

THE ROLE OF THE SURVEYOR IN TOWN PLANNING

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This Paper was delivered by Mr. Monaghan as part of a panel discussion on "What should be the Role of the Surveyor in Town Planning" at the 1959 Annual meeting of the Canadian Institute of Surveying. The Chairman of the Panel was Mr. Armand Dumas M.P. from Montreal. Other panel members were Mr. S.H. Pickett, Mr. G.C. Hamilton, and Professor J.F. Colbreth Burdis. It should be noted that Mr. Monaghan's discussion of the Ontario Planning Act, although familiar to us, is addressed to an audience from all parts of Canada. It is hoped that the other papers presented to the panel may be published in the future, in the interests of broadening the scope of the work of the Ontario Land Surveyor. - The Editor.

As I am one of the principals in a firm of Ontario Land Surveyors and Consulting Professional Engineers in Toronto, my presentation is that of a surveyor and engineer with experience in Ontario and particularly in the Metropolitan Toronto area.

In considering the question before us, I wondered if it meant "In what ways does a person in the capacity of a surveyor contribute to town planning?" or if the question meant "Should the surveyor undertake town planning work?" I couldn't decide; so while I have your attention I will deal with both questions briefly.

To answer either we must first see what town planning means to the surveyor. In the broadest sense town planning means the application of intelligent forethought to the determination of our environment. At the same time, it is implicit in my discussion that surveying and town planning are two distinct and separate functions. To the surveyor, who may have learned the meaning of existing planning legislation and of the requirements of people in the land development business, this definition would include the elements of planning in which he has interest.

Two elements of planning are significant from the surveyor's point of view. They may be identified as pre-planning and detailed design. Pre-planning occurs perhaps at the local planning board level, through area planning boards up to the provincial government level. The product of this pre-planning may be an "Official Plan" which determines the future land-use of the area in terms of residential, commercial and industrial development and indicates the possible future requirements of the municipality for land. It may be said that the official plan serves as advance notice to the public of the municipality's policies towards development. Whereas this plan provides a statement of policy, the rules and regulations are set out at municipal level in the form of a zoning by-law and other legislation.

To legislate on future land-use or on any subject, of course, requires an inventory of resources available. The surveyor's first opportunity arises then by producing a topographic map at a scale of, perhaps, 400' 1", with a 5' contour interval of the area under the jurisdiction of the Planning Board. As this map usually encompasses larger areas, it may be most efficiently prepared using photogrammetric methods.

In the conduct of this inventory the surveyor is asked to emphasize topography, drainage areas, present land use, soil characteristics, transportation routes, communication channels, tree cover and other physical features having a broad impact on the area. This topography is the surveyor's primary contribution at the "Official Plan" stage.

He returns to the scene at or prior to the detailed design phase of town planning. This relates, of course, to the preparation of a draft plan of subdivision. This draft plan is a proposal submitted to the Minister of the Department of Planning and Development detailing the manner in which a land owner intends to subdivide his land. In accordance with the requirements of Section 26 of the Planning Act, this plan will show the proposed alignment of streets, the shape and size of lots, the type of municipal services and facilities to be provided, to mention a few. To this draft plan the surveyor contributes boundary surveys and large-scale topography.

Should his draft plan then survive the revising and approving process as it encounters several departments and public utilities at the provincial, Metropolitan and municipal government levels - not to mention the banker at federal level in the form of C. M. H. C. - the surveyor then has the opportunity of preparing a Final Plan of Subdivision.

For the benefit of surveyors working in other branches of the profession and not necessarily aware of this detailed process of plan approval and registration, there are two plans. First is the draft plan as required by the Planning Act, which, as indicated above is a proposal on the division and development of land. The second is the final plan of subdivision for which provision is made in The Registry Act and The Land Titles Act. Registration of this final plan of subdivision has the effect of alienating the lands contained in the plan from their previous status to that of lots and blocks in reference to the number given the plan by the

Registry Office. Incidentally, the two acts governing registration provides that final plans must be approved under the Planning Act. This ensures continuity as the subdivider advances from the draft plan stage. By the way, I have used the adjective final in referring to the subdivision plan. This word is used in the governing legislation and I believe it is a contribution to the terminology by the subdividers in acknowledgement of the numerous revisions to the draft plan.

Let us return from this discussion of the two types of plans to the surveyor who is preparing the final plan of subdivision. This is a critical stage in the relationship between the planner and the surveyor, for it is now that the surveyor must, to some degree, ascertain the planner's intent and represent this on the ground in the form of monumented street lines and lot corners. Close liaison is desirable, particularly in respect of critical road grades, natural water courses and ravine lots. Even after the usual precautions are taken by the planner, the surveyor must be informed of the zoning regulations governing the plan and make calculations to ensure that his work is in compliance with the frontage and area specifications. As a matter of fact, the Township of North York requires this in the form of a certificate signed by the surveyor.

To summarize, then, the surveying function relating to town planning is to prepare topographic maps, boundary surveys and final plans of subdivision.

Now -- "Should the surveyor undertake town planning work?" meaning the preparation of official plans and the design of draft plans.

First, let us explore the qualifications of a town planner. Calling to mind the import of the official plan on the development of our environment, it is apparent that the planner should have formal training in geography, economics, sociology, municipal engineering, architecture, as well as have practical experience. On

the strength of this observation, we must conclude that a planner and a surveyor require quite different academic and experience preparation for their respective careers, and we must tentatively conclude that a surveyor is not qualified as a planner.

At the same time he does receive some training in this subject as an apprentice. A series of lectures is given during the annual four weeks' course, the student prepares a draft plan and must pass an examination on the subject as part of the qualification of an Ontario Land Surveyor. This course performs a very essential function in causing an awareness of planning in the surveyor's mind. He learns something of the art and science of planning and becomes familiar with the legal and procedural steps which are so essential to a practicing surveyor.

Having raised the question of the surveyor's qualifications as a planner, let us now turn to a more practical consideration. Although official plans are, to quite an extent, prepared by town planners, the majority of draft plans are actually designed and prepared by surveyors. Since the formation of the Ontario Department of Planning and Development in 1945, over 12,000 of these draft plans have been submitted; and although the town planner, the architect and the engineer have participated, the surveyor is alone responsible for more than half of these draft plans. At the same time, it is significant however, that there is a gradual migration of this work to the town planning organizations that are now emerging on the development scene.

The logical question may be asked - why are the surveyors called upon to prepare draft plans? Part of the answer is in the realization that the surveyor is known to the subdivider through his earlier boundary survey and topographic survey work, and he must certify as to the correctness of the boundaries shown on the draft plan. He is also related to planning by tradition. A further vital

consideration may be the fact that the surveyor is interested in earning a living and planning occurs as an opportunity. At the same time, surveying - as with engineering and architecture, is an established profession with legislation protecting it on one hand and, on the other, is serving the public by establishing standards of formal training and performance. Planning, as a profession, has considerable progress to make in this direction.

Perhaps as progress is made, a program of "selling" the profession to the "buyers" of this service may be undertaken. A constructive and positive campaign - informing the taxpayers at large and the potential subdivider in particular of the short and long term benefits of planning, and specifically the economic advantages - may have very substantial effects. To borrow a phrase from our Association of Professional Engineers-- "silent service is not enough".

While I have the opportunity of discussing planning with town planners, I would like to mention an area of planning which is "orphaned" to a great extent from all of the participating professions, I am referring to what is commonly called "architectural control". This connotation refers to the actual choice of house by the project builder, the siting of the dwelling on the lot and the grading of the site. In many instances the town planner designs the draft plan and sets it in motion, the surveyor pursues the plan to registration, the engineer ensures that the municipal services are properly designed and constructed, and the architect provides designs of house types -- and all these experts leave the scene before the building actually commences. At this stage the builder commits the largest capital investment to the property. The one governing authority that now oversees this very important responsibility is the Central Mortgage and Housing Corporation. This Corporation requires the submission of plans from the builders, in their capacity as insurers or bankers.

However, the erection of houses in a development, their subsequent sale and pleasurable occupation by families is the ultimate objective of all of the groups participating in town planning - or shall we say town building. No matter how well conceived, the plan remains only an intention until properly translated into satisfactory places to live, work and play.

I think this function of architectural control is rightfully a town planning task and have emphasized this point, for it, I think, constitutes the final step in town planning. Of course, it also provides a market for the professional service which is rewarding in the accomplishment.

In closing my remarks I would also like to emphasize the great importance of co-operation between the professional services contributing to planning, whether at the official or draft plan levels. This co-operation and subsequent co-ordination should begin at the outset of the project and continue throughout. Only in this way can the surveyor properly discharge his responsibility and the object of planning be accomplished.

Now I have traversed the subject of the role of the surveyor in town planning through to the role of the town planner in land development. I trust this contribution has been helpful.

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