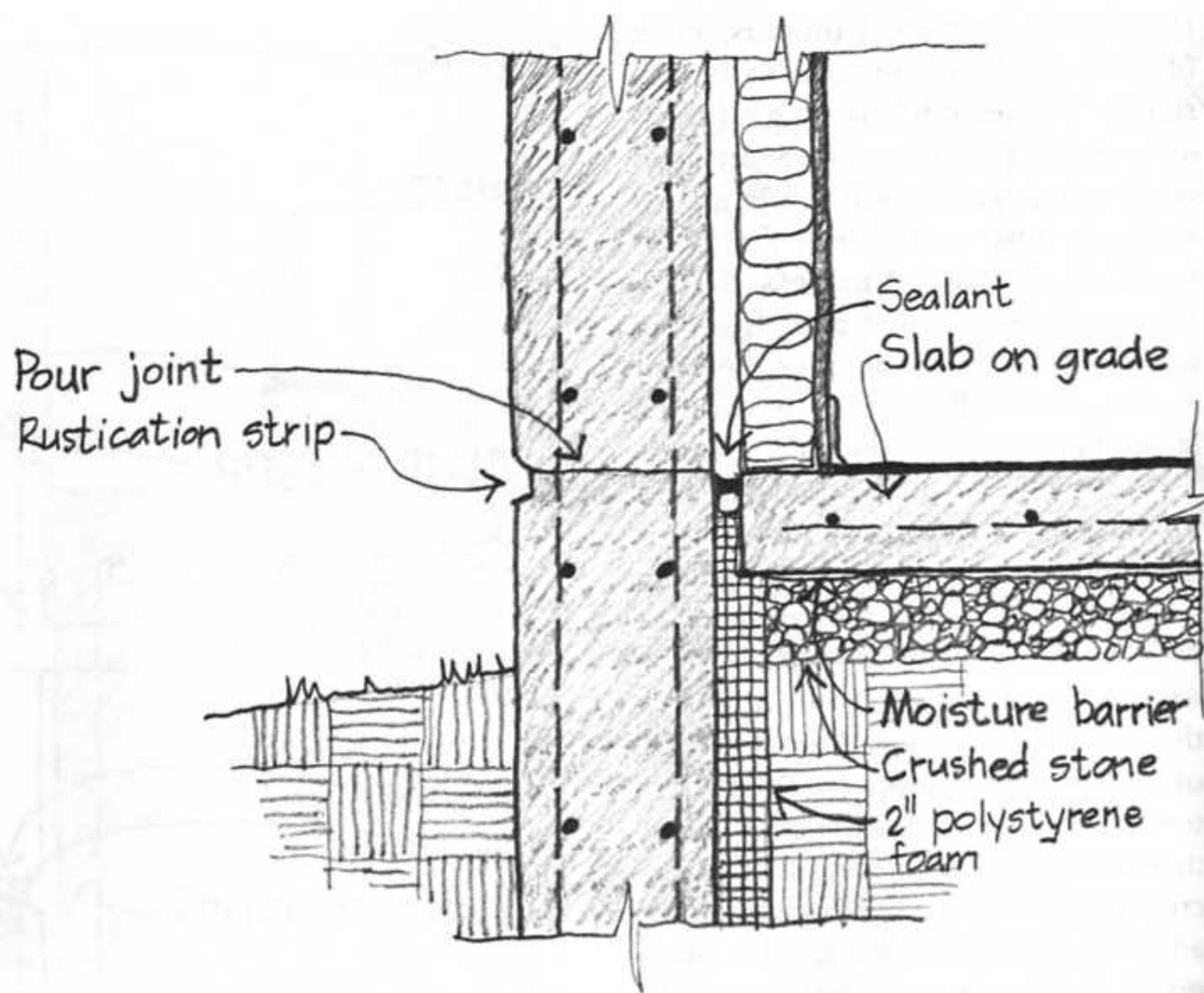


DETAILING THE GRADE CONDITION

We develop the grade detail rather quickly on a tracing paper overlay of the spandrel detail. The ground floor will be a concrete slab on grade, which the structural engineer figures should be 6" thick and reinforced with bars in both directions. We will place a 6 mil polyethylene moisture barrier beneath the slab to prevent ground water from rising into the building. After soil testing has been completed, the geotechnical engineer will assist in working out a detailed specification for compacted backfill and a layer of crushed stone beneath the slab. Between the slab edge and the concrete wall, we insert a 2" thick layer of polystyrene foam extending downward to 4' below grade to retard the passage of heat through the slab and soil to the outdoors. We choose to run the slab down the wall rather than fold it back under the slab, as is sometimes done, because we do not want the soil under the slab to freeze and heave.



DETAILING THE CORNER OF THE BUILDING

Working in plan view, we detail an exterior corner of the building. We chamfer the concrete corner to avoid breakage (*Clean Edge*). We create vertical *Control Joints* 4' from the corner on either wall. These will absorb the concrete shrinkage stresses that are likely to accumulate at the corner by inducing controlled cracking in the concrete. As recommended by ACI, we discontinue half the horizontal reinforcing bars at each control joint to help create a plane of weakness. ACI also recommends that a control joint have grooves on both sides of the wall to a total depth of one-quarter the thickness of the wall, which is 2½" in our building. We decide to use a standard ¾" deep rustication strip on the inside face and a 1¾" deep strip on the outside. This deeper strip must be

