

FIRST ANNUAL CONFERENCE ON LAND TRANSFERSARNIA, ONTARIOJUNE 20, 1964THE PROBLEM OF THE VANISHING SURVEY FABRIC

by E. O. Lafontaine

Original Survey Fabric The original survey fabric in the Province of Ontario was established many years ago in some cases, only recently in other cases, and not at all as yet in other cases. Surveyors were originally commissioned to lay out existing settlements or new settlements, township lots, road allowances, forts and other settlements of military significance. The early surveyors would hire natives and roustabouts to assist them. They would act on the orders of the party who ordered the survey and would generally follow instructions as nearly as possible. Quite often the principal function of the survey would be to indicate which lands were settled, the name of the settler and the size of the property which he settled. No doubt many persons have seen the type of plan which these early surveyors made, whereon are indicated the names of the original settlers and the area of their holdings.

Many survey systems were used by the early surveyors. These systems would depend upon the surveyor himself, or upon his instructions or to some extent upon which the conditions found, the type of settlement, the topography of the land and other influences. As a consequence, we have a variety of survey systems such as the single front system, the double front system, the front and rear system, the thousand acre section, twelve thousand acre section, etc. We also have many special cases such as exist in South-Western Ontario particularly. These special cases have been caused by the French influence, by the confluence of the Great Lakes, by the peculiar settlement which existed at the time.

Regrettably, not all survey lines were run in the systems which were used in the early surveys. Quite often rear stakes would not be placed at the lots or in other cases every second lot line would be staked. This of course meant that part of the survey fabric was missing in the first instance.

Extensions to the Survey Fabric Since the establishment of the original survey fabric by the old surveyors, there have been extensions or subdivisions of this fabric. The first extensions or subdivisions would be the division of lots into aliquot parts such as half lots, quarter lots, etc. This division usually occurred between father and son upon the passing from the one generation to the next.

Urban development and the registration of plans and subdivisions was the next major extension or subdivision in the survey fabric. In some cases, urban lay-out was a part of the original survey fabric as when the original survey laid out a settlement, military fort or defined a cluster of houses, etc. Nowadays of course, urban development and the registration of plans of subdivision, constitutes the major extension of the survey fabric.

There have been adjuncts to the survey fabric which are outgrowths of the fabric of which define or enclose the fabric. As an example, we can consider the development of urban municipalities, such as villages, towns, and cities, where the incorporation of the new municipality or its separation from the township is defined by a municipal boundary. This municipal boundary is usually defined by a legal description contained in a proclamation.

Provincial boundaries enclose the survey fabric and these are defined in most instances having been surveyed by the Ontario Government in co-operation with the governments of the adjoining provinces. In addition, to being well defined,

the boundaries are surveyed to high degree of accuracy and are very well referenced for future re-surveying.

The International Boundary between Canada and the United States constitutes a boundary to the survey fabric over a great portion of the Province. This boundary has been very accurately surveyed and is very well defined. It is controlled by the International Boundary Commission and the survey is maintained in excellent condition with fine records available to all who care to use them.

Problems with Original Survey Fabric It is not surprising that there were problems arising out of the original surveys made in the Province of Ontario. We must consider that in the first instance the surveyor who was commissioned was not always highly qualified. Some of these appointments were political appointments that were unrelated to the qualifications of the surveyor. The quality of the assistance which the surveyor obtained was of dubious character when we consider that in most instances the surveyor had to hire natives or uneducated woodsmen to help him. A measurement is only as good as both persons making the measurements, no matter how qualified one may be. We must also consider that the type of instruments used in those days were certainly not in a league with those which are used today. Other factors which we must consider would include the great hardships which the early surveyors had to endure; their transportation was on foot, or by canoe; the country at the time was uncharted, wild and rugged; and it took a very hardy soul to venture out and survey under those conditions. Moreover, the land at the time seemed to be of little value to the person making the survey. Quite often it was swamp or bush which to the surveyor appeared worthless and he therefore, perhaps, took less care than he might otherwise have taken. Needless to say, a great many of the swamps and worthless land which the surveyor condemned in his records of those times have now proved to be extremely valuable.

It must also be remembered that many of the early surveys were carried out as long as two hundred years ago. It is difficult to imagine that the monuments and survey lines established at that time would now remain preserved for us to follow. Indeed, the ravages of time have caused most of our difficulty in connection with retracement of original survey lines.

Problems of More Recent Surveys Even today, we experience problems with surveys and surveyors themselves. Despite the fact that we now use better instruments and better methods of surveying, we are human and therefore we are prone to error as any human being. Principally, lack of checking, lack of information, lack of research and lack of investigation cause the major problems. It must be recognized too that the surveyor making a survey is often confronted with conflicting evidence and must rely upon his personal judgment which, if faulty, leads us to all sorts of unusual situations.

As stated, original surveys were done many years ago and in a great many cases the evidence of these surveys has long since been destroyed. Now, fences, and other possessory lines begin to take precedence over the destroyed original surveys. These possessory lines begin to add confusion to the title and, yet, they have very real legal significance. The surveyor has to use good judgment as to the evidence which he is assessing and errors in the judgment in interpreting the evidence, the original survey notes, the records, the references and other matters which can cause serious problems.

The transfer of title from generation to generation through the decades without surveys to accompany each transfer leads to a loss of property definition.

It is doubtful whether any parcel can be transferred without some possibility of title problems, if a survey is not made. In addition, lack of proper control in the registration and checking the documents has created difficulties particularly if the registration has permitted the property to be transferred and registered without proper description.

Present Day In some areas today, the condition of the survey fabric is very good.
Condition of Also in some areas, the condition is very bad. It is probable that
the Survey every County in the Province has areas where no reasonable survey
Fabric fabric exists for many acres. In fact, it is quite possible that every
surveyor practising in the Province can call to mind large areas
where no survey fabric exists.

This condition for the most part has been caused by the topography of the land and by the type of original survey. It will be recalled that certain survey systems did not have the side lines of the lot run in all cases. If we combine this type of system with a topography where there are many lakes and rivers, we have a very serious problem of missing survey fabric. On many of the municipalities that border on lakes, the erosion of the banks has caused the loss of many acres of land including the survey lines. Whole roads have been known to disappear into lakes and new roads spring up in unaccountable fashion along the shorelines.

Perhaps some of the most serious problems occur in the older cities and towns. These older cities and towns were surveyed and plotted on a plan drawn by the surveyor himself. Often, these plans prove to be quite worthless because they shown no measurements, no bearings, no dimensions, no road widths or any other useful information. Typical of such areas would be the downtown section of the City of Toronto and the old Town of Amherstburg. In both cases, the central core of the municipality has been shown on a very old plan which has neither dimensions nor bearings. Needless to say, surveying under such conditions is unusually difficult and costly.

In many rural areas today, there are sections of land where no lot lines exist for the space of several lots. There are areas particularly prevalent in sections of the country where cash crops are grown. The use of fences in these type of areas is not as prevalent as in other areas where livestock are kept and as a result, the boundaries between lands become obliterated through cultivation. Over the years, no surveying is done and very soon the fabric has been destroyed.

Another serious condition exists in some municipalities where whole sections of the municipality, if not all of it, have been occupied and settled in a fashion which is entirely at conflict with the registered instruments and plans. It is not to be inferred here that the cause of this dilemma is the surveyor who made the original survey. Rather it is caused by a gradual neglect of property from generation without survey or registration of the new deed, and by a general disregard for land value. Many surveyors have witnessed situations where whole towns or villages have had to be resurveyed or ought to be resurveyed because of this condition.

The Problem When the survey fabric of an area is lost, individual persons can
when the rarely afford to pay the cost for a proper survey to re-establish
Fabric their property lines and to straighten out their title. In addition,
is Lost the excessive cost of surveying will deter proper land transfer
procedures and therefore poor title will persist. It is doubtful
whether any surveyor in private practice has escaped the situation where he has
had to tell a prospective client that the cost of the survey is so great that he
doubts whether it will be worth it to the client. Yet, what is to be done with
these cases? Moreover, the erosion of the survey fabric accelerates when the

number of surveys in an area declines. Therefore, if there is an area where few surveys are being requested because of the excessive cost, the survey fabric will erode to an even greater extent and intensify the problem.

When the survey fabric is lost, lines of occupation or possession soon take precedence over the originally surveyed lines. This creates a further aggravation to the problem because conflict between title and possession soon exist and the registration of the title transfer document become a welter of quit-claim deeds, etc. Action is usually only taken in these cases when the situation is so bad that the registrar or other authority having jurisdiction orders a proper plan or other corrective survey instrument to remedy the problem. By this time the problem is usually so severe that the cost of the entire survey is several times greater than it might otherwise have been.

Possible Solutions It has been remarked that individual persons can rarely afford to pay for the extra cost of surveys in areas where the survey fabric has been destroyed. This immediately suggests government assistance or legislation which will assist in these problems. Certainly government financial assistance to municipalities wishing to make re-surveys on a general scale would be a desirable assist in this matter. Another great help would be legislation which would permit re-surveys to be made under surveyors' reports and the cost charged to the individual owners affected, in somewhat the same manner as charges can be made against properties under the Local Improvement Act or under the Municipal Act for such things as sewers and watermains. This type of survey could be made either on petition of the owners affected or on the initiative of the Council of the municipality if it deemed such action was necessary.

For many years now, surveyors in the Province have been studying the matter of the establishment of a co-ordinate control system for surveys. This type of system would establish major co-ordinate points to be used to maintain the survey fabric and which could be used as reference points in all future land transactions. Our American brothers have been quite successful with this system and we believe that it has very great merit. In many countries of Europe, there is very little problem because of the use of co-ordinate control.

The establishment of a guaranteed title system such as Land Titles would eliminate many problems which occur especially with reference to fences, possessory lines, etc.

Possibly a solution is already occurring because surveyors use greatly improved instruments and methods nowadays. Checking of surveys is now done with calculators and electronic computers. Aerial photography, and the use of tellurometers and such devices not only improve accuracy but reduce the cost of surveying.

Rigid registration requirements will also help to solve the problem by eliminating registration of land with titles containing poor or inadequate descriptions.

Today's surveyor is more skilled and better educated than his predecessors because of the constant efforts of the Ontario Land Surveyors Association, to improve the qualifications of surveyors. This surely will result in improved surveying and will help to solve the problem of the vanishing survey fabric. Notwithstanding, the qualifications of the surveyor, however, and the highly accurate equipment he may use, surveying still requires a great deal of personal judgment. If we can reduce the number of times when such judgment is required, we will have helped to solve some of the problems in land transfer. This can only be accomplished by the joint co-operation of the legal profession, the surveying profession and the government authorities and agencies who regulate or control surveying and land transfer.