

MICHIGAN
STATE HIGHWAY DEPARTMENT
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CONCRETE CURB DESIGN

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The Road Division has been interested for some time in the matter of improving the Department's curb construction practices in light of (1) 100 foot joint spacing for concrete pavements now 50 feet, (2) the elimination of spalling at open curb joints created by the removal of steel divider plates. The problem was referred to the Research Laboratory for consideration.

Several possibilities arose in connection with the problem which were included in the study. They will be discussed separately.

1. Use of prefabricated bituminous board material for divider plates. This consists of substituting 1/4" stiff prefabricated bituminous board material for the steel divider plates and left in place. Although feasible, such a method would have many drawbacks which are quite obvious. For example, the handling and storage of the divider plate material to prevent distortion and the added cost in materials and finishing of joints, and also the slow down in production and added labor.
2. Construction without use of divider plates. This can be accomplished by providing adequate back forming and by securing the face form to a bridging member with one end hooking over top of back form and the other end resting on pavement slab. In this way, divider plates are not needed except where joints are formed to match those in abutting pavement.
3. Use of curb machine. There are machines now on the market for placing concrete and forming curb sections in one operation without use of steel divider plates.

It would be our recommendation to:

1. Consider methods 2 and 3, preferably 3 if machines are available.
2. Eliminate the dummy joints at 10 foot intervals. They have no functional purpose since the curb is continuously reinforced between contraction and expansion joints and also tied to abutting slabs with dowels.