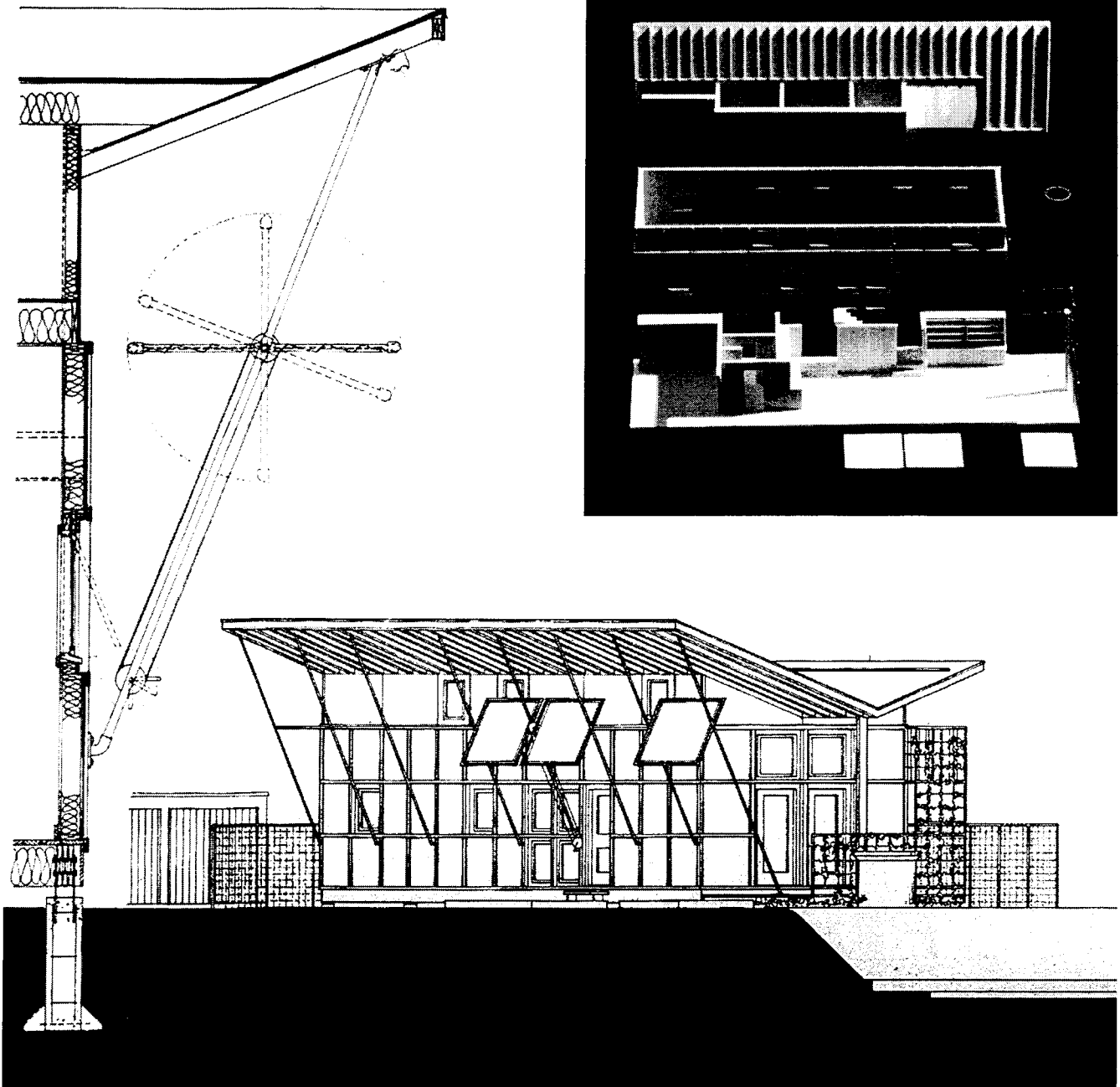


An Affordable, Sustainable House

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The philosophy of the materials and construction for this design derives from its sponsorship by Habitat for Humanity, implying volunteer labor and the intentions of sustainable design. It is one which seeks to minimize construction waste, employ economical (if not always conventional) material assemblies and relatively simple construction techniques. The dimensions of the plan and elevations derive from the use of horizontal, staggered 4 x 8 sheets of plywood for the exterior walls. Where salvaged, recycled or locally produced materials can be obtained to reduce costs, they are encouraged. It is intended that an effort be made during construction to capitalize on any special skills of the individual volunteer laborers.

In many rural areas of the South, a type of building has emerged which combines two familiar rural fixtures, the mobile home and the prefabricated metal farm-shed roof. The mobile home, whose ancestry has been traced by J. B. Jackson to number of American vernacular house types, is a model of economical dwelling. The added roof modifies the micro-climate, providing shade and a covered outdoor space. The design presented here was inspired by this act of ingenious common sense, combining a long thin house in the tradition of early, climate-sensitive Southern vernacular dwellings, with the great sheltering roof to shade the sun, capture the breezes and collect the rain. As is the case in many American cities, the residential streets of this Richmond, Virginia neighborhood run east-west, creating long, narrow north-south lots. This orientation does not support the typical

strategies for passive solar design. In this climate, where the avoidance of air conditioning would be a major achievement, summer cooling can be accomplished with shelter from the west sun, wind-channeling side yards, a deep south-facing porch, cross-ventilation, a breeze-catching roof, and (when all else fails) a mechanical exhaust fan. The efficiency of conventional winter heating has been enhanced through proper insulation, judiciously chosen windows and doors with insulating glass, and may be augmented by the addition of roof-mounted solar panels. As a prototypical dwelling for urban infill conditions, this design attempts to balance the need for energy conservation with the best uses of the spaces created by existing patterns of American urbanism.

There are two ways one might view the politics of sustainability: one which envisions the reform of economic behavior to create a new, environmentally responsible society and one which accepts the reality of contemporary culture but seeks to create a more healthy and efficient use of limited resources. In this context of affordable housing, adoption of the first strategy, while noble in intent, may continue the long history of patronizing attempts to reform the behavior of the poor. The second strategy is the one adopted here: the primary objective is a dignified, environmentally sensitive urban residence which will allow its inhabitants to make their own behavioral choices. The materials are "green," the climate is considered, the construction is simple, but the house is designed for the independent, imperfect, all-too-human inhabitants of the contemporary city.

