

Our File/N/Réf.  
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DATE 9 April 1996

TO/DEST. The Chair and Members of Regional Council

FROM/EXP. Director, Finance and Administration Division  
Environment and Transportation Department

SUBJECT/OBJET **1996 WATER DISTRIBUTION SYSTEM  
REHABILITATION PROGRAMME**

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### INTRODUCTION

The Region's water distribution system consists of over 2200 km of watermains of which approximately 35% are over 50 years old. The replacement value of this system is in excess of \$1.5 Billion. This programme recommends annual projects based on:

1. Watermain breaks and operational performance
2. Hydraulic performance
3. Co-ordination of road & sewer works with other agencies

The 1996 scope of works is outlined in Appendices A, B and C:

Appendix A: 1996 Co-ordinated Watermain Rehabilitation  
Appendix B: 1996 Proactive Watermain Rehabilitation

These parts of the programme involve the replacement, rehabilitation and cathodic protection of watermains and services which, for example, are of:

- Excessive age (typical life expectancy 70 to 80 years)
- Insufficient size (present minimum standard size is 150 mm)
- Insufficient depth of cover (present standard is 2.4 metres)
- Excessive break rate
- Lead services (present standard is copper)
- Low flow capability

### Information Previously Distributed

To be listed on Planning and Environment  
Committee Agenda 14 May 96

All locations are fully co-ordinated with other agencies and area municipalities. It is considered necessary to proceed with co-ordinated programme locations, as the area municipalities will be reconstructing roadways and replacing sewers. Experience has shown that when a road is reconstructed and the watermains and services are not replaced at the same time, the watermains and services are put at a higher risk of freezing and breakage. It is unlikely that such an opportunity will occur again for another 50 years. It is also considered necessary to proceed with the proactive programme now due to high break rates and/or low flow capability. Also included in this component of the programme are items to address needs for 1997 pre-engineering and cathodic protection (i.e.: corrosion protection) through the installation of anodes.

#### Appendix C: 1996 Intersection Improvements

This part of the programme involves minor water system requirements such as the installation of new water valves, the replacement / relocation / refurbishment of existing hydrants, interconnection of watermains and abandonment of out-of-date system components. These installations are handled by staff of the Water Division of the Environment and Transportation Department.

For all the foregoing work the setting of priorities involves an iterative process, with locations being revised as the priorities of other agencies are finalized.

#### CONSULTATION

This programme falls under the Schedule “A” category of the Class Environmental Assessments process as defined through the Environmental Assessment Act. Consultation with area municipalities has taken place in developing the programme.

#### EXPENDITURE JUSTIFICATION

The 1996 Water Distribution System Rehabilitation Programme is fully co-ordinated with programmes and needs as outlined by the area municipalities, the National Capital Commission, Public Works and Government Services Canada and the “Urban Rehabilitation Programme”.

#### FINANCIAL IMPLICATIONS

All the 1996 scope of works can be accommodated within the approved 1996 Capital Budget allocation of \$11.0 M. Subsidies for the 1996 programme, from the Ministry of the Environment and Energy (MOEE) and the Ontario Clean Water Agency (OCWA) are not available.

Should you require any additional information, please contact Jim Carman of the Planning and Programme Development Branch at extension 2714 or myself at extension 2611.

*Approved by  
J. Yelle-Weatherall*

Attach. (3)

cc: A. Proulx  
J. Carman

bcc: J. Levesque, Policy Assistant, Office of the Chair  
J. Barbeau, Director, Corporate Programs and Administration

4/18/96

**1996 Water Distribution System**  
**Rehabilitation Programme**  
**Capital Project # 922-41921**

<b>Summary of Components</b>	<b>Budget Estimate</b>
<b>Appendix A : Coordinated Watermain Rehabilitation</b>	<b>\$ 6,525,000</b>
<b>Appendix B : Proactive Watermain Rehabilitation</b>	<b>\$ 3,325,000</b>
<b>Appendix C : Water Intersection Improvements</b>	<b>\$ 650,000</b>
<b>Total Programme :</b>	<b>\$10,500,000</b>
<b>Contingency :</b>	<b>\$ 500,000</b>
<b>Budget :</b>	<b>\$11,000,000</b>

The programme contingency will be used for the following purposes :

- a) To address unforeseen works which are part of the 1996 programme elements.
- b) To address unforeseen works which become apparent during design review of other works.

4/18/96

**APPENDIX " A "**

**1996 Coordinated W.M. Rehabilitation**

Water Contact	Other Contact		Street	From	To	96 Budget Estimate
K. Connors	Trans.	1	Wellington	Bank	Bay (Parkway)	\$600,000
K. Connors	Trans.	2	Lyon	Wellington	Sparks	\$100,000
M. Willmets	D. Dougherty	3	Hickory	Champagne	Bayswater	\$200,000
W. Brien	W. Clouthier	4	Bell	Queensway	Carling	\$400,000
M. Ross	R. Rehbein	5	First	O'Connor	Q. Elizabeth	\$200,000
M. Ross	R. Rehbein	6	O'Connor	Catherine	Fifth	\$500,000
W. Brien	W. Clouthier	7	Plymouth	Bronson	Lebreton	\$200,000
W. Brien	Z. Rana	8	Cartier	Somerset	Waverly	\$150,000
W. Brien	Z. Rana	9	Cartier	Frank	Argyle	\$150,000
W. Brien	W. Clouthier	10	Powell	Bell	Bronson	\$150,000
M. Ross	W. Clouthier	11	Parent	Guigues	Murray	\$150,000
W. Brien	I. Bhatia	12	Tyndall	Holland	Parkdale	\$150,000
W. Brien	I. Bhatia	13	Rozel S.	Hare	Rozel E.	\$150,000
K. Connors	Z. Rana	14	Greenwood	Churchill	Edison	\$100,000
K. Connors	Z. Rana	15	Westhill	Dead End	Churchill	\$150,000
M. Willmets	D. Dougherty	16	Greenbriar	Arnhem	Prince of Wales	\$150,000
M. Willmets	D. Dougherty	17	Meadowlands	and easement S. of Debra		\$100,000
F. Marcuccio	N. Finn	18	Midway	Hartleigh	Richmond	\$ 50,000
F. Marcuccio	I. Bhatia	19	Lenester	Fairlawn	Woodroffe	\$ 50,000
W. Brien	W. Clouthier	20	Arthur Lane	Plymouth	Queensway	\$150,000
W. Brien	W. Clouthier	21	Clemow	Cambridge	Bronson	\$100,000
F. Marcuccio	N. Finn	22	St. Laurent	140 m N/Tawney	100 m S/Foley	\$ 50,000
M. Willmets	N. Finn	23	Compton	Anthony	Byron	\$100,000
W. Brien	I. Bhatia	24	Lewis	Bank	Metcalfe	\$200,000
M. Ross	R. Rehbein	25	Lakeside	Bronson	Driveway	\$300,000
K. Connors	C. Laviolette	26	Alfred	St. Denis	Montfort	\$100,000
T. Davis		27	Rideau Place	at Barhaven Reservoir		\$ 60,000
K. Connors	Trans.	28	Rideau Place - Cummings Bridge Rehabilitation			\$150,000
M. Ross		29	Regional Public Utility Easements			\$ 50,000
F. Hashem Zadeh		30	Rehabilitation Management Model			\$ 40,000
T. Davis		31	NRC/RMOC joint research - performance of PVC & DI			\$ 50,000
F. Marcuccio		32	Pre - Engineering for 1997 program			\$100,000

**Items 33to 37 depend on the timing of road and sewer works by others.**

W. Brien	I. Bhatia	<b>33</b>	Percy	Gladstone	Catherine	<b>\$150,000</b>
K. Connors	Z. Rana	<b>34</b>	MacLaren	Bank	Cartier	<b>\$300,000</b>
M. Willmets	D. Dougherty	<b>35</b>	Beech	Rochester	R/R Tracks	<b>\$200,000</b>
W. Brien	W. Clouthier	<b>36</b>	Russell	Mann	Somerset	<b>\$225,000</b>
M. Ross	D.S. Lea	<b>37</b>	Laurier	Nelson	Charlotte	<b>\$500,000</b>

**Total Coordinated need : \$6,525,000**

4/18/96

**APPENDIX " B "**

**1996 Proactive W.M. Rehabilitation**

Water Contact	Street	From	To	Estimate	Mun.
F. Marcuccio	1	Replace/refurbish 4 x 1296 mm valves on A & B lines		\$100,000	Ottawa
F. Marcuccio	2	Valve replacements Bronson Avenue		\$100,000	Ottawa
M. Ross	3	Southgate	Cahill Johnston	\$300,000	Ottawa
W. Brien	4	Apolydor	Lasalle Clementine	\$100,000	Ottawa
M. Willmets	5	Hopewell	Bank Leonard	\$225,000	Ottawa
M. Willmets	6	Rosedale	Sunnyside Colonel By	\$100,000	Ottawa
M. Willmets	7	Leonard/Col. By	AylmerRosedale	\$100,000	Ottawa
M. Willmets	8	Acacia	Mariposa Coltrin	\$600,000	Rockliffe
M. Ross	9	Gladstone	Preston Bridge	\$100,000	Ottawa
M. Ross	10	Somerset	King Edward Range	\$450,000	Ottawa
K. Connors	11	Catherine	Percy O'Connor	\$600,000	Ottawa
T. Davis	12	Ste Monique	Marquette Joliette	\$ 50,000	Vanier
F. Marcuccio	13	1996 Cathodic Protection Programme :		\$500,000	All Municipalities
Total - 1996:				\$3,325,000	

**APPENDIX "C"****1996 Water Intersection Improvement****4/18/96**

<b>Item</b>	<b>Item Description</b>	<b>Estimate</b>
<b>1</b>	<b>Install 10 x 152 mm gate valves and boxes</b> - Highgate east of Bloomsbury - Woodland north of Handon - Millard west of Heather - Tara south of H086 - Tara north of H069 - Woodside south of H072 - Honeywell west of H030 - Knightsbridge at H033 - Edison at Avondale - Melbourne at Greenwood	<b>\$40,000</b>
<b>2</b>	<b>Install 15 x 203 mm gate valves and boxes</b> - Sycamore at Quinpool and H070 - Larkin at Barrhaven - Hemmingwood at Covington and H093 - Parkland at Emery - Navaho at Matthews - Terrebonne at Marygrove - Traverse at Needham and V4 - Pleasant Park at Oxbow - Pleasant Park at Oxbow - Esson at Hime - Dossetter at Swain - Esson at Saddler and H024 - Riverside at H007 - Riverside at H055	<b>\$60,000</b>
<b>3</b>	<b>Install 7 x 305 mm gate valves in chambers</b> - Poulin at Priscilla - Naskapi at Ludgate - Westpark at Valewood and H005 - Cobden at Edwin - Cobden at Badger - Cobden at Torquay - Preston at Tompkis	<b>\$35,000</b>
<b>4</b>	<b>Install 4 x 406 mm gate valves in chambers</b> - Preston at Laurin and H102 - Blohm between Soutland and Wallack - Carling at Moore - Carling at Grenon	<b>\$28,000</b>
<b>5</b>	<b>Blank and / or cap pipe at :</b> - Kingsford and Sandwell - Kingsford and Varley - Carling east of Cole - Hampstead at Surrey	<b>\$17,000</b>
<b>6</b>	<b>Connect 152 mm main at Grandeur and Burland</b>	<b>\$20,000</b>
<b>7</b>	<b>Fire hydrant replacement</b>	<b>\$450,000</b>

**Total :      \$650,000**