MARKHAM

Report to: Development Services Committee Date of Report: January 17, 2012

SUBJECT:	Feasibility of Undergrounding of Overhead Hydro Distribution Systems
PREPARED BY:	Rachel Prudhomme, Manager, Special Projects (2849) Alan Brown, Director of Engineering (7507)

RECOMMENDATION:

1) THAT the staff report entitled "Feasibility of Undergrounding of Overhead Hydro Distribution Systems" be received;

2) AND THAT undergrounding of existing power and utility lines on existing roads, including hydro, telecommunication and streetlight circuits, be deferred pending availability of funding;

3) AND THAT Staff report back as to the results of PowerStream's development of criteria and principles for funding of undergrounding of overhead hydro distribution systems and potential application to the Ontario Energy Board (OEB) for partial funding in their 2013 rates;

4) AND THAT the Region of York be requested to protect sufficient space in the current design for the future undergrounding of the overhead hydro distribution system and utilities in the Highway 7 corridor from Rodick Road to Sciberras Road to the satisfaction of the Director of Engineering and PowerStream;

5) AND THAT the appropriate individuals at PowerStream, York Region and VIVA, as well as Bell, Rogers, Atria, etc., be advised accordingly.

1. PURPOSE:

The purpose of this report is to update Council on the feasibility of undergrounding the existing overhead power and utility distribution system along Highway 7 from Rodick Road to Sciberras Road, the Heritage Area along Yonge Street and Main Street Markham from Highway 407 to Highway 7 and from Bullock Drive to 16th Avenue.

2. BACKGROUND:

In March 2008, York Region retained a consultant (IBI Group) to examine the possibility of undergrounding power lines through various local municipalities as part of VIVA's Rapidway construction. The Town of Markham, City of Vaughan, Town of Richmond Hill and Town of Aurora were asked to provide their lists of priority locations for undergrounding of power transmission lines as part of the YRRTC road widening initiatives through their communities.

The Town of Markham sent the following preferences for undergrounding to the Region in a letter dated October 22, 2008:

Top Priorities were:

- Highway 7 through Markham Centre (Montgomery Court to Main Street Unionville)
- Warden Ave. through Markham Centre (Highway 407 to Apple Creek Blvd)
- Yonge St. between Steeles Ave and Highway 7
- Highway 7 between 9th Line and Reesor Rd

Secondary Priorities were:

- Highway 7 between Leslie St. and Montgomery Court
- Highway 7 between Old Kennedy Rd and McCowan Rd
- Portions of Old Kennedy Road in Milliken and Main Street Markham

In February 2009, IBI Group submitted their final report, entitled "York Region Power Plant Relocation Impact Study Report". The report focused on analyzing the potential mechanisms to fund the undergrounding of power lines on Regional roads. It reviewed the laws, regulations, governing body rulings, industry practice and precedents to determine the viability of various funding options. An independent legal opinion was also obtained to further substantiate the viability of each option and the viability of requesting Ontario Energy Board (OEB) approval for funding through the hydro rates.

At its meeting of March 26, 2009, York Region Council received Report No. 4 of the Rapid Transit Public / Private Partnership Steering Committee, entitled "Opportunities for Financing the Underground Relocation of Power Transmission Lines along the Viva Rapidways". This report summarized the findings by IBI Group in their report of February 2009 and a legal opinion. It also reported on consultations with key stakeholders such as the Ontario Energy Board, York Region, local municipalities, Hydro One Networks Inc. and a "coalition of Large Distributors and developers" (Attachment "A"). The key issues highlighted in the Regional Staff report were that incremental costs for undergrounding are unlikely to be accepted into the rate base by the OEB and that other sources of funding were not available and therefore, VIVA could move ahead with its rapidways project on the basis of not burying hydro lines through local municipalities. The report was referred back to staff for further consultation with stakeholders.

3. HIGHWAY 7 - RODICK TO THE TRACKS EAST OF SCIBERRAS:

3.1 Overview:

In September 2009, the Town retained IBI Group (the same consultant as the one hired previously by the Region) to conduct a feasibility study to further define the costs expected for the Markham undergrounding project along Highway 7. The study was jointly funded in equal portions by the Town, York Region and PowerStream.

In March 2010, IBI Group submitted their final report to the Town entitled "Feasibility Study for Highway 7 Overhead Distribution System Relocation from Rodick Road to Sciberras Road", which proposed various options for undergrounding of the 2.7 km corridor. After numerous meetings and discussions on options and costs for undergrounding, in July 2011, the Town retained a peer review consultant to produce a conceptual design and submit

an updated budget for undergrounding. The consultant concluded that the estimated costs for undergrounding on Highway 7 from Rodick Road to Sciberras Road and the section specifically located between Town Centre Boulevard and the tracks east of Sciberras Road could be reduced. An updated cost estimate of approximately $23,000,000 was submitted for the section from Rodick Road to Sciberras Road.

3.2 Highway 7 from Rodick Road to Town Centre Boulevard:

The reconstruction of Highway 7 from Rodick Road to Town Centre Boulevard is underway, with the relocation of hydro poles already in progress. The undergrounding of the hydro lines in this section in advance of the VIVA construction contract cannot be accommodated without delaying the VIVA contract for at least one year, and is not recommended.

In order to safeguard the possibility of undergrounding in the future, the Town has requested that the Region and VIVA reserve and protect sufficient space within the right-of-way corridor from Rodick Road to Town Centre Boulevard for possible future undergrounding. The location and size of the protected space is to be approved by the Director of Engineering.

The estimated cost to underground the overhead hydro lines in the future is in the order of $4 to $5 million.

3.3 Highway 7 from Town Centre Boulevard to the Tracks East of Sciberras:

York Region has recently advised Markham staff that it will be delaying the construction of the section of Highway 7 from Verclaire Gate to Sciberras Road until late 2012/2013. This may provide an opportunity to underground the hydro / utility lines subject to resolution of funding ($17,000,000 to $20,000,000).

A decision to implement undergrounding in the section between Town Centre Boulevard and the tracks east of Sciberras Road has to be made in February 2012 in order to keep the overall project on schedule.

Although York Region has delayed the road construction of Highway 7 from Verclaire Gate to Scieberras Road until late 2012/2013, the Region has requested PowerStream to complete hydro relocations by Fall 2012. PowerStream is currently looking at the design anticipating that hydro relocation work will start in the Summer 2012. The timing of project completion is expected to be before any final decisions with respect to PowerStream's rate submission to the Ontario Energy Board (OEB).

4. YONGE STREET HERITAGE AREA:

At its meeting of December 6, 2011, the Development Services Committee requested that

staff report back on the estimated cost of burying hydro lines in the Yonge Street heritage area. The "Heritage Area" extends from John Street to Circlewood Park (7877 Yonge St) over a distance of 550 meters. Based on cost information provided in studies and in discussion with the peer review consultant (DPM Energy Inc.), the estimated cost for undergrounding power lines in this heritage area of Yonge Street from John Street to Circlewood Park would be approximately $6 million.

No action is currently being undertaken by York Region, the Town of Markham, City of Vaughan, or PowerStream on the undergrounding of overhead wires in the Yonge Street corridor.

5. MAIN STREET MARKHAM HERITAGE AREA:

On December 6, 2011, the Development Services Committee also requested that staff report back on an estimated cost of burying hydro lines in the heritage area of Main Street Markham. The Main Street Markham hydro and utility lines have already been buried between Highway 7 and Bullock Drive over a distance of 850 meters but the section between Highway 407 to Highway 7 and Bullock Drive to 16th Avenue remains overhead. Based on cost information provided in the studies and in discussion with the peer review consultant (DPM Energy Inc.), a reasonable "per meter price" for undergrounding power lines in urban areas is about $11,000 per linear meter, including restoration and traffic control.

Drawings are currently being prepared for the future reconstruction of the sections between Highway 407 and Highway 7 (1.2 km) scheduled for a 2014-2016 timeframe and between Bullock Drive and 16th Avenue scheduled for 2013-2014 (1.15 km).

There are savings to be achieved when undergrounding is done in combination with other street work. If undergrounding of hydro and utility lines is being done as a "stand-alone" project without any other road work being conducted, all costs associated with excavation, restoration and traffic control are borne as part of the undergrounding project. However, if undergrounding can be combined with a road reconstruction project, costs for traffic control, excavation and restoration can be shared. The effect of combining undergrounding on Main Street Markham with a road reconstruction project as opposed to funding as a stand-alone project can be seen in Table 1.

Table 1
ESTIMATED COST OF UNDERGROUNDING ON MAIN STREET MARKHAM

Section	Cost as part of road reconstruction	Stand-Alone Cost
Hwy 407 to Hwy 7	$10,200,000	$13,200,000
Bullock Dr. to 16th Ave	$9,800,000	$12,700,000

6. FUNDING:

A summary of the costs for undergrounding of overhead power lines along the priorty corridors identified by DSC on December 6, 2011 is shown in Table 2.

Table 2
SUMMARY OF COSTS FOR UNDERGROUNDING ON MARKHAM ROADS

ROAD	SECTION	UNDERGROUNDING COST
Main Street Markham	Hwy 407 to Hwy 7	$13,200,000
Main Street Markham	Bullock Dr. to 16th Ave	$12,700,000
Yonge Street	John St. to Circlewood Pk	$6,000,000
Highway 7	Rodick Rd. to Town Centre Blvd.	$4,000,000 - $5,000,000
Highway 7	Town Centre Blvd. to Sciberras	$17,000,000 - $20,000,000
Relocation of other utilities	20 % contingency	$11,000,000
TOTAL:		**$64 million to $68 million**

Markham staff has compiled a summary of the various funding options that were studied by all three sources described above (IBI Group Final Report, Legal Opinion and Report to York Region Council). The summary is contained in table format as Attachment "B".

It is clear that there is currently no viable funding source and that further work is required by York Region, the Town of Markham and PowerStream to see if any of the options can be successfully implemented.

It should be noted that the high costs for undergrounding of power lines does not include any costs for relocating other utilities as well. For example, telephone, cable and any other overhead utilities would also have to be relocated underground, which would add to the costs. Table 2 has allowed a 20 percent contingency for such.

As can be seen in Table 2, the magnitude of the costs for the undergrounding projects is substantial. Currently there is no budget or source of funding available. There is no provision in the development charges and no tax funding assigned, PowerStream cannot cost share because it is not a necessity and hydro rate hike to finance the work for beautification purpose is not likely to be approved by the Ontario Energy Board. It is recommended that any future consideration of undergrounding of power lines along Regional roads be deferred until an appropriate funding source is identified. However, staff will continue to work with PowerStream, YRRTC and York Region to ensure that suitable space be reserved in the Highway 7 corridor along that project for future undergrounding, should Council wish to proceed at a later time.

PowerStream has agreed to develop some criteria and guiding principles that may be applied to specific projects involving multiple parties sharing in the funding of an overhead to underground conversion that would be applicable across all of PowerStream's service areas. PowerStream would have to bring the matter forward through its Audit and Finance Committee and to its full Board in the New Year. If approved, they would then have to forward a proposed shared funding formula as part of their Cost of Service Rate Application to the OEB towards the end of April 2012 to request approval for a rate change in 2013. The

OEB would have to approve the criteria and principles and establish a regulatory principle and precedence for future projects.

As a result of the above, it is recommended that staff not proceed with further study of undergrounding power lines in those subject areas until a source of funding becomes available. Staff will report back regarding PowerStream's progress.

7. OTHER MUNICIPALITIES:

Markham staff has conducted research on recent similar initiatives in other municipalities, including the City of Ottawa, the City of Mississauga and the City of Pickering.

7.1 City of Mississauga:

In Mississauga, the 175-year old Meadowvale Village Heritage Area was to be the site of upgrading of the outdated electrical overhead system. Enersource Hydro Mississauga was to replace like-with-like the 55 year old overhead systems with taller poles and a more modern and reliable system, but residents requested that power lines be placed underground to beautify the heritage streetscape. The undergrounding was found to be technically possible, but very costly. The matter was discussed at the Heritage Committee in August 2011 and at the General Committee and Council meetings of September 2011.

Committee minutes state that "Council noted difficulty in supporting the underground electrical upgrade due to the costs for installation and to maintain underground wiring, and that it would set a precedent for other communities". Minutes also state that "it was further noted that the residents of the area should pay their share of the costs if they wish to have the underground wiring".

According to Doug Morrison, Senior Manager for Overhead Construction and Standards for Hydro Mississauga, the residents have refused to pay the costs and they are working with the Heritage Committee to determine the best overhead system for their streetscape (i.e. length and location of poles, which side of the street, etc.).

7.2 City of Ottawa:

In March 2011, the City of Ottawa adopted a policy on Underground Wiring. The policy directs that the undergrounding of existing overhead wires on City rights-of-way be undertaken only when the full cost of burial is paid for by the requesting party, or as otherwise approved by Council on a case-by-case basis.

As part of the Council Report, City of Ottawa staff summarized all funding options in a table format and conducted a cost-benefit analysis of eight sample streets representative of the main street types in downtown Ottawa. Results showed that the cost of undergrounding of overhead wires could not be justified based on direct financial return on investment. As a

result of Council's policy, the reconstruction of Bank Street in the luxurious Glebe shopping district near the Rideau Canal and other similar projects did not qualify for hydro undergrounding.

7.3 City of Pickering:

On May 17, 2010, Pickering Council had a detailed discussion period regarding undergrounding of overhead wires. Despite a general consensus that underground hydro wiring benefits the community and encourages sustainable development, Council felt that the funding costs are an issue and need to be worked out before proceeding with undergrounding. For this reason, Council did not approve the undergrounding of overhead wires along Brock Road.

8. ALIGNMENT WITH STRATEGIC PRIORITIES:

It is the vision of both the Town and the Region to beautify the downtown corridor along Highway 7 in Markham Centre and in the designated heritage areas. However, due to the enormously high estimated cost in the feasibility study and lack of funding, staff recommends that the projects be put on hold pending further investigation for different funding sources.

9. BUSINESS UNITS CONSULTED AND AFFECTED:

The Finance Department and the CAO's Office have reviewed this report.

RECOMMENDED BY:

Alan Brown, C.E.T.
Director of Engineering

Jim Baird, M.C.I.P., R.P.P.
Commissioner, Development Services

ATTACHMENTS:

Attachment A – Report No. 4 of the Rapid Transit Public / Private Partnership Steering Committee, Regional Council Meeting of March 26, 2009

Attachment B – Table showing funding options and viability

4
OPPORTUNITIES FOR FINANCING THE UNDERGROUND RELOCATION OF POWER TRANSMISSION LINES ALONG THE VIVA RAPIDWAYS

The Rapid Transit Public/Private Partnership Steering Committee recommends the following report dated February 26, 2009, from the Vice-President, York Region Rapid Transit Corporation be referred back to staff to allow senior staff to consult on the findings with the Chief Administrative Officers and Commissioners in the City of Vaughan, and Towns of Richmond Hill, Markham and Newmarket and that staff report back to a future meeting of the Committee.

1. RECOMMENDATIONS

It is recommended that:

1. The Regional Clerk circulate this report to local municipalities for their review and comment.

2. Staff report back to Council on the outcome of the municipal comments and provide recommendations as to next steps on the hydro line relocation strategy along the Viva rapidway corridors.

2. PURPOSE

This report provides background and some of the supporting analysis of a study jointly led by the York Region Rapid Transit Corporation and PowerStream and undertaken by Giffels Associates and their associated consulting team to determine the opportunities for alternative sources of financing for the underground relocation of the power transmission lines along those Viva rapidways that lie within the PowerStream boundaries.

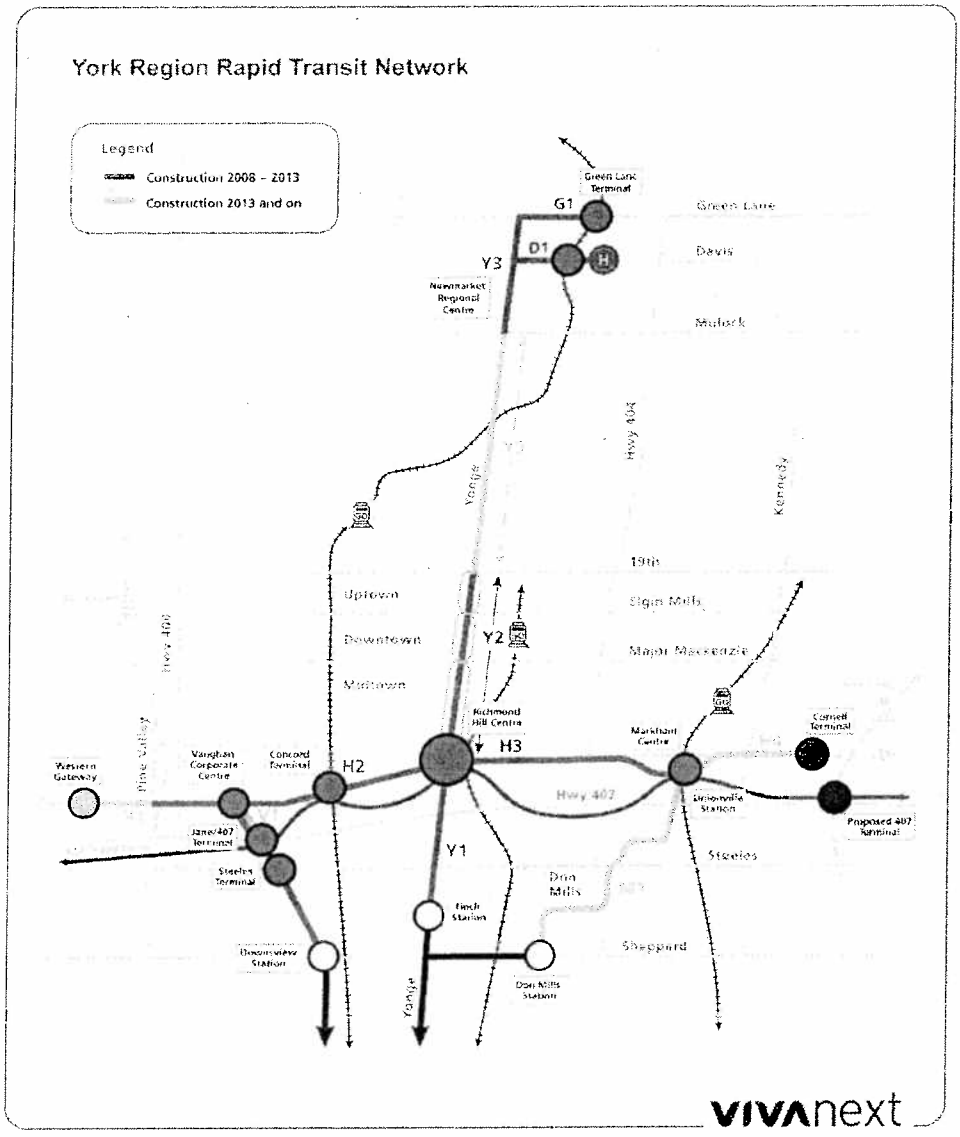
While the study excludes the Newmarket segments of rapidways, the findings of this report are equally applicable to any electrical distribution company.

The study did not consider the implementation of rapidways along the section of Yonge St. between Highway 7 and Steeles, since it is now proposed that this section will be served by an extension to the Yonge-University-Spadina Subway, with an extension from Finch station to the Richmond Hill Centre. The subway may provide other opportunities for undergrounding along the Yonge corridor that would be the subject of a future report.

3. BACKGROUND

Viva Phase 1 rapid transit runs today in mixed traffic in four key corridors. As shown in Figure 1 vivaNext includes the construction of 67 kilometres of surface rapid transit in these same corridors, integrated with the extension of the Yonge Street and Spadina subway lines north to the Richmond Hill Centre and Vaughan Corporate Centre.

Figure 1
York Region Rapid Transit Network – vivaNext



In June 2008, the York Region Rapid Transit Corporation and PowerStream Inc. commissioned a study to guide the planning of power plant relocations to accommodate road widening for vivaNext. The study focused on analysis of potential mechanisms for funding the incremental costs to install electrical power distribution lines and equipment underground (hereafter referred to as "undergrounding") in lieu of overhead construction. The study explored numerous avenues of law, regulations, governing body rulings, industry practice and precedents related to funding the installation of underground distribution systems. The results of that study are discussed in Section 4.

4. ANALYSIS AND OPTIONS

The Giffels Study assessed a range of relocation options in consideration of financial, regulatory, legal and political impacts

A Request for Proposals was issued in March 2008, requesting proposals for a study to guide the planning of power transmission relocations resulting from the road widening necessary to accommodate the rapidways. Several proponents responded and after review and evaluation a project team led by Giffels Associates Ltd./IBI Group, in consultation with Navigant Consulting, and Gowling Lafleur Henderson LLP were selected to conduct the study, and a contract was awarded at the end of June 2008.

The study focused on the following areas:

1. Technical analysis of the options available to PowerStream for plant relocation at each of 11 identified sections of the planned rapidways, and comparing the costs of undergrounding at each location with undergrounding only at key areas.

2. Financial impacts: an assessment of the capital requirements and funding strategies for PowerStream to relocate plant to accommodate the vivaNext system and the Region's Growth Management strategy and urban design policies and guidelines.

3. Regulatory impacts: an assessment of whether or through what strategies the capital costs could be approved by the Ontario Energy Board (OEB) for inclusion in the PowerStream rate base, and how a by-law requiring undergrounding would be viewed by the OEB in such application.

4. Legal impacts: an assessment and opinion of Ontario's Places to Grow Act, 2005, and other available regulations or mechanisms that could be used as strategies to develop funding sources for undergrounding.

5. Political impacts: including an assessment of municipal desire for undergrounding, and a report on any prior decisions of the Ontario Energy Board on the same or similar proposals from gas or electricity distributors.

The study initially excluded the Newmarket area, which is not supplied by PowerStream, but rather by Newmarket Hydro. An addendum to the original study to include recommendations for the rapid transit corridors in Newmarket is underway.

Funding for undergrounding hydro lines is not included as part of provincial support for vivaNext

The budget prepared and submitted to Metrolinx for the rapidway construction assumes "like for like" relocation with power transmission lines that are relocated to remain above ground. In this study it is not anticipated that provincial money allocated for transit would fund undergrounding, and it was assumed that no other provincial money would be available.

Key stakeholders were consulted during the study

The consulting team consulted a number of key stakeholders during the study, including the Ontario Energy Board, York Region, local municipalities, Hydro One Networks Inc., and the coalition of Large Distributors and developers.

Municipalities were asked to identify their priority sections for undergrounding and these have been mapped against corresponding plans for rapidways

Municipalities were interviewed to determine their desire for undergrounding, and priority sections of Highway 7 and Yonge St. were identified where the municipalities most desired the undergrounding of electrical distribution facilities. These sections were evaluated against those sections identified for road widening for the Viva rapidways.

The sections identified and the corresponding segments of rapidways are shown in Table 1. The table also shows the estimated incremental costs by section and by municipality for the undergrounding when compared to above ground relocation.

VivaNext does not preclude future burial of hydro lines

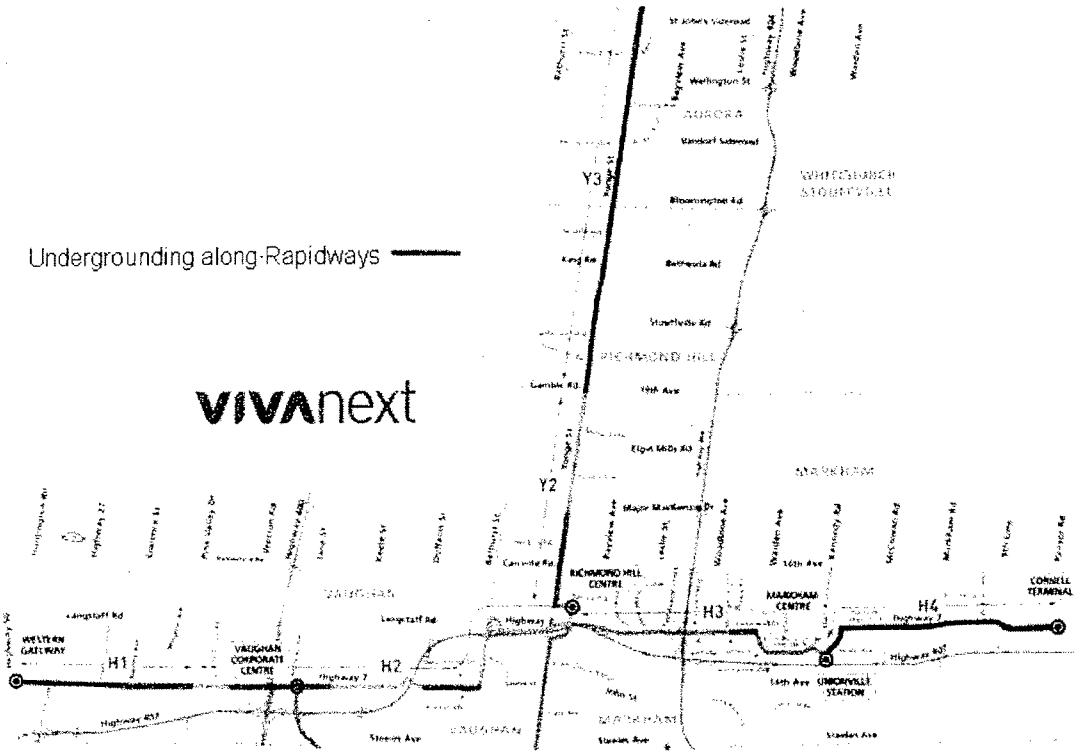
The vivaNext rapidways project is moving forward on the basis of not burying hydro lines. However, it should be noted that the construction of viva rapidways does not preclude the possibility of burying hydro transmission lines along rapidway corridors in the future.

Table 1
Municipal Preferences and alignment with Rapidways

Areas of undergrounding requested by municipalities		Distance	Corresponding to Rapidways	Incremental costs for undergrounding	
		km.	km.	$M	$M
Town of Markham	H3 - Woodbine Ave to South Town Centre Blvd.	1.6	1.6	4.42	9.94
	H4 - 9th Line to Reesor Rd.	2	2	5.52	
City of Vaughan	H2 - Pine Valley Drive to 500 m. west of Kipling Ave.	2.5	1.9	11.40	39.60
	H2 - 200 m. east of Creditstone Rd. to Ansley Grove Rd.	3.3	2.7	16.20	
	H2 - Centre St - Dufferin St. to Bathurst St.	2	2	12.00	
Town of Aurora	Y3 - 1 km. south of St John's Side Rd. to 0.5 km. north of Wellington Rd.	1.5	1.5	6.57	6.57
Town of Richmond Hill	H3 - Bayview Ave. to Valleymede Dr.	1.2	0.9	2.48	22.98
	Y2 - Trayborn Dr. to Elgin Mills Rd.	0.5	0.5	5.50	
	Y2 - Highway 7 to Major Mackenzie Dr.	4	4	22.00	
		18.6	17.1	86.09	86.09

The segments corresponding to rapidways are illustrated in Figure 2 below.

Figure 2
Municipal Preferences and Alignment with Rapidways



Certain clearance requirements are required between the transmission lines and any built form

The technical review included the Electrical Safety Association (ESA) regulations and the Ontario Highway Safety Manual. The ESA requires a clearance of 5.5m from the centreline of the pole to any adjacent building to account for:

- 1 metre separation of power cable from pole
- 1.5 metre potential sway of power cable
- 3 metre safety clearance from power cable

The Ontario Highway Safety Manual requires that where the speed limit is 50 kph, and the roadway is bounded by a curb, then the hydro pole should be a minimum 0.5 metres from the edge of the road. Where the posted speed limit is 60-70 kph, then the separation must be a minimum 3 metres.

These setbacks contemplate that it is possible for the first storey of a building to be built right up to the edge of the boulevard and that anything above the first storey would require an additional setback to provide the clearance necessary from the energised transmission line to accommodate the clearances noted above.

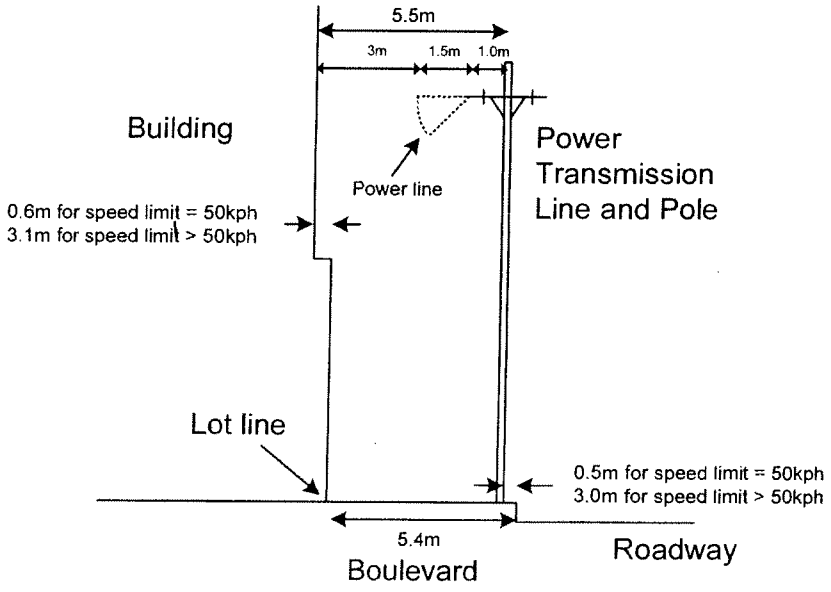
For a 50 kph posted speed limit the poles will require a setback from the curb of 0.5 metres, and any structure above the first storey will require a further setback of 5.5 metres from the poles.

Applying this standard to the rapid transit corridors with a boulevard of 5.4 metres would mean that anything above the first storey would have to be set back a further 0.6 metres from the edge of the boulevard to ensure adequate safety clearance limits.

If the posted speed is increased above 50 kph, then the distance would extend a further 2.5 metres between the curb and the pole, pushing any structure above the first storey back a further 2.5 metres (0.6m + 2.5m = 3.1m).

Based on existing conditions along the majority of the rapid transit corridors with some possible exceptions on Davis Drive the report concludes that an overhead relocation is viable.

Figure 3
Power line clearances from curb and building fronts



Staff are concerned that the implications of this built form arrangement along the rapid transit corridors may not be consistent with the urban density and density objectives of the landowners and local municipalities and will review this with the local municipalities.

The report indicates that incremental costs for undergrounding are unlikely to be accepted into the rate base by the Ontario Energy Board

The consultant team could not find a precedent to support the inclusion of the cost of undergrounding in the Ontario Energy Board (OEB) rate base. Inclusion of such capital improvements by the OEB are subject to a test of prudency. While the OEB would be expected to pass a rate increase for above ground relocations, the report indicates that, unless it can be demonstrated to be technically necessary, that a rate increase for undergrounding would not likely be accepted.

The study looked at the planned sequence and schedule of works, and the costs to underground the distribution plant along the priority sections

The following table shows the impacts to the PowerStream rate base over a sample of years between 2009 and 2025 where:

a) Scenario 1 represents system wide above ground replacement.

b) Scenario 2 includes undergrounding of priority sections with the incremental cost included in the rate base.

c) Scenario 3 is the same as 2 but with the municipalities funding the undergrounding.

All scenarios include the York Region Rapid Transit Corporation paying the same amount for the underground portions as it would have paid had they been overhead.

		2009	2013	2017	2021	2025
Scenario 1 (like-for-like replacement)	Total Rate Impact (c/kWh)	0.003	0.030	0.047	0.040	0.034
	Residential bill impact ($/mo)	$0.02	$0.24	$0.38	$0.33	$0.28
Revised Scenario 2 *(High Priority Sections)*	Total Rate Impact (c/kWh)	0.003	0.097	0.137	0.123	0.110
	Residential bill impact ($/mo)	$0.02	$0.79	$1.12	$1.00	$0.89
Revised Scenario 3 *(High Priority Sections)*	Total Rate Impact (c/kWh)	0.003	0.054	0.077	0.065	0.054
	Residential bill impact ($/mo)	$0.02	$0.44	$0.63	$0.53	$0.44

A variety of funding sources were examined for their potential application to the cost of undergrounding

Seven funding sources in addition to the OEB were identified as potential sources of funding for the undergrounding. It would be appropriate to go over the findings with the local municipalities with respect to these funding sources and report back to Council on the results.

5. FINANCIAL IMPLICATIONS

The construction of the rapidways includes the cost for relocating hydro lines, if required, as overhead lines. The report indicates that it would expect that for scenarios where funding is secured for undergrounding, where it is not required as a result of existing buildings, that the rapid transit budget for overhead to overhead relocation would be available to be applied to the undergrounding budget. The report does not provide any certainty as to the funding source for undergrounding at this time.

6. LOCAL MUNICIPAL IMPACT

Viva is being closely coordinated with local planning and economic development activities along the rapid transit corridors. Regional staff will review the content of the Consultant's report with local municipal staff.

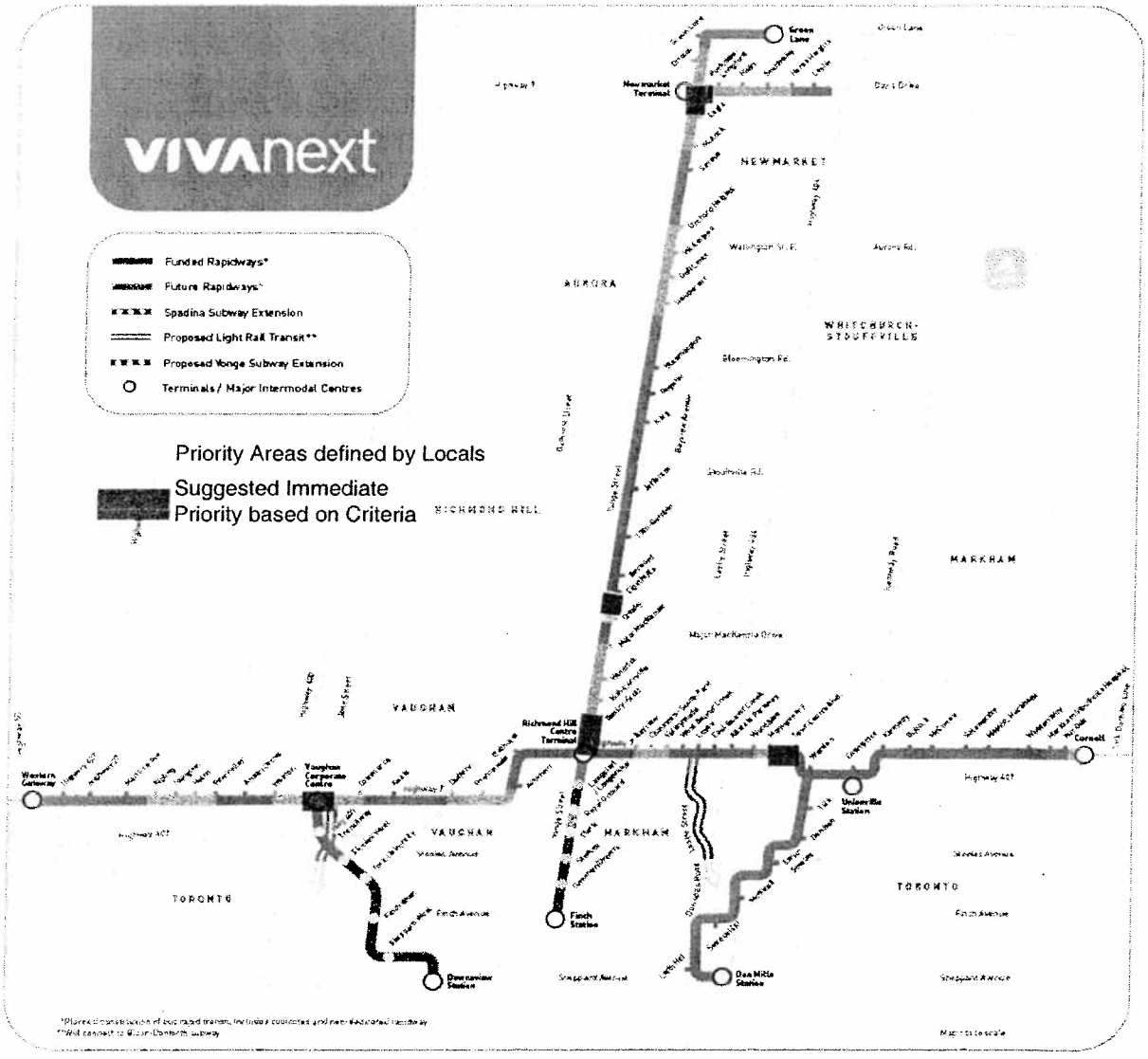
7. CONCLUSION

The Giffels report is a significant and lengthy document. The significance of the findings need to be discussed at length with the local municipalities as the affected stakeholders prior to confirming our concurrence with its findings. It is recommended that staff be allowed to share the findings of the draft report with the affected stakeholders and report back on the outcome of these discussions.

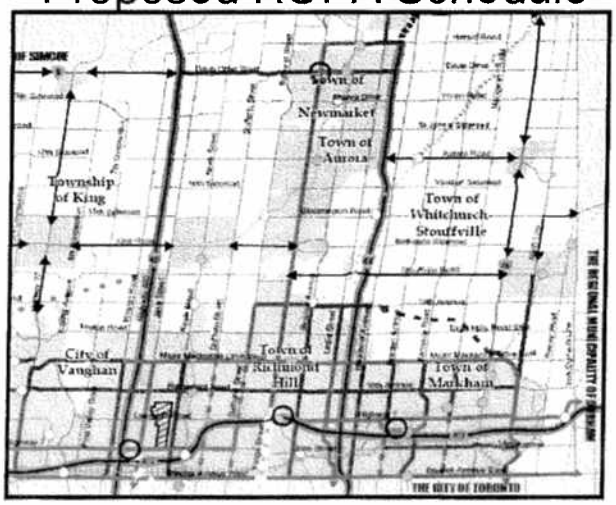
For additional information, please contact Mary-Frances Turner, Vice-President, York Region Rapid Transit Corporation at (905) 886-6767 ext. 2226.

The Senior Management Group has reviewed this report.

Burying Hydro Transmission Line Priority Areas



Proposed ROPA Schedule



ATTACHMENT "B"

FUNDING MECHANISMS AND VIABILITY

Sources of Information:

1. IBI Group, "York Region Power Plant Relocation Impact Study Report", final report submitted to York Region, Dated February 19, 2009.
2. Gowlings LLP, Legal Opinion, dated February 13, 2009.
3. York Region, "Opportunities for Financing the Underground Relocation of Power Transmission Lines Along the VIVA Rapidways", Report No. 4 of the Rapid Transit Public / Private Partnership Steering Committee received at Regional Council Meeting of March 26, 2009.

FUNDING MECHANISM	HOW IT WORKS	VIABILITY
PowerStream ratebasing on incremental costs	Funding by PowerStream through its overall rates; requires the OEB to accept incremental costs in the rate base.	OEB would not approve as PowerStream would have difficulty proving that there are technical or financial reasons for undergrounding.
PowerStream "Rate Rider"	Requires the Town to enact a by-law requiring PowerStream to put all or part of relocated assets underground; the "rate rider" is an extra charge applied only to those customers where the undergrounding occurs.	There is a chance that OEB might approve, but would order that PowerStream customers in that jurisdiction must pay for undergrounding outside of the rate base; also, in order to prompt a "rate rider", expenditures must be driven by a specific need and they must be the most cost-effective alternative for ratepayers.
Funding directly by PowerStream	PowerStream would pay for the undergrounding but would not receive any reimbursement through rates; the cost would be borne by the shareholders through lower profits and lower dividends.	Must be approved by PowerStream's Board of Directors; non-benefiting partners would likely oppose.
Funding through Municipal Tax Base	Make undergrounding a Council priority and fund through tax revenues.	Town Council has many priorities and may not wish to spend tax revenues on underground power distribution assets.
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FUNDING MECHANISM	HOW IT WORKS	VIABILITY
Funding by Town Development Levies (Development Charges)	Place lot levies on developers to help pay for the increased infrastructure costs; developers, and eventually homebuyers, pay the cost.	Development Charges Act does not allow the inclusion of a new service in development charges.
Funding through a Municipal Special Levy	Aimed at capturing the benefits that accrue to the adjoining landowners.	Requires acceptance by adjoining landowners; businesses could anticipate that the enhanced streetscape will attract more business and increase the value of their holdings.
Funding directly by YRRTC	YRRTC budget may contain sufficient funds to pay for underground relocation.	The money allocated for transit will not fund undergrounding, as it is a "like-for-like" relocation with overhead power transmission lines to remain above ground. However, it is felt that if funding is secured by local municipalities for undergrounding, the rapid transit budget for overhead to overhead relocation would be available to be applied to the undergrounding budget.
Funding directly by the Province	The Province might fund through "Places to Grow" Act or other provincial initiative either directly or through allocation to YRRTC.	Provincial money allocated for transit will not fund undergrounding and no other provincial funding is available.
Innovative funding options (ex: creating Community Improvement Area powers or Business Improvement Area powers through the Municipal Act and Planning Act)	The Municipal Act and the Planning Act allow the designation of a Business or Community Improvement Area for beautification purposes and then allow imposing a levy to recover the costs of beautification.	High degree of risk due to project and approval timing for the CIPA or BIA; must be in line with the Official Plan; requires landowner acquiescence.
Municipal By-Law changes to force developers to build to a minimum front-yard set-back or right to the property line.	If developers must build tight to the lot line, it forces a technical reason for undergrounding of transmission lines; this would compel PowerStream and developers to underground lines. PowerStream charges 100% to the Developer for the undergrounding. Space must be allocated for above ground pad mounted equipment.	Viability depends upon the developer's willingness to pay the costs of undergrounding. A technical underground solution will not be possible if space is not allocated for above ground pad mounted equipment.

Cost-sharing Agreement between key stakeholders	All stakeholders, including those abutting the undergrounding would work out an agreement to pay the costs up front.	Would reduce the potential burden on any one stakeholder and reduce risk for any decision to proceed.