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[Original french version available upon request]

Common Construction and Multi-user pedestal (Financial Analysis)



PRELIMINARY RESULTS





Committee task (RTU)* – CERIU**

To jointly engineer and build communication and power infrastructures using a new construction technique, in partnership with land developers and builders, and which consists of conduits buried in sand in a common trench on either side of the street, and utilizing one multi-user pedestal for all services to obtain optimum savings.

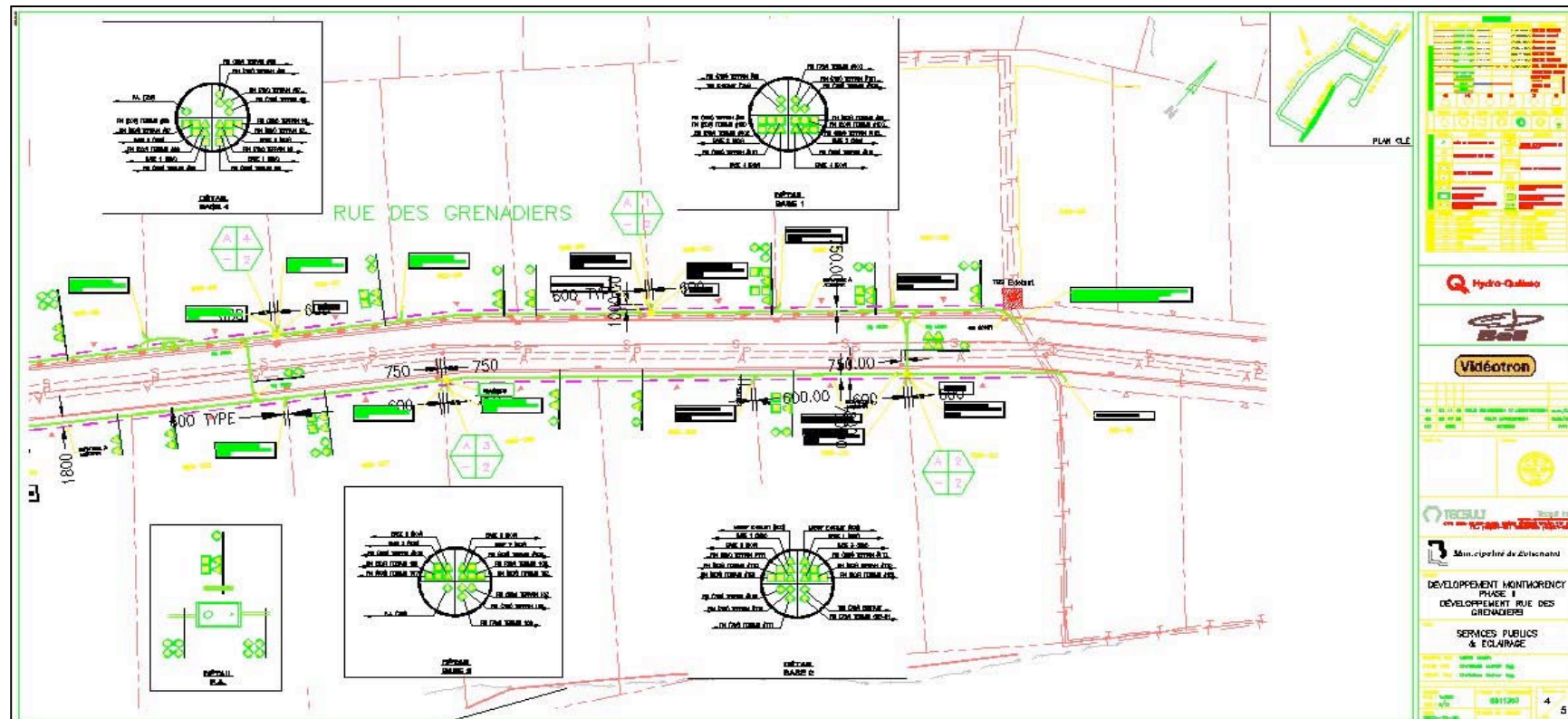
This pilot project was built in 2003 at Domaine des chutes in Boischatel*, consisting of 19 luxury single homes with about 70 feet of frontage.**

[* RTU: Urban Technical Networks (Committee)]

[** Centre of Expertise in Research for Urban Infrastructures]

[***Boischatel is a suburb north of Quebec city]

Common integrated civil engineering





Common integrated civil engineering

- Choice of integrating techniques
- Requirements and approvals
- Standards and standardized symbols
- As built detailing
- Data updating



Pilot Project Costs Report for Boischatel Conventional method (separate trenches)

Hydro-Québec: (\$57,175)

- Trenches + conduits
- Handholes and pads (transformers)

Bell Canada : (\$46,500)

- Trenches + conduits
- Pedestals and pads

Vidéotron : (\$12,500)

- Trenches + conduits
- Pedestals and pads

City (lighting) : (\$46,227)

- Trenches + conduits
- Cabling
- Lampposts and bases



Costs for lighting - Conventional method

Hypothesis : 4 lots of 60 feet

Trenches + conduits + cables + Lighting fixtures + console + base

Montreal (B.Villeneuve):

Trenches, conduits, cables (mat. and labour):

\$1,224 / lot

Lighting fixture + console + base :

\$ 875 / lot

Total

\$2,099 / lot

Gatineau and Longueuil (CIMA):

Civil:

\$ 716 / lot

Cabling + Lighting fixture + console:

\$1,466 / lot

Total

\$2,182 / lot

Laval (Dessau Soprin):

Civil:

\$ 953 / lot

Cabling+ Lighting fixture + console:

\$2,064 / lot

Total

\$3,017 / lot

Average cost per lot for lighting system = \$2,433

*[Costs are in Canadian currency]



New method

Allocation of common costs for the Boischatel project, based on occupation of multi-user pedestal:

- Hydro-Québec 40%
- Bell Canada 20%
- Vidéotron 20%
- City 20%

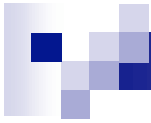
Note: The common construction of civil infrastructures includes the costs of contracting out and purchasing of the multi-user pedestal.



Boischatel's Costs Report
 Conventional method versus New method : multi-user pedestals in a common trench.
Engineering only

Networks	Engineering projected cost, using conventional method	Pilot project engineering expenses	Savings %	Savings \$	Savings \$ / lot	Annual savings \$ (1100 lots)
Hydro-Québec	\$5,700	\$3,576	37%	\$2,124	\$112	\$122,968
Bell	\$4,600	\$2,938	36%	\$1,662	\$87	\$96,221
Vidéotron	\$1,488	\$1,488	0%	\$0	\$0	\$0
City (lighting)	\$2,600	\$2,188	16%	\$412	\$22	\$23,853
Total cost	\$14,388	\$10,190	29%	\$4,198	\$221	\$243,042

[Costs are in Canadian currency]



Boischatel's Costs Report
 Conventional method versus New method : multi-user pedestals in a common trench.
Civil Work only

Networks	Construction projected costs using conventional method	Pilot project construction expenses	Savings %	Savings \$	Savings \$ / lot	Annual savings \$ (1100 lots)
Hydro-Québec	\$57, 175	\$34, 000	41%	\$23, 175	\$1, 220	\$1,341,711
Bell	\$46, 500	\$25, 320	45%	\$21, 180	\$1, 114	\$1,226,211
Vidéotron	\$12, 500	\$9, 960	20%	\$2, 540	\$134	\$147,053
City (lighting)	\$46, 227	\$15, 720	66%	\$30, 507	\$1, 606	\$1,766,195
Total cost	\$162, 402	\$85, 000	48%	\$77, 402	\$4, 074	\$4,481,170

[Costs are in Canadian currency]

Boischatel Pilot Project Summary of Costs

**Conventional method versus New method:
multi-user pedestals in a common trench.**

Engineering and Civil Work

Networks in partnership	Total projected cost by using conventional method	Pilot project total expenses	Savings %	Savings \$	Savings \$ / lot	Annual savings \$ (1100 lots)
Total cost, engineering and civil	\$176, 790	\$95, 190	46 %	\$81, 600	\$4, 295	\$4, 724, 212

[Costs are in Canadian currency]

Conclusion



*Partnership is cost effective:
Annual savings of 46 % or \$4,7 million
for the developers
[on 1100 lots]*