Subdivision Problems

RAYMOND C. CASSADY, Vice-President
Henry B. Steeg & Associates, Inc.,
Consulting Engineers,
Indianapolis, Ind.

The discussion of subdivision problems could cover a wide scope. Of course, the first look at this subject is probably done by the owner or developer of the tract or parcel of land which is to be subdivided.

One must recognize that the end result in the laying off a tract of land and subdividing into lots and blocks is to obtain a product or products—something to sell or market. Whether the subdivision is to be offered for sale as vacant lots for individual buyer development or to be offered completely developed with housing or business places ready for occupancy, the ultimate goal is a sale for profit. Before undertaking the subdivision of land the developer will probably study the market for the size or class of property he proposes to develop, study the growth trends in that particular neighborhood or section of the city, consider the timing of the development in anticipation of the demand or the completion of associated development, and consider financing problems and many other pertinent matters.

Perhaps our job as public officials, is to look at the problems of the development of a new subdivision strictly from the view point of protecting the public interests. As soon as the rumor is started that a certain area or tract of land is to be subdivided, the residents in or near the vicinity of such tract usually become instantly apprehensive. “What is going to happen to our property values? Will it cause greater traffic congestion? Will our neighborhood schools be seriously over­loaded?” The answers to these questions, and for the many more matters affected by a large scale sub­divisional development, depend a great deal on the control the city officials have on the planning and development of the area.

A large number of city officials have interrelated responsibilities to protect the public interests. The city’s authority starts usually with the common council. Many of our cities have enacted and are guided by an ordinance designed specifically for the proper control of sub­divisional development. Where there is a city plan commission most
of the overall planning problems would be cleared through this agency first.

Let's make a list of some of the overall and general outlook problems facing city officials before a large subdivision can be properly developed. Let us start with the zoning requirements for proper land use. Is the land best suited or located for industrial use or commercial use, or for residential housing? Should additional school or recreational areas be allocated and set aside as part of the program? Does it conform with the master plan where such a plan is adopted? And, of course, a check must be made as to the availability of public utilities—sewers, water supply, power. Consideration must also be given to the municipal services to be provided after the subdivision is fully developed—public health, police protection, fire protection, street lighting, traffic control, refuse collection and disposal, and perhaps many more general problems to be faced.

Whether or not your city has a subdivision control ordinance, or plan commission, or a master plan, the city engineer has and must assume a large share in the responsibility for the correct answers to all or most of the above enumerated problems, and in addition, must assume practically the full responsibility to assure proper ground control. Under layout or plat arrangement come the problems of street location and designation for anticipated use, whether for state or interstate highway, main arterial throughway, secondary connecting street, or feeder street to inside streets or to cul-de-sacs. The city engineer in those cities having no master plan or plan commission, particularly, should be alert to the need for requiring the developer to provide for and to dedicate streets of sufficient width and arrangement for the anticipated future needs of the city, and to assume ready access to all service streets. Two or more platted routes to each service street are desirable to provide for emergency ingress and egress in the event one street may be temporarily blocked off during construction or repairs or for other reasons.

The city engineer should also be alert to advise the planner against poor design in layout. Eliminate deadend streets without adequate provision for properly designed turn-a-rounds. Limit the lengths of streets ending in a cul-de-sac in order that a minimum amount of double travel is required for ready access and departure for each lot. Eliminate unnecessary jogs or offsets in the continuity of streets. Avoid double frontage lots, a practice that wastes street lengths.

Of course, it is quite advantageous to have the plat fit the topography. In many of the older subdivisions particularly, the layout of streets and lots was arranged in parallel tiers without regard to topo-
graphical features. In rough or hilly areas, this practice has sometimes resulted in reducing the desirability or feasibility of building on some of the lots, thereby reducing their value and often encouraging the building of substandard housing spotted throughout a relatively higher standard neighborhood. Also, it is usually found that the cost of improving streets, and cost of installation of sewers and other public improvements are materially increased in areas where the platting layout does not fit the topography.

Since the advent of government financing of home building through the F.H.A. and the Veterans' Administration and in cooperation with their planning departments, the so-called "contour control" design has become increasingly popular even throughout relatively flat areas. Gently curving streets with cul-de-sac courts connecting to more readily accessible throughways, seem to be the preferred arrangement by such planning agencies.

With reference to ground control, the developer or his engineer-planner should be required to furnish certain basic information to enable the city authorities and particularly the city engineer to properly review all the problems. The basic information should include an area map showing the proposed subdivision with reference to the adjacent property, a boundary and topographical survey, and a tentative overall layout plat, and line and grade profiles along proposed streets and sewers. A schedule of the proposed development, if the intended plat is to be developed in sections, may be of considerable value.

The city engineer must then review the layout plan—line and grade profiles, street improvement plans, sewer design, provisions for drainage and be ready to recommend approval for construction to the board of public works when proper plans are furnished.

Perhaps, long before this stage of the review has been reached, the city has already adopted certain minimum improvement requirements and procedure. Proper plans, specifications, construction contracts and a guarantee of the improvements will greatly reduce the future obligation of the city for maintenance and repair.

When the city accepts title to the streets, utilities, sewers and other improvements constructed and installed by the developer of a new subdivision, it accepts an obligation to maintain such improvements forever. It is important to the city, therefore, that the subdividers provide a complete, marketable product, with all reasonable improvements, constructed in such fashion and quality to best fit the needs of the public and requiring a minimum of costly upkeep.