



STAFF REPORT ACTION REQUIRED

Amendment to Municipal Code - Management of Subsurface Space in the Road Allowance

Date:	May 19, 2009
To:	Public Works and Infrastructure Committee
From:	Executive Director, Technical Services
Wards:	All
Reference Number:	P:\2009\Cluster B\Tec\PW09022.dco

SUMMARY

The purpose of this report is to provide an update on the long-term initiative to improve the management of subsurface space in the road allowance and request an amendment to the Municipal Code that would require as-built drawings as a condition of road cut permit approval.

RECOMMENDATIONS

The Executive Director of Technical Services recommends that:

1. the Municipal Code Chapter 743, Streets and Sidewalks, Use of, be amended substantially as set out in Attachment 1 to this report, to require as a condition of cut permit approval that as-built drawings, or location certificates, be submitted by all applicants, including utilities, to the City of Toronto within 60 days of completion of construction by the applicant installing underground equipment, plant or structures within the road allowance, subject to such technical or stylistic amendments as may be required by the City Solicitor;
2. As set out in Attachment 1, any applicant who fails to provide the as-built drawings or location certificates as required shall pay the City's cost of preparing them and shall be ineligible, except in the case of emergency or to perform work where otherwise required by the City, for the issuance of further permits for the performance of work within the City street in respect of the particular equipment, plant or structure for which the as-built drawing or location certificate is outstanding until these requirements are complied with or the City's costs of

- preparing the as-built drawings or location certificates have been paid by the applicant;
3. the Executive Director of Technical Services and the General Manager of Transportation Services be authorized to define standards for as-built drawings and location certificates consistent with Ontario Regional Common Ground Alliance (ORCGA) best practices and the evolving CSA standard for the mapping of buried utilities; and
 4. the appropriate City officials be authorized to implement the foregoing, including the introduction of the necessary bill.

FINANCIAL IMPACT

There are no new financial implications from the adoption of this report.

DECISION HISTORY

At its meeting of May 18, 19 and 20, 2004, City Council approved the report entitled "Approval of Long-Term Initiative to Improve the Management of the Subsurface Space in the Road Allowance". Further details of the report are available at:

<http://www.toronto.ca/legdocs/2004/agendas/council/cc040518/wks3rpt/cl023.pdf>

COMMENTS

Interest from the Toronto Public Utilities Co-ordinating Committee

On September 9, 2008, the Digital Map Owners Group, being the Toronto Public Utilities Coordinating Committee (TPUCC) members with an ownership interest in the composite utility maps in the former City of Toronto, agreed to undertake a number of pilot projects for composite utility mapping in alignment with the City's capital works program. The pilot projects are expected to be undertaken in 2009 and 2010 with the goal of developing a revised utility mapping process that improves the quality of utility information in support of the City's sewer, watermain and road design activities; improves the efficiency of City and utility drawing mark-ups; and dovetails with utility design activities triggered by City requests for utility relocations.

Development of Requirements for As-built Drawings, Mapping and Electronic Data Standards

Over the past four years, staff has undertaken numerous activities to explore and promote the long-term benefits of reliable records defining the location of underground utilities. The activities of staff have included:

- (1) forming a Utility Policy and Data Standards Task Force of the Regional Public Works Commissioners of Ontario (RPWCO), representing 17 Ontario municipalities, to develop requirements for as-built drawings, mapping and electronic data standards;

- (2) securing membership in the Ontario Regional Common Ground Alliance (ORCGA), dedicated to the development of utility best practices with respect to safety and damage prevention;
- (3) jointly engaging with the Regional Public Works Commissioners of Ontario the Canadian Standards Association to develop a national standard for the mapping of buried utilities;
- (4) collaborating with the Ontario Goods Roads Association and members of the Professional Engineers of Ontario and the Association of Ontario Land Surveyors.

Standards for As-built Engineering Drawings Prepared by Contracted Services and Developers

The Executive Director of Technical Services has completed the specifications for as-built drawings of sewers and watermains to be assumed by or constructed under contract to the City.

The standard for mapping of public and private buried utilities is expected to be completed by the Canadian Standards Association in the first quarter of 2010 and the City's sewer and watermain as-built specifications will be revised accordingly at that time.

Report on Technology and Other Changes that May Impact Policy

The changes in technology that impact the exchange of electronic utility network information have been significant due to the efforts of the International Standards Organization, the Open Geospatial Consortium, the World Wide Web Consortium, Google, Microsoft and many others. The effort of the Canadian Standards Association is a key missing link that is expected to bridge a significant technology and standards gap for utility map integration on a day-forward basis. The Technical Standards and Safety authority is expected to incorporate some portion of the CSA standard for the mapping of buried utilities in regulations governing excavation safety for electrical and pipeline utilities.

The cost of obtaining a relatively accurate positional fix of an exposed utility, for mapping and other purposes, continues to decrease through improvements to global navigation satellite systems, information technology services and data collection equipment.

It is noteworthy, from a policy perspective, that many jurisdictions recognize the contribution of reliable utility location information to efficient transportation and construction planning and coordination in the road allowance. Japan and England have enacted legislation affecting three levels of government and the latter has engaged several universities to undertake extensive research on mapping underground utilities. Many studies by U. S. Departments of Transportation (DoT) are coming to similar conclusions.

The Florida DoT recently completed a major study entitled the “Efficacy of Utility Database Management” and included several recommendation for the creation of Utility Information Management System.

Maximization of Subsurface Road Space to Enhance Tree Plantings, Soft Landscaping and Urban Design Objectives

The Development Infrastructure Policy Standards (DIPS) Phase 2 report, jointly authored by Technical Services and Planning Divisions, was adopted by Council at its meeting held on December 5 and 6, 2005. The report presents a set of six standardized public road allowance cross sections. In an effort to meet the conflicting needs of urban intensification, reduced road allowance standards and the growing expense of underground infrastructure installation and maintenance, a hierarchy of different road allowance widths with standardized underground utility locations has now been adopted. The implementation of these standards together with the efforts of the Development Engineering Committee of the Municipal Engineers Association, which is continuously surveying member municipalities for changes and trends in issues related to road allowance and underground utilities in new developments, places us in a better long-term position to encourage and sustain tree plantings, soft landscaping and other urban design objectives.

Provision of As-Built Drawings

As-built drawings should be required as a condition of road cut permit approval for the purposes of harmonizing this requirement across the City. Staff are finalizing a comprehensive harmonized streets by-law and the requirements for utility road cut permit approval, however, until such time as the reports and by-laws are completed, it would be desirable to secure as-built drawings or location certificates of underground equipment, plant or structures as a formal policy of Council.

We are therefore recommending that Municipal Code Chapter 743, Streets and Sidewalks, Use of, be amended to require the submission of as-built drawings, or location certificates, as a condition of cut permit approval to the City of Toronto within 60 days of completion of construction in the road allowance and the Executive Director of Technical Services and General Manager of Transportation be authorized to define standards for the location certificates consistent with ORCGA best practices and the evolving CSA standard for the mapping of buried utilities. In the event that as-built drawings or location certificates are not provided as required, the Executive Director and/or the General Manager may, at the sole expense of the applicant, undertake the work required to accurately identify the location of the underground equipment, plant or structures and prepare the as-built drawings or location certificates and recover the cost from the applicant. Alternatively, the General Manager may, except in the case of an emergency or to perform other work required by the City, refuse to issue any further permits to the applicant for the performance of work within the City street in respect of the particular equipment, plant or structure for which the as-built drawing or location certificate is

outstanding, until these requirements are complied with or the City's costs of undertaking the outstanding work have been paid.

The proposed amendments to Municipal Code Chapter 743 are included as Attachment 1 to this report.

CONTACT

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SIGNATURE

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Executive Director
Technical Services

Attachment 1 – Proposed Amendments to Municipal Code Chapter 743, Streets and Sidewalks, Use of

ATTACHMENT 1

PROPOSED AMENDMENT TO MUNICIPAL CODE CHAPTER 743, STREETS AND SIDEWALKS, USE OF

It is recommended that Municipal Code Chapter 743 be amended by:

1. Adding the following definition to § 743-1A in alphabetical order:

EXECUTIVE DIRECTOR – The Executive Director of Technical Services.

2. Adding the following new section to the Chapter:

§ 743-5. Provision of As-Built Drawings.

- A. Any person applying to the City for a permit for the performance of work within a City street, including a sidewalk, boulevard or roadway, for the purposes of constructing or installing underground equipment, plant or structures, shall agree as a condition of receiving the permit, to provide to the Executive Director and/or the General Manager, within sixty (60) days of the completion of the work, as-built drawings or location certificates accurately indicating the as-built location, including depth of coverage, of the equipment, plant or structure, in such form and to such standards as may be required by the Executive Director and/or the General Manager [of Transportation Services].
- B. In the event that an applicant fails to provide the as-built drawings or location certificates as required under Subsection A, the Executive Director and/or the General Manager may, on thirty (30) days written notice to the applicant, perform (or cause to be performed) the work required to accurately determine the location of the equipment, plant or structure and prepare the as-built drawings or location certificates as required under Subsection A, and the City may recover the cost of doing so from the applicant by action or by adding the costs to the tax roll and collecting them in the same manner as property taxes.
- C. Where an applicant is in default of their obligations under Subsection A, the applicant shall not, except where, in the opinion of the General Manager, there is an emergency or the permit is required to perform work required by the City, be issued any further permit for the performance of work within the City street in respect of the particular equipment, plant or structure for which the as-built drawing or location certificate is outstanding, including a sidewalk, boulevard or roadway, until such time as the as-built drawings or location certificates as required under this § 743-5 have been provided by the applicant, or until the applicant has paid the City's costs as required under Subsection B.

- D. The provisions of this § 743-5 shall not apply to the extent that they conflict with the provisions of any agreement between the applicant and the City respecting the performance of work within a City street.