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2005 DIGITAL ORTHOPHOTOGRAPHY PROJECT STATUS

The Planning and Economic Development Committee recommends the following:

- 1. The presentation by Susan Chin-Snelgrove, GIS Analyst, be received; and**
- 2. The recommendation contained in the following report, December 1, 2005, from the Commissioner of Planning and Development Services be adopted:**

1. RECOMMENDATION

It is recommended that this report be received for information.

2. PURPOSE

The report informs Committee and Regional Council on the status of the 2005/2007 Orthophotography Project including the success to date of partnering with municipalities and Conservation Authorities and acquisition of quality data.

3. BACKGROUND

Digital Orthophotography has become essential information in support of Regional and local municipal operations, programs and strategies. Detailed digital aerial images and elevations have proved to be a high-impact tool that provides rich geographic context for infrastructure, community and long range planning activities, emergency response, and communication with the public.

On November 18, 2004, Report No. 10 of the Planning and Economic Development Committee, Council approved the extension of York Region's existing contract with J.D. Barnes Limited to 2008 to include a maintenance agreement for updating orthophotography. Staff negotiated the terms with J. D. Barnes Limited and extended the existing contract on March 31, 2005.

York Region solicited participation of the YorkInfo Partners to share the cost of the acquisition and provide low cost Orthophotography to local area municipalities and the Conservation Authorities. School boards declined.

Collection of the aerial photography began in early April and was completed in May 2005. These images were then scanned and orthorectified. Orthophotography samples were received from J. D. Barnes Limited for quality assurance and deemed acceptable in

July 2005, followed by preliminary delivery of the whole Region in September and final acceptance and delivery in October 2005.

4. ANALYSIS AND OPTIONS

The maintenance agreement builds on the prior RFP, to exercise an option that was not pursued when the 2002 Orthophotography was acquired. The agreement extended to 2008, allows for two deliveries of Orthophotography in 2005 and 2007, with costs spread over four years (2005 to 2008). As indicated in the previous report to Council, in order to keep the costs down, these data are leased rather than purchased and intellectual property resides with the vendor. Therefore the maintenance agreement does not allow for the Region to compete with the vendor to sell the digital information, other than to “registered associates” including municipalities and municipally-owned corporations. The ability not to resell does not have an impact in the everyday business of the Region or its Partners. The lower cost of licensing data was far greater than the potential for net revenue from data sales.

An Orthophotography Task Force was established, comprised from members of the YorkInfo Partnership, including the Town of Markham, Town of Richmond Hill and the Region, for data quality assurance (QA). They made a site visit to J. D. Barnes Limited in May 2005 to review their operations and confirmed that the acquisition and creation processes met the specifications required in the maintenance agreement. The Region received samples of the Orthophotography in July 2005 as part of the QA process. The Task Force reviewed and agreed that the images met the specifications which was confirmed in correspondence to J. D. Barnes Limited.

In October 2005, the Region received final delivery of the 2005 Orthophotography and its derivative products. These include the Digital Elevation Model and the local area municipality mosaics. The Orthophotography Task Force conducted a final review and accepted the Orthophotography for 2005.

The Region and the YorkInfo Partners now have access to the imagery and its derivative products. This provides a consistent geographic view with the equivalent accuracy to the 2002 product. The resolution of the imagery is at 20 cm for internal use and 50 cm on the internet. This does not affect regional and municipal use, but does slightly impact public use through mapping websites such as York Explorer. The limitation to the quality of the public image restricts unauthorized use of the image, an example being the collection of data from the images for profit by third parties. The YorkInfo Partners received the 2005 Orthophotography and derivative products upon signing a sublicense with the Region.

The updated Orthophotography will be essential to the Region as well as the YorkInfo Partners in making informed decisions in our rapidly growing region. The Information has been used in projects such as West Nile Virus, 16th Avenue Sewer Trunk Realignment and the Official Plan Greenlands Realignment.

5. FINANCIAL IMPLICATIONS

The Region amended the existing contract with J.D. Barnes Limited by signing a four year maintenance agreement in August 2005 for a maximum of \$500,000 over four years for acquiring the 2005 and 2007 Orthophotography. The budget item was identified and approved as part of the Region's 2005 Business Planning and Budget process.

With the price that the Region negotiated, the cost savings have been shared with the local municipalities and the Conservation Authorities, representing a 50/50 split between what the Region and the participating members will pay.

Table 1
Payment and Update Schedule

	2005 Cost	2006 Cost	2007 Cost	2008 Cost	Total Cost	Number of Updates
Maintenance Agreement	\$125,000*	\$125,000	\$125,000*	\$125,000	\$500,000	2

* Year the Region receives new Orthophotography

6. LOCAL MUNICIPAL IMPACT

Geomatics held discussions with the YorkInfo Partners on their requirements as well as the opportunity for cost sharing and avoidance of duplication. Ten members of the YorkInfo Partners have agreed to cost share for a total value of 50% of the cost of acquiring the Orthophotography. The data has been made available to the members of the YorkInfo Partnership in the Region's continued efforts in the sharing of data, applications and resources. The members cost for the Orthophotography and the derivative products average 50% less than if they had purchased the information independently from the vendor.

Signing a maintenance agreement with J.D. Barnes Limited has benefited both the Region and the YorkInfo Partners with the same geographic currency across multiple jurisdictions. The involvement of the members from the YorkInfo Partnership in the Orthophotography Task Force assisted with the acceptance of the Information.

7. CONCLUSION

This acquisition of the 2005 and 2007 Orthophotography through a maintenance agreement resulted in the reduced costs and benefits for both the Region and well as the YorkInfo Partners. The acquisition of the Orthophotography and the project was successful for 2005.

The Senior Management Group has reviewed this report.