

8

LAUNCH OF THE YORK REGION STREET ATLAS

The Planning and Economic Development Committee recommends the adoption of the recommendation contained in the following report, May 11, 2006, from the Commissioner of Planning and Development Services:

1. RECOMMENDATION

It is recommended that this report be received for information.

2. PURPOSE

York Region Geomatics produced a “Street Index” used by various Regional departments, York Region EMS, York Regional Police, and the public. The purpose of this report is to highlight the creation and launch of the new and improved “York Region Street Atlas” which replaces the “Street Index”.

3. BACKGROUND

York Region began producing the York Region Street Index in 1975 for York Regional Police. The original versions were hand drawn and updated once a year in a labour intensive process. As technology progressed, the Street Index was created in AutoCAD and updated once a year. Distribution of the publication expanded to service all Regional Departments. For improved efficiency and to reduce duplication, the Street Index was migrated to a GIS format (ArcView 3.2) in 1999, where it is currently maintained. Within this environment, the Street Index utilizes input from the roads database, which is maintained by Geomatics. The publication is comprised of four layers of information including: Roads, Railway, Lakes and Rivers. With the availability of new technologies and efficient update processes, Geomatics has developed a new Street Atlas to take advantage of these and meet the user requirements for an improved product. The transfer of Emergency Medical Services from the Province to the Region has resulted in York EMS becoming the largest consumer of the Street Index.

4. ANALYSIS AND OPTIONS

Use was reviewed to determine if commercially available street guide products could be used as a replacement. It was determined that because of the region's rapid growth (ie: over 250 roads or 1100 road segments were added last year), a product that is updated quarterly or semi-annually is required. In addition, the product needs to include proposed roads for those activities that are in advance of the road being assumed. Vendor guides are only produced annually, may miss newer roads, and don't include proposed roads, therefore, do not meet the needs of users within the Region. Evaluation of a new format and more efficient process then proceeded.

4.1 Software Research and Acquisition

The York Region Street Index was maintained in ArcView 3.2 which was old and unsupported / un-maintained ESRI software, and required a significant investment of time for updates. With the emergence of new technologies, new software options became available. Map book creation software was researched and tested, resulting in the acquisition of MapLogic software that is compatible with software already in use in the Geomatics Branch.

MapLogic incorporates functionality for multi-page layouts, multiple scale map series, automatic creation of indexes for street names, and utilizes the Branch's ArcMap capabilities and environment.

4.2 New Design

The structure and content of the new Street Atlas was reviewed and evaluated, with emphasis on emergency response by York Region EMS. Various similar publications were reviewed to adopt concepts of "ease of use" and improved navigability.

Improvements include the addition of: key maps of York Region Hospitals, EMS, Police and Fire station locations, UTM reference grid, and a new index for locating street names. The index contains the page and alpha numeric reference for all roads within York Region, and various points of interest including schools, health care facilities, child care facilities, malls, community centres and golf courses. The publication has been created to enable either colour or black and white printing depending on the user's needs.

The scale of the new Street Atlas has been modified to improve readability of street names and features in the urban areas of York Region. There are two scales used within the publication with urban areas zoomed into 2 x 2 kilometre area per page and rural areas showing a 4 x 4 kilometre area per page. A 500 metre overlap area has also been included on each map page providing continuity for features across pages of the publication.

4.3 Improved Information Availability

The original York Region Street Index featured four layers of information including: roads, railway, lakes and rivers. With the new York Region Street Atlas, thirty-two layers

of information will be featured in the publication including: roads, railway, lakes, rivers, hydro corridors, forest, trails, parks, schools, emergency response stations, hospitals, health care facilities, day care facilities, community centres, arenas, golf courses, malls, and conservation areas.

The data layers featured in the new Street Atlas are linked to the Geomatics geospatial information warehouse which enables automatic updates to the spatial features when the publication is updated. Most of the information featured in the Street Atlas is maintained by York Region Geomatics utilizing information closest to source. As an example; health care facilities, EMS stations and childcare facility locations are provided by Health Services and Community Services and Housing departments. Roads are maintained on a daily basis by Geomatics through the use of draft plans and registered plans. Proposed roads are included to meet the needs of advanced activities and emergency response, as well as accommodate the potential of a road changing from proposed to existing within the update cycle. Updates to geospatial information are performed according to an established maintenance schedule.

4.4 Standard Symbology

The features found within the new Street Atlas are symbolized with standard symbology that has been established by Geomatics. Standards have been adopted from FGDC (Federal Geographic Data Committee) and ESRI. Symbology standards define the symbol type, colour, line type and widths of the information rendered. Incorporating symbology standards ensures a feature will look the same from one publication to the next which introduces continuity and decreases confusion on behalf of the user.

Symbology standards have been implemented corporately and are reflected in the GIS map templates and layerfiles available in the Geomatics Self-Service Environment.

4.5 Quality Assurance

Quality assurance conducted by Geomatics staff in the creation phase of the new Street Atlas included labelling verification, location verification, and readability. An additional review period was conducted by York Region EMS paramedics who volunteered to test navigability, ease of use, and data accuracy verification. Quality assurance will continually be performed as part of the updating process with feedback from users.

4.6 Publication Updates

Efficient update processes have been developed and documented. Software characteristics allow for maintaining annotation edits performed from one publication to the next and layout efficiencies allow for changes to be made once to a master layout page which is then reflected on all pages within the publication. The geospatial information rendered in the Street Atlas will reflect the most current information available upon the update of the publication. Automation of the index creation for street names ensures consistency and accuracy between name listings in the index and location within the map series, as well as saving time as manual manipulation to the layout and

content of the index is no longer required. Completion of user needs studies will determine the update schedule.

4.7 Training and Support

Training has been developed and delivered to a pilot group of York Region Paramedics. The goal with the creation of the York Region Street Atlas is to make it as user friendly as possible through the creation of an instructional page included in the publication, and an intuitive design, therefore reducing or eliminating the need for training by users.

4.8 Future Directions

New information layers are continually investigated for inclusion into the Street Atlas as Geomatics strives to improve the quality of data and products, ensuring the information meet the needs of users.

5. FINANCIAL IMPLICATION

No new or additional financial implications as this is part of ongoing operations, including maintenance and continuous improvement and the new process is approximately 20% more efficient related to staff time required for updates. Working with clients and partners through service level agreements and Memorandums of Understanding, Geomatics generally offsets costs related to new and enhanced projects and programs. Printing costs are paid for by clients including the public on a cost recovery basis.

Table 1
Publication Update Resources

	Year 2	Year 3	Year 4	Total Update Cost*	Number of Updates
Old Street Index	45% FTE \$33,000	45% FTE \$34,000	45% FTE \$35,000	\$102,000	4
New Street Atlas	14% FTE \$10,500	14% FTE \$11,000	14% FTE \$11,500	\$33,000	2
New Street Atlas	28% FTE \$21,000	28% FTE \$22,000	28% FTE \$23,000	\$66,000	4

FTE = Full Time Employee resources required in a year.

* Does not include cost of printing which is paid for by Regional Departments and the public on a cost recovery basis.

6. LOCAL MUNICIPAL IMPACT

The York Region Street Atlas is available for purchase by all members of the YorkInfo Partnership and the public.

7. CONCLUSION

The York Region Street Atlas will provide the corporation and the public a means to locate a street or point of interest in a published format that can be used in the field for various business or recreational purposes. The new design improves navigability; ease of use, more information is available incorporating standard symbology, and efficiencies have been introduced in the update process.

Geomatics continues to achieve a high level of customer service and satisfaction through the delivery of quality, value-added mapping products and services in a timely manner, that have become an integral part of business processes in York Region.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is included with this report.)