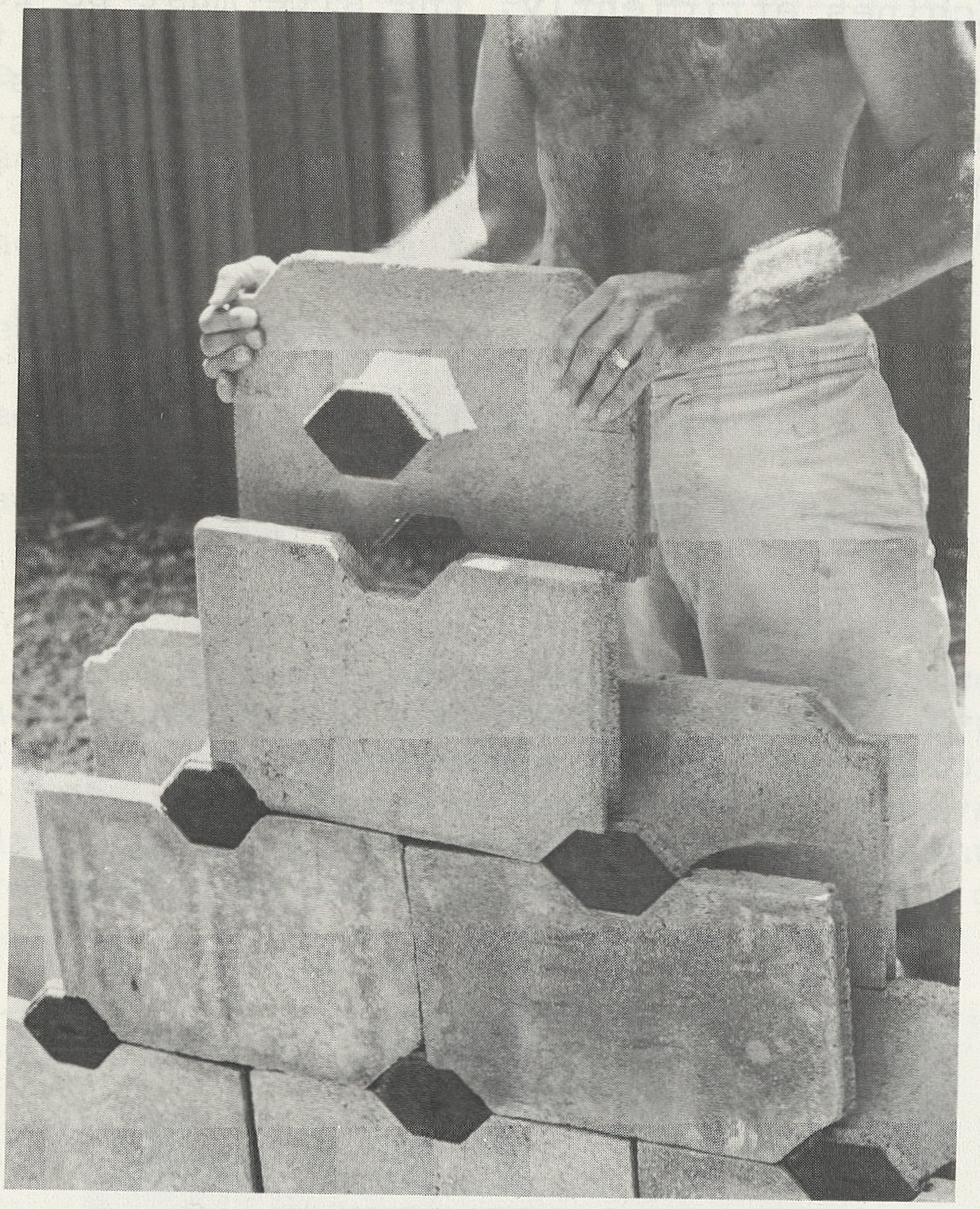
MORTARLESS BLOCK WALL

IN THE PROYECTO EXPERIMENTAL, the bearing walls, shear walls, and ground floor partitions are cavity walls made of interlocking, self-aligning concrete blocks, moulded on site. No mortar is required. The blocks simply interlock to form the wall. Blocks are made of a dry concrete mix, and may be 10



or 20 cm thick: column and corner blocks are made in special moulds. Walls and columns are reinforced with sulphur (see page 214). Plumbing lines and electrical conduits run through the cavity.

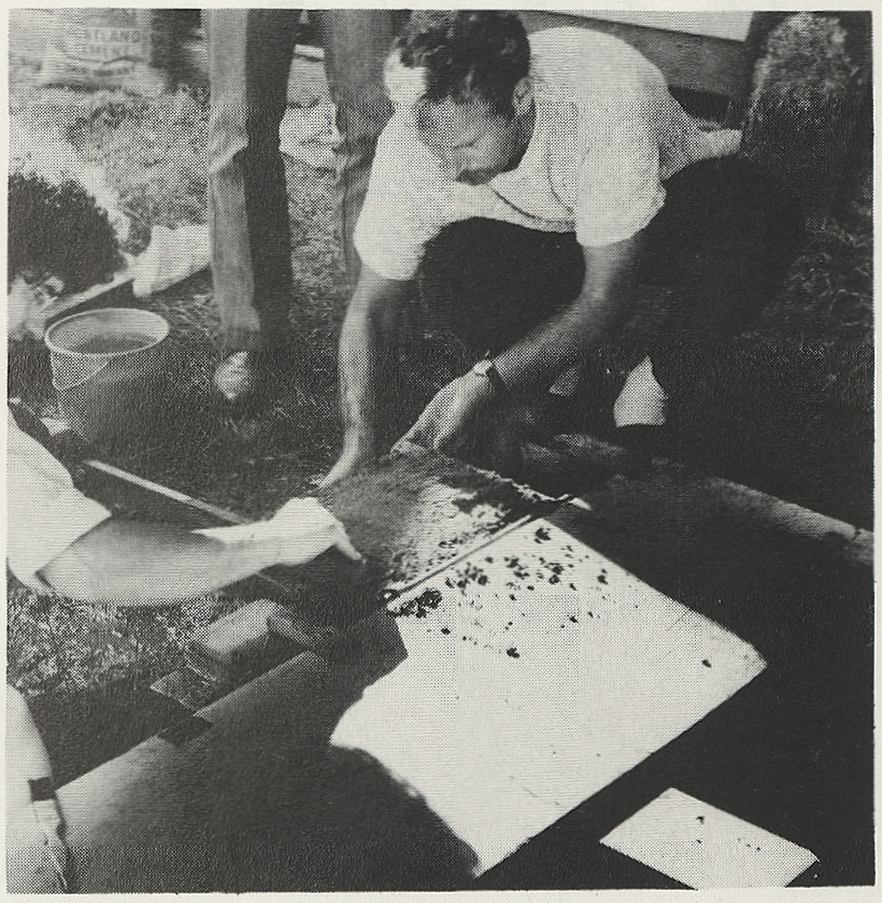
THE GENERAL PATTERN IS:

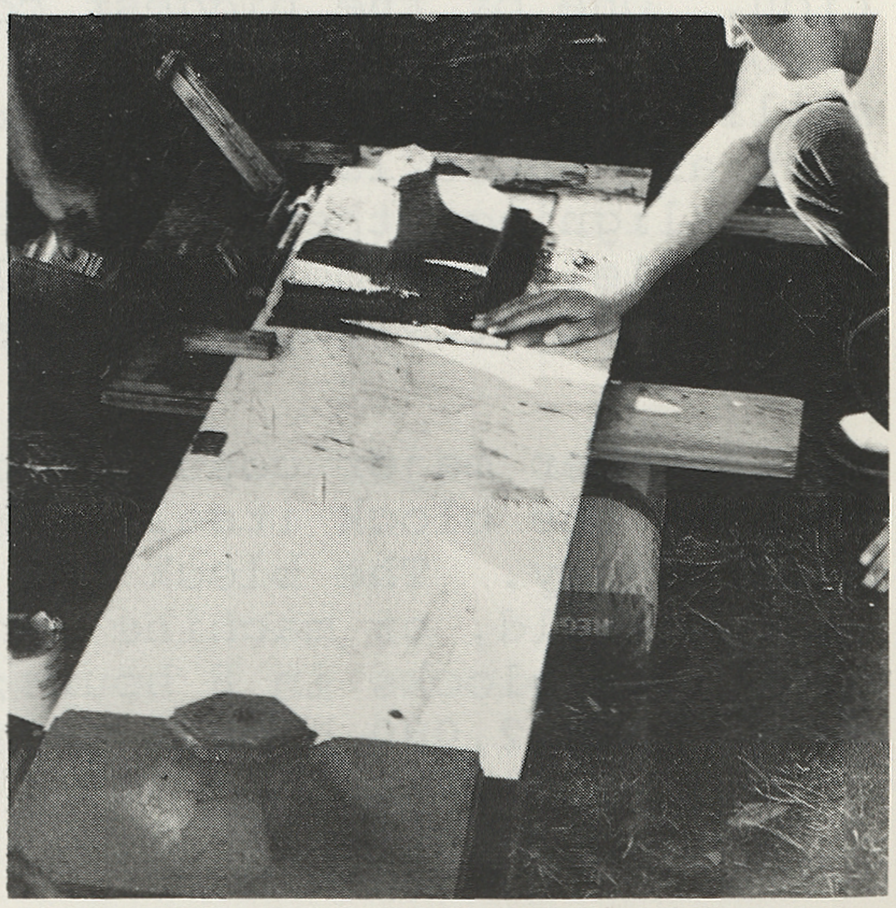
Context:

Low cost, low rise building, in any place where concrete is one of the cheapest building materials.

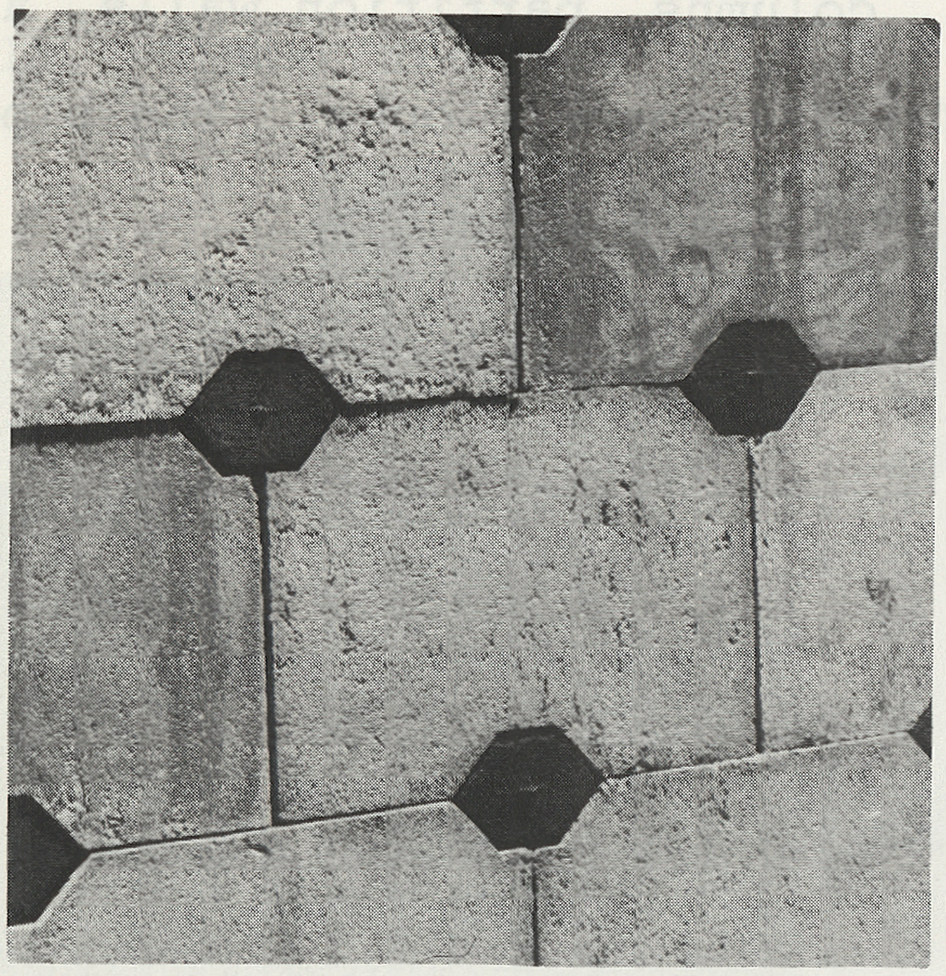
Solution:

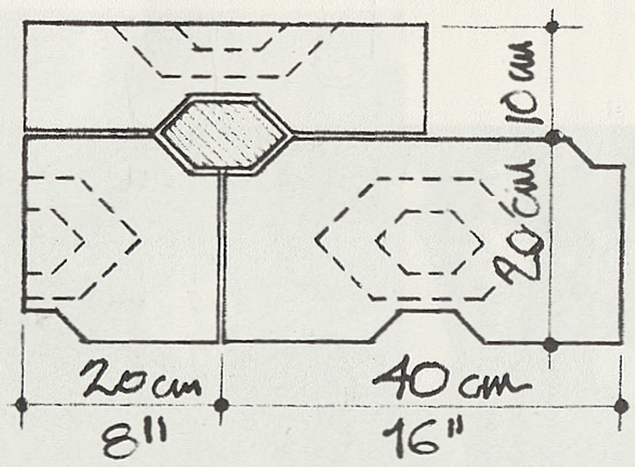
Bearing walls, shear walls, columns, partition walls, and foundations may be made from EDI-Thermomod blocks. The block





is self supporting up to a height of three stories. Vertical edges, corners, and horizontal upper edges are either poured concrete, with steel reinforcing, or are reinforced with sulphur-fiber. The EDI-Thermomod system is patented by Educational Design, Inc.





Half Blocks

Problem:

In areas where concrete is the principal building material, concrete block is one of the cheapest forms of wall construction. One of the biggest costs of a concrete block wall is the labor cost: each block has to be placed and mortared by a skilled mason. The EDI-Thermomod block system eliminates almost all these labor costs. The blocks are mortarless and self aligning; they weigh only 5 kg apiece, and are very easy to handle. Two men can build a wall extremely fast, simply by stacking the blocks on one another. Masons are not required.

Another major cost in concrete block construction is the cost of the block itself. Here again the EDI-Thermomod block saves money. The block can be hand-manufactured on site in a simple mould, or machine manufactured. One mould produces about 400 blocks in 8 hours; a battery of five moulds will produce about 2,000 blocks a day - enough for the walls of an

average 100 square meter house. Half blocks and blocks of different thickness can be made from the same mould. The blocks are cured after 24 hours. On site manufacture eliminates expensive storage and trucking.

The wall has several other advantages: The system is light, and earthquake resistant. The dry construction allows the blocks to move during a quake, thus preventing fracture of the wall. Since there is no mortar, blocks can be removed at any time to make new openings in the wall. The cavity can be made to serve as a conduit for plubming and electricity - because the blocks can be removed, the conduits are easy to reach. Finally, like any cavity wall, the wall has good thermal and acoustic insulation.

The EDI block has been used to build very low cost buildings in Mexico and the south-eastern United States. Many of these buildings were built entirely by self-help; the buildings are performing well in use; those in Mexico have successfully withstood major earthquakes.