By the way, our latest research housing project consists of six garden townhouses. They are located between North Capitol and First Street, Northwest, on K Street and were open to the public this past weekend and will be open this coming one. All have been sold to people who qualify in the urban renewal program of the Federal Government.

Panels for this project were cast in an outdoor yard in Richmond, Va., in late January and were erected in the District of Columbia in February. During most of this time, the temperature was below freezing. Conventional construction in concrete, brick, or block masonry could not have proceeded during such weather except at greatly added

expense.

One of the research objectives of the National Association of Home Builders and the Research Foundation continues to be minimization of

the effect of weather on construction.

Primary weather-caused residential construction problems relate to grading, materials handling, installation of underground utilities, construction of streets, curbs, gutters, sidewalks and driveways, installation of footings and foundations, exterior finishing, and land-

scaping.

There have been other research developments that contribute to reducing the effect of weather on construction. They have been developed by manufacturers, builders, and workers to try to minimize the effect of weather. Such developments include: Long-length plastic pipe which reduces the number of joints and simplifies bad weather joinery, synthetic rubber pipe connections, additives for concrete, prefinished exterior siding, improved materials handling equipment, improved materials delivery methods, materials protective coverings such as paper-wrapped palletized lumber and others. Homebuilders have developed a number of methods to offset the effect of bad weather. Even though much research has been done by manufacturers and builders to try to reduce the extra cost effects of bad weather, the two house examples set forth in the table above illustrate that much remains to be accomplished.

## WHAT CAN BE DONE

There have been some efforts to control weather. This, however, is out of my field of knowledge, and I will not try to comment on this. Sometimes they do it too well I understand. If it is assumed that little can be done to change overall weather patterns, then additional new materials, equipment, and methods need to be developed if building is to proceed economically in spite of the weather. A few examples of these have been set forth above.

In addition, an improved weather forecasting and notification system could be developed so that builders and contractors could plan ahead better, thus minimizing the effect of whatever weather was going to occur. In residential construction, builders need to know at 6 a.m. whether it is going to rain and whether the temperatures will be

freezing or below during the next 12 hours.

It would also be helpful for builders to be able to learn at 3 p.m. whether it will rain or be below freezing during the next 24 hours. Since micro climates around major suburban areas, where most of