

The Management of Map Revisions

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A series of map sheets at a scale of one inch to a hundred feet cover the built up portion of the City of Ottawa.

These show the original township lots, forced roads, plans of subdivision, as many linear dimensions as are available from existing records, and references to all documentation pertaining to the streets and the limits thereof.

If a street name change occurs, then the by-law number effecting it is shown. If a street is widened, the instrument number of the transfer document, and the subsequent dedication by-law, if any, is annotated.

Property lines are not shown; at least not on the master sheets that are produced and maintained by us. Topographic information is not shown.

The first sheets were drawn in 1935, and others have been produced as the City expanded. In the beginning, the only control had been the fabrics of the original Townships of Gloucester and Nepean, so as you can imagine the occasional subdivision has had to be cranked around a little bit to ensure a fit.

The sheets are currently being re-drawn at a scale of one to twelve fifty, with proper control, and all linear measurements are being converted to and shown in S.I. units.

A map of the City at 1:5000 and a street index are also maintained.

One of the principles of our system is that the plans and index should be kept permanently up-to-date by a system of continuous revision. What we attempt to provide to other civic departments, other Government agencies, and the public, are a series of maps, and an index, which represent the relevant facts as they are on the day when any map or the index is required for use.

We do not concern ourselves about the age of the map, but the extent to which the facts shown on it have changed since the date of its last circulation.

We feel no embarrassment at all in charging for a print of a map that has not been revised for five years, as long as we know for sure that no changes have occurred to the information shown on it during the preceding five year period.

Such a system demands that all changes are made soon after they occur so that a user may always obtain up-to-

date information at short notice in the form of a copy of the map sheet, while a new circulation of the sheet may be made whenever it is deemed necessary to do so.

Up until a few years ago, revisions to the map sheets were carried out in a haphazard fashion.

Sometimes changes were made upon verbal instructions, sometimes a scrap of paper would note the changes required, and sometimes a letter, usually polite I must say, from another department pointing out an error would instigate another revision.

Notes to revise were sometimes not followed up, and a mapping product that was not as reliable as it could be, or should be, was the result.

Any time a new sheet was finished, paper prints would be circulated to user agencies. They would request prints of older sheets when their old ones had worn out or disappeared, or when they thought they were out of date.

No systematic procedure existed to ensure that needed changes had been made or that from time to time users were given new prints of revised sheets.

The preparation of new sheets slowed down considerably during the last few years, and we experience no difficulty in producing and circulating these.

As the older sheets were being continuously revised, however, it was important that when the need for a change to an existing sheet was perceived, then sufficient administrative control had to be introduced to ensure that the work was carried through to completion. It was also considered necessary to record the amount of change taking place on each sheet, so as to know when a new circulation of a particular sheet should be initiated.

This problem was passed to Mr. D. Hodges, Resource Officer, of our Administration Division. The procedure that he developed is outlined below.

The system demands adequate intelligence, and stress is laid on the need to develop and foster liaison contacts in our own administration, and in other government offices.

For example, a trip to the land registry office is made twice a year to check that copies of all registered plans and condominium plans have been received,

and lists of by-laws enacted are reviewed periodically to make sure that none of those concerning our maps have been missed.

We are also fortunate that our position as a municipal survey organization gives us advance notice in most instances of impending legislation, and through the approval processes, of most plan registrations.

Information indicating the need to revise a map that we maintain can now be transmitted to us by a partially completed Form 1, "Revision to Mapping", by the receipt of a plan or by-law, by memo or otherwise.

The chief draftsman receives the information, and either prepares a Form 1, or completes the form received (see Figure 1).

The type of revision is identified and noted under the measurement units. A weighted constant is assigned to each type of map revision to determine the frequency of distribution of the revised maps, and is indicative of the item's relative importance.

For example, if a new street is to be added to a map sheet, this would be of immediate interest to many users. Building permits will probably be issued, a house numbering system on the new street will need to be set up, and so on and so forth, so this type of revision is given maximum weight.

On the other hand, it may be convenient to add the registered instrument number of an old by-law, for future reference, and this would be of interest to our office only, so this is given no weight at all in the distribution process.

The next consecutive revision number is obtained from the "Mapping Revision Log" and entered on the form. The rest of the form is completed where appropriate.

An entry in the "log" at this time ensures that the revision will be eventually completed, and not forgotten.

The "Revision to Mapping" form together with any source documents is passed to the draftsman assigned to carry out the revision.

The revision is made to the subject map, and the date of the revision is added to the map in the title block area. Form 1 is signed by the draftsman, and the revised map and source documents are returned.

The plan as drawn is checked, and Form 1 is completed by the chief draftsman.

The "Map Revision Control Sheet"

DEPARTMENT OF PHYSICAL ENVIRONMENT
SURVEYS AND MAPPING DIVISION

REVISION TO MAPPING

Date: _____

Request to revise: Sheet Plan _____ Sheet Number (if known): _____
City Map _____
Street Index _____

Location: _____ At Between: _____ And: _____

Nature of Revision: _____

Requested by: _____

Code	Indicators	Meas. Units	
1)	Subdivision Lots	_____ x 2 = _____	REVISION NO. _____
2)	Streets (Opened or Closed)	_____ x 10 = _____	SHEET NO. _____
(Streets (Widened or Narrowed)	_____ x 2 = _____	
4)	Street Name Changes	_____ x 5 = _____	
5)	Document Nos. Annotated	_____ x 0 = 0	Dept. File: _____
6)	Lanes (Opened or Closed)	_____ x 2 = _____	Div. File: _____
7)	Other	_____ x 1 = _____	Field Notes: _____
		TOTAL UNITS = _____	

SHEET NO.	REVISED BY	DATE	CHECKED BY	DATE

FIG. 1

MAP REVISION CONTROL SHEET

SHEET NO. _____

Nature of Revision	Revised By	Date of Revision	Meas. Units	Accumulated Total Meas. Units

FIG. 2

(there is one of these for each map - see Figure 2) is completed by entering thereon the nature of the revision, revised by and date. The measurement units, and the accumulated total measurement units are computed and entered.

If this total does not reach the trigger, or distribution level of ten, then everything, including the map sheet, is returned to the files.

One of the disadvantages of the system described here is that unlike the production of new map sheets, when it may be expected that circulation or publication will follow its completion within a week or two, work undertaken in the course of continuous revision may lie unpublished for a considerable period.

We console ourselves with the thought that any revisions that do not cause the accumulated total to reach the trigger level are fairly innocuous in themselves. It is their cumulative effect that can destroy the validity of any map.

In the event that the trigger level is reached, or exceeded, then prints of the revised map are ordered and distributed as per a distribution list. A note is made on the "Map Revision Control Sheet" of the circulation, and the accumulated total of measurement units is returned to zero, before the Control Sheet is returned itself to the files.

This system also allows us to inform anyone with a print of one of our plans of its status at any time. So long as we know the last revision date shown on their print, by referring to the appropriate Map Revision Control Sheet, we can tell them how many changes, if any, have been made to that particular sheet since their copy was made, and the nature of each change.

Whilst the foregoing procedure could be described as a set of rules for the numerical assessment of a subjective problem, it hasn't really solved all of them. However, in the ongoing programme of supplying reliable maps on a continuing basis, it has nevertheless gone a long way in bringing order to what was an amorphous and unsatisfactory kind of situation.

It occurs to me that such a system could be made to work on the maintenance of topographic maps if access could be had to copies of all building permits issued. Even if new buildings were not added to, nor demolished buildings erased from, existing topo maps, then a record of the work required on each sheet should serve as an indication as to whether a manager would be economically justified in producing a completely new sheet of that particular area, or not.