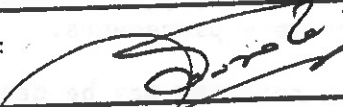


TO: SUPERSEDED BY EI 91-006 EFFECTIVE 8/1/91	ENGINEERING BULLETIN NEW YORK STATE DEPARTMENT OF TRANSPORTATION
Distribution: 30 <input type="checkbox"/> Main Office 32 <input type="checkbox"/> Regions 34 <input type="checkbox"/> Special	Code: <u>E.B. 89-30</u>
APPROVED:  <hr/> DEPUTY CHIEF ENGINEER (STRUCTURES)	Date: <u>9/8/89</u> Supersedes:

This Engineering Bulletin Expires _____

This Bulletin is being issued as a follow-up to E.B. 89-28.

After substantial discussion, the Structures Division and the Technical Services Division have concluded that there is insufficient technical information available to establish specific causes for the several incidents of aggregate reinforced elastomeric material failure (Item 16567.41). Therefore, the following policy regarding this material, and the strip seal type joint system which exclusively employs it, is effective immediately:

- A. FIELD VULCANIZED, AGGREGATE REINFORCED ELASTOMER
1. Item 16567.41 is hereby disapproved for projects not yet let as of the date of this Bulletin.
 2. Field vulcanized aggregate reinforced elastomer shall be used only on an experimental basis. In addition, this material will henceforth be designated as elastomeric concrete.
- All pre-approvals for this material are hereby rescinded.
3. All suppliers of this material will be required to have their particular formulation approved by the Materials Bureau for experimental installation.
- This requirement applies regardless of the number of apparently satisfactory installations already in-service.
4. All known suppliers of elastomeric concrete will be informed of this policy change.
- Suppliers wishing to obtain approval for an experimental installation will be required to contact the Materials Bureau for particulars.
5. Pay item 16567.45 (attached) will control the use and installation of elastomeric concrete. It will be approved for each contract on a project-by-project basis, by the D.C.E.S. in coordination with the Materials Bureau.

Subject: FIELD VULCANIZED, AGGREGATE REINFORCED ELASTOMER FOR JOINT SYSTEMS, AND STRIP SEAL TYPE JOINT SYSTEMS.

B. STRIP SEAL TYPE JOINT SYSTEMS.

1. No strip seal type joint system employing elastomeric concrete shall be used in conjunction with p.c. concrete placements regardless of the depth of placement unless otherwise approved by the D.C.E.S. Armored joint systems with compression seals backed by p.c. concrete shall be the system of choice for all p.c. concrete placements.
2. Strip seal joint systems employing elastomeric concrete may be used only for asphalt concrete overlay placements. Such placements should be of a depth, skew or movement, that only a strip seal joint system will fit the intended location.
3. All strip seal type joint systems shall be anchored to the underlying structural slab by means of support angles anchored to the slab using drilled and grouted anchor bolts, or any other method approved by the D.C.E.S. Details will be provided by the Structures Division, on request.

PROJECTS UNDER CONTRACT

For ongoing contracts, it is recommended that armored joint systems be substituted for strip seal type systems wherever feasible.

In those instances where substitution of an armored joint system for a strip seal system is not feasible, the following course of action regarding installation procedures is recommended:

- I. Require certification from the elastomeric material supplier that the material being supplied is identical in formulation to that material originally supplied for earlier experimental installations.
- II. Require the strip seal system to be attached to the underlying concrete as noted in B3 above. Details will be provided by the Structures Division, on request.
- III. Ensure that the receiving substrate is both sandblast cleaned and dry. Do not permit loose material of any nature to be present. Require vacuum cleaning, or air-blowing with oil-free dry air to clean the recess. Do not permit flash rusting of the steel. This will require rapid installation of the elastomeric material after blast cleaning or failing that, secondary blastcleaning. Installations within 24 hours of a rainstorm should be avoided. Require the supplier's representative to certify that the substrate is within the manufacturer's requirements for dryness.

Subject: FIELD VULCANIZED, AGGREGATE REINFORCED ELASTOMER FOR JOINT SYSTEMS, AND STRIP SEAL TYPE JOINT SYSTEMS.

- IV. Require the elastomeric material supplier's representative to be present at all times during the preparation and installation phases.
- V. Do not permit any deviation from the manufacturer's instructions. Require the representative to certify all steps as they are being implemented.
- VI. Examine the installed system to assure that the elastomeric concrete is fully beneath the steel extrusions.
- VII. Test the completed installation thoroughly. Be as confident as possible that no leaks are occurring, or are likely to occur. If possible, test the installation after exposure to traffic for a few days, to ensure no debonding of the material has occurred.

Questions regarding this Bulletin may be directed to:

Larry Johanson at (518) 457-2459

Bob Ecuyer at (518) 457-4549.

rlc 9/89 ej

ITEM 16567.45 - ELASTOMERIC CONCRETE FOR JOINTS SYSTEMS

DESCRIPTION. The work shall consist of furnishing and placing elastomeric concrete at the joint system locations indicated on the plans.

This material is experimental. No deviation from the specification requirements will be permitted without the express written consent of the D.C.E.S.

An experienced, technical representative of the material supplier shall be present during all phases of substrate preparation and material installation. All work done in the absence of the supplier's technical representative will automatically be rejected.

This material is proprietary. There is a possibility that royalty payments will be required.

MATERIALS. All elastomeric concrete material used for this work shall be pre-approved by the Director, Materials Bureau. The directives of the Materials Bureau regarding material approval shall be followed.

Only one material, supplied by a single supplier shall be used for this work. The combining of materials, or the installation of different materials at separate locations will not be permitted unless otherwise approved by the Director, Materials Bureau.

The supplier of the approved material shall be required to supply Materials Details as defined in subsection 101-34.1. All Materials Details shall meet the procedural directives of the Materials Bureau.

All elastomeric concrete will be accepted at the project site on the basis of pre-approval by the Materials Bureau, of the material, and the Materials Details. Elastomeric material unaccompanied by approved Materials Details will not be accepted.

CONSTRUCTION DETAILS.

An experienced technical representative of the material supplier shall be present during all phases of substrate preparation and material installation. The representative shall be competent, in all respects, with the material and all equipment necessary to install it properly. The representative shall be responsible to:

1. Certify in writing to the Engineer that all materials being used are identical in formulation to those approved by the Materials Bureau.
2. Train assigned personnel regarding the correct methods of installation.

3. Advise the Engineer and the Contractor that all steps necessary for correct installation are being followed.
4. Certify, in writing, that all steps necessary for proper installation have been followed, and that the material has, in fact, been installed in accordance with the approved Materials Details. Two copies of the certification shall each be given to the Engineer and the Contractor.

Prior to material installation all metal surfaces to come in contact with the elastomeric concrete shall be blast cleaned in accordance with the requirements of SSPC SP-6 Commercial Blast Cleaning. All cleaned metal surfaces shall correspond to SSPC Vis-1, surface preparation grades B Sa2, or C Sa2, as applicable. All concrete surfaces shall be sandblast cleaned of all laitance, oil, grease, or any other material which may affect the bond between the elastomeric material and the concrete. No loose material of any nature shall be permitted on any receiving surface. Immediately prior to material installation all receiving surfaces shall be vacuum cleaned, or air-blown with oil-free compressed air. Upon material installation, all receiving surfaces shall be bone dry. No visible rust will be permitted.

Elastomeric concrete shall be installed in strict accordance with the approved Materials Details. No deviations from the Materials Details will be permitted without the express written consent of the Director, Materials Bureau. The contractor shall be held strictly responsible to ensure that all required operations are performed.

After the material has been installed and cured as required, a watertightness test shall be performed. The watertightness test shall be performed only after the material has been exposed to normal daily vehicular traffic for seven consecutive days. The watertightness test shall be performed in accordance with the requirements of subsection 567-3.01D.

METHOD OF MEASUREMENT. The work will be measured as the number of linear feet of elastomeric concrete installed as required. Measurement will be taken along the horizontal projection of the joint system centerline. Measurement will be taken between the outer limits of the installed material.

BASIS OF PAYMENT. The unit price bid per linear foot shall include the cost of all labor, materials, and equipment necessary to complete the work.

No payment will be made for any material installed as replacement material for that removed, regardless of the reason for removal, unless the Engineer certifies that the reason for removal was beyond the Contractor's control.

Fifty percent (50%) of the linear footage will be authorized for payment upon installation and curing of the elastomeric concrete in accordance with the requirements of the Material Details.

The remainder will be authorized upon completion of satisfactory watertightness test(s).