal axes of the bars are aligned parallel with the pavement centerline and pavement surface such that the maximum misalignment of one bar end relative to the other is 50 mm.
- Midpoint of the longitudinal axis of each bar is at the center of the joint (± 25 mm).
- Longitudinal axes of the two end bars are 100 - 250 mm from the longitudinal joints.

Use an epoxy coating appearing on the Approved List for “Epoxy Coatings for Longitudinal Joint Ties” or “Epoxy Coatings for Steel Reinforcing Bars” that is applied by an applicator appearing on the Approved List for “Applicators for Steel Reinforcing Bars”.

At least 7 days before placing the hinge joint assemblies, provide the Engineer:

- The name and address of the joint support assembly supplier.
- The name and address of the joint support assembly manufacturer.
- Certification from the rolling mill as to the type and grade of steel used.
- The brand of epoxy coating and the name and address of the manufacturer.
- The name and address of the epoxy coating applicator.
- Certification from the epoxy coating applicator that the bars have been coated, tested, and meet the requirements of §705-14, Longitudinal Joint Ties.

The Department may perform supplementary sampling and testing of the bars and assemblies to ensure conformance with §705-14.

CONSTRUCTION DETAILS. Submit a proposed joint layout for full depth concrete placement that clearly identifies transverse joint locations, including hinge joints, and revise it, if necessary, to meet the Engineer’s approval. Do not place any hinge joints without the Engineer’s approval.

Place hinge joint assemblies perpendicular to longitudinal joints (or free edges). Do not align hinge joints with other types of transverse joints. Space hinge joints:

- Equally between other types of transverse joints.
- Such that the maximum spacing between any type of transverse joint is 4.6 m.

Affix the assemblies to the subbase (or permeable base) in accordance with the approved Materials Details

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submitted with other transverse joint supports used on the project. If there are no other transverse joint supports used on the project, obtain such an approved Materials Detail from the supplier and affix the assemblies in accordance with that Materials Detail. Provide that Materials Detail to the Engineer before positioning any hinge joint.

After placing concrete, construct a joint through the assembly in accordance with §502-3.06A1, Transverse Contraction Joints.

METHOD OF MEASUREMENT.

Meters of hinge joints placed.

BASIS OF PAYMENT.

In the unit bid price, include the cost of furnishing all labor, equipment, and material necessary to construct a hinge joint, including saw cutting. Sealing or filling the joint is paid under separate item.

This specification is
DisApproved