BROCKVILLE
CITY OF THE 1000 ISLANDS

Finance, Administration and Operations Committee

Tuesday, January 17, 2012, 4:15 p.m.
City Hall - Council Chambers

Committee Members
Councillor D. Beatty, Chair
Councillor L. Fullarton
Councillor D. LeSueur
Councillor M. McFall
Mayor D. Henderson, Ex-Officio

Areas of Responsibility:
Clerk's Office
Environmental Services
Finance Department
Fire Department
Human Resources Dept.
Operations Department
Airport Commission
Arena Advisory Board
Brockville Municipal Accessibility Advisory Committee (BMAAC)
CRCA
Cemetery
Health Unit
Joint Services Committee
PLMG
Police Services Board
Safe Communities Coalition
St. Lawrence Lodge Management Board
Volunteer Awards

All legal matters [excepting the purchase and sale of land]

AGENDA

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DISCLOSURE OF INTEREST

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STAFF REPORTS

[Addenda]

REPORTS BOARDS AND COMMITTEES

FAO - CONSENT AGENDA

MOTION TO MOVE INTO CLOSED SESSION

REPORT OF THE STANDING COMMITTEE OF THE WHOLE IN CAMERA

ADJOURNMENT

January 6, 2012

REPORT TO FINANCE, ADMINISTRATION, OPERATIONS COMMITTEE – JANUARY 17, 2012

2012-02-01
WATER & WASTEWATER SYSTEMS QUARTERLY REPORT (OCT. – DEC. 2011)

PETER RAABE, P. ENG.
DIRECTOR OF ENVIRONMENTAL SERVICES
ED MALCOMNSON
WASTEWATER SYSTEMS SUPERVISOR
DON RICHARDS
WATER SYSTEMS SUPERVISOR

RECOMMENDED

THAT Report 2012-02-01 Water & Wastewater Systems Quarterly Report (Oct. – Dec. 2011) be received for information purposes.

PURPOSE

This report covers the months of October, November and December 2011. The intent of the report is to keep the Committee, Council, and the public current with performance and major operational aspects of the Water Treatment Plant, Water Distribution System, Water Pollution Control Centre (wastewater treatment system), and Wastewater Collection System, including any notable highlights, MOE inspections and adverse conditions.

BACKGROUND

This report is submitted quarterly, and represents the fourth quarter of 2011.

ANALYSIS/OPTIONS

A. WATER TREATMENT PLANT AND WATER DISTRIBUTION SYSTEM

The City continues to be in compliance with the Water Treatment Plant's Municipal Drinking Water Licence and Drinking Water Works Permit, in addition to the Ontario Safe Drinking Water Act and Regulations. Please refer to Attachment #1 – Brockville Drinking Water System Performance Assessment Report to review the treatment and bacteriological sampling results.

Adverse Water Quality Incidents:

AWQI 104180 November 10, 2011 – bacti sample results overgrown which resulted in an adverse test result from the sample taken at Goliger's Travel on Parkedale Avenue. Sample was taken as a precaution due to main break repair November 9, 2011. Water mains flushed and re-sampled.

AWQI 104394 December 2, 2011 – 16" transmission main ruptured causing plant effluent flows to exceed rated capacity. The treatment plant was unable to meet CT disinfection requirements during high flows. The water main was isolated, repaired and placed back in service.

AWQI 104579 December 21, 2011 – bacti sample (1) Total Coliform, sample taken after water main break on Hillcrest Drive. The water main was flushed and re-sampled.

Spill Ref#0645-8Q2QHK – On December 30, 2011 while backwashing filter #1 at the Water Treatment Plant, the drain mud valve in the filter wastewater conduit to the wastewater holding tank failed in the closed position. The backwash was immediately shutdown as there was no means of transferring the backwash water to the holding tank. In order to gain access to the mud valve and to make the necessary repairs, the wastewater conduit was drained. Due to the design of the treatment plant, the only method of draining the wastewater conduit was to open a drain valve to the river. A report was filed with SAC and the valve was repaired.

Items of Note:

1. Main Treatment Plant
   - Zebra mussel control system was drained and isolated for the season.
   - UV Disinfection system is in operation for the season.
   - Problem with transfer pumps, foot valve on suction piping repaired.
   - SCADA communication problems for Low Lift VFD pump controls, ISI Controls re-programmed PLC.

2. Booster Stations & Parkedale Reservoir:
   - Parkedale - Zone 1 diesel pump refurbishment completed (2011 Contingency Capital)
   - Station flooring in Zones #1 & #2 repainted.
   - Waste water drain line replaced in Parkedale Reservoir Zone 1.

3. Filters:
   - GAC samples taken from Filter #1 & #2 for analysis.

4. Overhead Tank:
   - No items to report.

5. Low Lift Pump Station:
   - Low Lift pump #1 replacement underway.
   - Low lift electric motor #3 failure – motor taken to Hewitt Brockville for repairs and placed back in service.

6. Drinking Water Quality Management System:
   - Brockville DWQMS - Internal audit conducted on elements 4, 5, 6, 10, 11, 12, 13, 15, 16, 17, 18, 21.
     - (2) Major non-conformances
     - (2) Minor non-conformances
     - All non-conformances have been addressed
   - Elizabethtown-Kitley DWQMS Management/Infrastructure Review Meeting was held on November 9, 2011.
   - Elizabethtown DWQMS Internal Audit conducted on all 21 elements.
     - (1) Major non-conformance
     - (2) Minor non-conformances
     - All non-conformances have been addressed
   - CGSB site Audit for Brockville was conducted on November 21, 2011, waiting on final report.
   - New DWQMS Representative appointed for the Brockville Drinking Water System and the Elizabethtown-Kitley Distribution System Operational Plans. The Supervisor of Water Systems is the new DWQMS Representative.
   - City of Brockville DWQMS Management/Infrastructure Review Meeting held on December 13, 2011 (See Attachment #3 Meeting Minutes).

7. MOE Inspections:
   - No MOE inspections scheduled.

8. Regulatory Sampling
   - All regulatory weekly bacti sampling for Brockville and Elizabethtown-Kitley completed.
   - All regulatory quarterly sampling for THM's Nitrate, Nitrite for Brockville and Elizabethtown-Kitley completed.

9. Trunk Water Distribution:
   - 16" transmission main on Perth Street north of the CN rail tracks ruptured.
   - Leak detection conducted on the trunk feeder main from the main plant on Rivers Avenue to Church and Perth Street. Possible leak found on Church Street near Beecher Street – further investigation will be conducted in the spring.

10. Elizabethtown-Kitley Distribution:
    - Water meters were removed from seasonal residence at Butternut Bay.
    - New Municipal Drinking Water Licence issued for the Elizabethtown-Kitley distribution systems. Licence No. 257-101, Issue No. 2 was amended to incorporate regulatory relief from lead sampling requirements.

11. Local Water Distribution:

    - Water Main Breaks:

      - Nov 2011
        - Church Street 150 mm cast iron shear.
        - Parkedale Avenue 250 mm cast iron main break. Split in pipe caused by increased flow from Shell Canada fire flow test.
      - Dec 2011
        - Front Avenue 150 mm cast iron hydrant lead.
        - Hillcrest Drive 150 mm cast iron shear.
        - Front Avenue 150 mm cast iron hydrant lead.
        - Parkedale Avenue 300 mm cast iron 2 metre split.

    - Flushing Program:
      - Annual flushing program and hydrant fire flow testing completed.

    - Service Repairs / Replacement:
      - Removal of all bulk water fill stations completed.
      - Repairs to curb stop boxes and valves as required.

    - Valve / Hydrant Inspection:
      - Installation of hydrant flags for winter.
      - Non-draining hydrants pumped out for winter.
      - Valve chambers pumped out for winter.

    - Capital Projects WD:
      - Centre Street water main installation commenced Sept 12, 2011. Installation completed November 8, 2011. The water main was disinfected, flushed, sampled and placed in service.

B. WASTEWATER TREATMENT PLANT AND COLLECTION SYSTEM

Please refer to Attachment #2 – Brockville WPCC Sewage Plant Performance Assessment Report for all Operational Data for the quarter. In regards to compliance of Carbonaceous 5-day Biochemical Oxygen Demand ($CBOD_5$), as of the end of December the 12 month revolving average effluent characteristics (concentration and loading) for $CBOD_5$ are 61.20 mg/L and 1072.84 kg/day respectively and remain out of compliance with the Certificate of Approval limits of 35.00 mg/L and 763 kg/day.

Items of Note:

1. Main Plant:

    - Primary Clarifiers #1 and #2 are still being upgraded as part of the Secondary Treatment Upgrade.
    - New centrifuge has been installed but is not commissioned.
    - New Boiler #505 has been installed but is not commissioned.
    - Digester #2 upgrades and pressure test have been completed and the digester will be put in service in January 2012.
    - 2011 Land Application program was completed. The draft 2011 Organic Soil Conditioning Report has been prepared and is ready for review.

2. Main Pumping Station:

    - Wet well was cleaned
    - Bypasses: no bypasses to report.

3. Pumping Stations:
    - WPCC staff responded to five (5) mechanical pump calls. No issues to report.
    - Upgrades have now been completed at all pumping stations, with the exception of Oxford Avenue, but they have not been commissioned.

4. Power Outages:
    - There were three power outages at the WPCC/Pumping Stations. No issues to report.

5. Wastewater Collection System:
    - 55 blocked sewer/camera inspections.
    - 2 blocked main responses.

POLICY IMPLICATIONS

No policy implications at this time.

FINANCIAL CONSIDERATIONS

No financial considerations at this time.

CONCLUSION

It is recommended that Council receive the report for information purposes.

P. Raabe, P. Eng.
Director of Environmental Services

E. Malcomnson
Wastewater Systems Supervisor

D. Richards
Water Systems Supervisor

D. Cyr
Director of Finance

B. Casselman
City Manager

BROCKVILLE DRINKING WATER SYSTEM
PERFORMANCE ASSESSMENT REPORT

	CITY OF BROCKVILLE				ELIZABETHTOWN-KITLEY		BACTERIOLOGICAL SAMPLING		
							BROCKVILLE WDS		
Month 2011	Total Volume Treated (ML)	Avg. Daily Flow (ML/d)	Avg. Fl2 Residual (mg/L)	WDS Avg. FCR (mg/L)	Total Flow (ML)	Avg. Daily Flow (ML/d)	EC	TC	HPC
OCT	345.44	11.14	0.50	1.09	5.87	0.19	36 36 out of 36 safe	36 36 out of 36 safe	16 16 out of 16 safe
NOV	339.79	11.33	0.53	1.07	5.68	0.19	45 45 out of 45 safe	45 45 out of 45 safe	20 20 out of 20 safe
DEC	346.63	11.18	0.48	1.06	5.47	0.18	36 36 out of 36 safe	36 36 out of 36 safe	16 16 out of 16 safe

FCR - Free Chlorine Residual
WDS - Water Distribution System
EC - E. coli
TC - Total Coliform
HPC - Heterotrophic Plate Count
ML - Million Litres

ATTACHMENT #2

BROCKVILLE WATER POLLUTION CONTROL CENTRE

MUNICIPALITY: BROCKVILLE
PROJECT: BROCKVILLE
PROJECT NUM.:
WORKS NUM.: 120000122

YEAR: 2011
WATER COURSE: ST. LAWRENCE RIVER
DESIGN CAPACITY: 21.800 X 1000 m3/d
PEAK DESIGN CAPACITY: 54.500 X 1000 m3/d

DESCRIPTION: A PRIMARY TREATMENT FACILITY, COMPLETE WITH TWO PRIMARY ANAEROBIC DIGESTERS TWO CENTRIFUGES FOR SLUDGE THICKENING AND UTILIZING FERRIC CHLORIDE FOR PHOSPHORUS REMOVAL AND SODIUM HYPOCHLORITE FOR EFFLUENT DISINFECTION.

MONTH	FLOWS			BOD/CBOD			SUSPENDED SOLIDS				PHOSPHORUS			
	TOTAL FLOW 1000M3	AVG DAY FLOW 1000M3	MAX DAY FLOW 1000M3	AVG RAW BOD (mg/L)	AVG EFF CBOD (mg/L)	TOTAL LOADING EFF. CBOD (kg/day)	AVG RAW SS (mg/L)	AVG EFF SS (mg/L)	TOTAL LOADING EFF. SS. (kg/day)	PERCENT REMOVAL	AVG RAW PHOS. (mg/L)	AVG EFF PHOS. (mg/L)	TOTAL LOADING EFF.PHOS. (kg/day)	PERCENT REMOVAL
DEC 11	620.17	20.006	25.459	135.80	54.60	1092.33	137.13	35.50	710.21	74.1	2.68	0.71	14.20	73.5
NOV 11	469.25	15.642	25.844	195.13	74.67	1167.99	217.90	44.75	699.98	79.5	3.98	0.98	15.33	75.4
OCT 11	462.63	14.924	21.605	207.11	78.89	1177.35	191.80	46.70	696.95	75.7	3.62	0.94	14.03	74.0
SEP 11	420.62	14.021	16.419	183.22	90.11	1263.43	173.56	49.67	696.42	71.4	3.37	1.02	14.30	69.7
AUG 11	482.82	15.575	25.118	149.09	66.00	1027.95	168.58	40.00	623.00	76.3	3.12	0.81	12.62	74.0
JUL 11	474.37	15.302	18.874	151.27	61.36	938.93	175.36	40.73	623.25	76.8	3.03	0.82	12.55	72.9
JUN 11	545.65	18.188	22.796	164.42	65.58	1192.77	185.58	45.00	818.46	75.8	3.19	0.89	16.19	72.1
MAY 11	806.83	26.027	41.137	106.73	38.40	999.44	115.00	27.00	702.73	76.5	1.97	0.57	14.84	71.1
APR 11	761.79	25.393	43.915	92.00	36.00	914.15	103.50	22.58	573.37	78.2	1.91	0.51	12.95	73.3
MAR 11	864.40	27.884	47.378	95.25	33.67	938.85	95.14	24.07	671.17	74.7	1.88	0.49	13.66	73.9
FEB 11	460.18	16.435	27.914	149.55	64.64	1062.36	156.50	38.58	634.06	75.3	3.04	0.92	15.12	69.7
JAN 11	483.33	15.591	16.876	163.00	70.46	1098.54	157.50	40.42	630.19	74.3	3.23	1.08	16.84	66.6
AVG		18.749		149.38	61.20	1072.84	156.46	37.92	673.32	75.71	2.92	0.81	14.39	72.19
MAX			47.378	207.11	90.11		217.90	49.67		79.46	3.98	1.08		
CRITERIA		21.800			35.00	763.00		45.00	981.00			1.00	22.00	
COMPLIANCE		YES			NO	NO		YES	YES			YES	YES	
STATISTICS FOR THE MONTH OF DECEMBER:														
2010	605.17	19.522	31.548	123.50	51.75	1010.26	116.75	29.38	573.56	74.8	2.66	0.65	12.69	75.6
2009	628.37	20.270	32.364	107.29	43.43	880.33	129.75	24.50	496.62	81.1	2.56	0.61	12.36	76.2
2008	716.62	23.117	37.739	72.50	33.75	780.20	98.11	25.44	588.10	74.1	2.08	0.58	13.41	72.1

MONTH	Total Loadings		
	TOTAL RAW BOD (kg/day)	TOTAL RAW SS (kg/day)	TOTAL RAW P (kg/day)
DEC 11	2,717	2,743	54
NOV 11	3,052	3,408	62
OCT 11	3,091	2,862	54
SEP 11	2,569	2,433	47
AUG 11	2,322	2,626	49
JUL 11	2,315	2,683	46
JUN 11	2,990	3,375	58
MAY 11	2,778	2,993	51
APR 11	2,336	2,628	49
MAR 11	2,656	2,653	52
FEB 11	2,458	2,572	50
JAN 11	2,541	2,456	50
AVG	2,652	2,786	52
MAX	3,091	3,408	62

COMMENTS:

Minutes
DWQMS Management / Infrastructure Review Meeting
Brockville Drinking Water System
December 13, 2011

Present: ***Bob Casselman, City Manager***
Dave Henderson, Mayor
Peter Raabe, Director of Environmental Services
Don Richards, Supervisor Water Systems
Jill Buckland, Abatement/Lab Technician

Location: Boardroom City Hall

- Meeting commenced at 13:30 hrs.
- Roll call: D. Richards questioned if Larry Journal's position on the DWQMS Management Review Committee would be replaced. B. Casselman stated it would be up for discussion at the next council meeting.
- May 9, 2011 Management Review Meeting Minutes: minutes reviewed and approved.
- Old Business: Management Review Committee requested 2 meetings per year – this meeting satisfies this request.
- New Business:
  - P. Raabe provided a brief overview of the Brockville Drinking Water System Operational Plan and advised top management that the DWQMS Representative responsibilities have been appointed to the Supervisor of Water Systems.
  - D. Richards provided an overview of the Element 20 Management Review requirements in the Brockville Drinking Water System Operational Plan and presented the Management Review Summary report (see attached).
  - Outcome from Summary Report Presentation:
    - D. Richards provided a detailed report regarding deviations from critical control points – December 2, 2011 transmission feeder main break. (see attached report to MOE) D. Henderson questioned how the MOH determines if a boil water advisory is to be issued. D. Richards indicated that during any Adverse Water Quality Incident there is communication between operations staff (Water Systems ORO or Supervisor) and the Medical Officer of Health. During the transmission main failure the MOH requested operational parameters of the plant process, system pressures and chlorine residuals to determine if a boil water order would be issued. D. Richards expressed concern if the main break was not isolated in time and the tower supply was depleted a boil water advisory would have been issued and the City's Emergency Management plan would have been implemented.

- D. Richards provided the Annual Risk Assessment Review Report (see attached). All risks identified in the annual review have bee n addressed or are currently under review. D. Richards stated that the review is conducted annually by the Supervisor of Water Systems and a more comprehensive review is conducted every three years – 2012 is scheduled for the comprehensive review. D. Henderson questioned whether the r isks identified in the Source Water Protection Report are the same as the ones in the Operational Plan. P. Raabe provided an overview of the Source Water Protection Plan for Brockville's source water and indicated the risks identified in the report are managed by the Planning Department when approving development in the source water protection zone areas and approvals are required for development. The MOH will manage inspections relating to septic systems in the intake protection zone.

- J. Buckland provided an overview of the CGSB initial audit report results (see attached). CGSB site audit was conducted on November 21, 2011 for the Brockville Drinking Water System Operational Plan and we are still waiting on these results.

- D. Richards stated that the Water Systems Emergency Plans are currently under review and in-house training on emergency response is provided to Operations Staff. Water systems Standard Operational Procedures are also currently under review.

- D. Richards provided information regarding the upcoming amendments to the Safe Drinking Water Act – Section 14 Agreements with Accredited Operating Authorities (Elizabethtown-Kitley agreement) and Section 19 Standard of Care, Municipal Drinking Water Systems. B. Casselman expressed the need to review the agreement in more detail to ensure proper cost recovery for operating system. P. Raabe indicated a meeting was held with the Director of Finance and staff to review the agreement and to ensure pr oper allocation of expenses for cost recovery. D. Richards indicated that there are additional agreements with Elizabethtown regarding the operation of the system and with the upcoming regulatory changes to the Safe Drinking Water Act the City may want to consider a legal opinion before amending the original agreement. D . Richards provided MOE information sheet on the Standard of Care Course.

- D. Richards provided feedback from consumers. Water systems division needs to provide better communications for consumer water inquiries/com plaints. Consumers are calling GWMC, WPCC and City Hall for water related m atters and the calls need to be redirected to the water plant. When the calls are redirected to the plant, if plant staff are available the call will be handled. The recommendation is to have a centralized phone system with administrative help to manage calls and direct to the app ropriate staff. P. Raabe recommended updates to the City website to providing additional direction when consumers trying to contact department.

- D. Richards provided an overview of the resources required to maintain the DWQMS system for both Brockville and Elizabethtown-Kitley's Operational Plans.

- D. Richards stated that the 2011 Capital projects have been completed within budget with the exception of the Low Lift pump installation and Main Plant Pump #2 refurb which will be carried over to 2012. Variance report on 2011 capital projects was submitted to the finance department.

- D. Richards reviewed the 10 Year Capital Plan for Water Treatment and Water Distribution. The Draft 2012 Capital Budgets were also presented for review.

- Operational Plan Currency: D. Richards stated that once the results of the CGSB audit are received both Operational Plans will be revised - projected date is January 2012. D. Henderson requested hard copies of the Operational Plan not electronic.

- D. Richards provided a brief overview of the Elizabethtown-Kitley Operational Plan and presented the minutes of the Elizabethtown-Kitley Management/Infrastructure review meeting held on November 9, 2011. A new Municipal Drinking Water Licence has been issued to Elizabethtown-Kitley, amendments include regulatory relief from lead sampling.

- Staff Suggestion: D. Richards recommended scheduling a Standard of Care Course offered by the Walkerton Training Centre for Senior Management and Council. Information on the course was provided. D. Henderson requested we extend the invitation to Elizabethtown-Kitley and possibly the Counties. D. Richards will arrange invitations when the course date has been confirmed.

- D. Richards provided an overview of the Drinking Water Licence/Permits and Accreditation Process. The only outstanding item to be addressed is the submission of the financial plan to the MOE in order to receive accreditation. B. Casselman stated the financial plan is currently being developed and will be submitted in February 2012.

- Meeting adjourned at 15:15 hrs.

Prepared by: D. Richards, Water Systems Supervisor

NOTICE: Should there be any significant errors, inaccuracies or omissions please notify the author in writing and this will be passed along to all other meeting attendees.

REPORT TO FINANCE, ADMINISTRATION, OPERATIONS COMMITTEE – January 17, 2012

2012-004-01
REQUEST FOR REVISION OF PARKING ON WATER STREET EAST

SANDRA M. SEALE
CITY CLERK
DAPHNE LIVINGSTONE
DEPUTY CITY CLERK

RECOMMENDATION

THAT the four existing parking meters located on the south side of Water Street East from 43m east of Ferry Street to 30m east of Park Street be removed; and

THAT there be Two Hour Time Limited Parking Zone on the South side of Water Street East from 43m east of Ferry Street to 30m east of Park Street; and

THAT By-law 119-89 be amended accordingly.

PURPOSE

To remove metered parking on Water Street East and install 2 Hour Time Limited Parking.

BACKGROUND

The City Clerk's office is in receipt of a letter from Mr. David Descent, Property Manager for The Executive, Leeds Condominium Corporation No. 3. The letter requests the removal of the four existing parking meters located on the south side of Water Street East. The request is to facilitate the use of the laneway in front of the building for emergency vehicles and loading and unloading of passengers.

ANALYSIS/OPTIONS

Confirmation has been received from Ms. Brenda Clarke, that the DBIA Board has approved the change to Time Limited Parking in this location.

Additionally, the removal of the existing parking spaces on the laneway will not create a shortage of parking spaces required under the Site Plan Control Agreement. There are 84 interior parking spaces within the development which service 80 units.

POLICY IMPLICATIONS

Amendments to the Parking By-law require Council's authorization.

FINANCIAL CONSIDERATIONS

The estimated cost of $200 for signs and installation will be borne by the Parking Operating budget.

CONCLUSION

It is recommended that the four meters located on the on the south side of Water Street East be removed and 2 hour complimentary parking signs be installed.

D. Livingstone
Deputy City Clerk

S. Seale
City Clerk

D. Cyr
Director of Finance

B. Casselman
City Manager

RECEIVED JUL 12 2011

THE EXECUTIVE

A Condominium of the 1000 Islands

55 Water St. E., Brockville, Ont.
LEEDS CONDOMINIUM CORPORATION NO. 3
Brockville, Ontario K6V 1A3

July 8, 2011

Ms. Sandra Seale,
City Clerk,
Corporation of the City of Brockville,
1 King Street West, (City Hall)
Box 5000,
Brockville, On.
K6V 7A5

Dear Ms. Seale,

Leeds Condominium Corporation No.3, also known as The Executive situated at 55 Water St. East Brockville On. K6V 1A3 hereby requests that the City remove the four existing parking meters located on the south side of Water Street East between Bethune and Park streets and replace them with two hour maximum parking signage. This request is being made to accommodate a change in our off street drive through to create a safer and more manageable access route for Emergency vehicles to attend at our location.

Thank you for your consideration.

Yours truly,

David Descent,
Property Manager,

DECEMBER 22, 2011

REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – JANUARY 17, 2012

2012-007-01
HARBOUR SUBLEASES
BROCKVILLE YACHT CLUB AND
LEEDS CONDOMINIUM CORPORATION #18

C.J. COSGROVE, P. ENG.
DIRECTOR OF OPERATIONS

RECOMMENDATION

THAT the City of Brockville enter into sublease agreements for the continued use of parts of the Brockville Harbour with the Brockville Yacht Club and Leeds Condominium Corporation # 18; and

THAT the necessary by-laws be enacted.

PURPOSE

To approve subleases for the continued use of parts of Brockville Harbour with the Brockville Yacht Club and Leeds Condominium Corporation #18 (Boardwalk Condominium).

BACKGROUND

At the November 8, 2011 meeting, Council passed By-Law 088-2011, authorizing the execution of a lease of the Brockville Harbour by the City from the Department of Fisheries and Oceans. The term of the lease is from January 1, 2012 to December 31, 2014.

The City has had on-going sublease agreements for the portions of the Brockville Harbour with the Brockville Yacht Club and Leeds Condominium Corporation #18.

ANALYSIS

The Brockville Yacht Club and Leeds Condominium Corporation #18 wish to enter into new agreements to extend their subleases for the same duration as the City's lease agreement with the Department of Fisheries and Oceans.

New lease agreements have been prepared and have been signed on behalf of the Brockville Yacht Club and Leeds Condominium Corporation #18. The agreement with the Yacht Club is consistent with previous agreements. The agreement with Leeds

Condominium Corporation #18 has been modified to reflect the proposed relocation of the docks from the south seawall adjacent to the condominium to the east seawall.

POLICY IMPLICATIONS

Council authorization is required for the proposed leases.

FINANCIAL CONSIDERATIONS

The Brockville Yacht Club sublease requires a payment to the City of $2,830 for 2012, with a Consumer Price Index escalation clause for the subsequent years.

The Leeds Condominium Corporation #18 sublease requires a payment to the City of $810 for 2012, with a Consumer Price Index escalation clause for the subsequent years.

CONCLUSION

The City should enter into subleases for parts of the Brockville Harbour with the Brockville Yacht Club and Leeds Condominium Corporation #18.

C. Cosgrove, P.Eng.
Director of Operations

D. Cyr
Director of Finance

B. Casselman
City Manager

DECEMBER 22, 2011

REPORT TO FINANCE, ADMIN. & OPERATIONS COMMITTEE – JANUARY 17, 2012

2012-008-01
RELOCATION OF DOCKS -
BOARDWALK CONDOMINIUM

C.J. COSGROVE, P. ENG.
DIRECTOR OF OPERATIONS

RECOMMENDATION

THAT the quote from Kehoe Marine Construction in the amount of $19,300 plus HST for the relocation of the Boardwalk Condominium docks be accepted.

PURPOSE

To retain the services of a qualified contractor to relocate the floating docks at the Boardwalk Condominium in the Brockville Harbour.

BACKGROUND

The City of Brockville agreed to make the arrangements for, and pay the cost of, relocating the floating docks which have been located on the south seawall adjacent to the Boardwalk Condominium, to the east seawall adjacent to the condominium. Relocation of the docks makes way for the installation of a new dock at the foot of Broad Street as part of the Tall Ships Landing/Maritime Discovery Centre project.

ANALYSIS

A quote for the work was solicited from Kehoe Marine Construction. The quote of $19,300 plus HST compares favourably to the estimated cost of $25,000 used in determining the budget amount proposed to be included in the 2012 Capital Budget.

It is recommended that this be a single source purchase as Kehoe Marine Construction (Kehoe) is the contractor of choice for the Boardwalk Condominium, the owner of the docks. Kehoe is also very familiar with the Brockville Harbour and the standards expected for the floating docks in the harbour, having previously built and installed the most recent docks in the harbour.

POLICY IMPLICATIONS

The Purchasing By-Law (090-2005) requires Council approval of a single source purchase of this value.

FINANCIAL CONSIDERATIONS

Sufficient funds have been included in the proposed 2012 Capital Budget for this work. Acceptance of this quote would commit these funds to be included in the 2012 Capital Budget. Acceptance of the quote at this time is recommended to ensure the docks are in place for the start of the 2012 boating season.

CONCLUSION

Acceptance of the single source quote from Kehoe for the relocation of the Boardwalk Condominium docks is recommended.

C. Cosgrove, P.Eng.
Director of Operations

D. Cyr
Director of Finance

B. Casselman
City Manager

December 28, 2011

REPORT TO FINANCE AND OPERATION COMMITTEE – January 17, 2012

2012-010-01
ORMOND AND BEECHER
STREET BRIDGES
LOAD LIMIT RESTRICTION

C. J. COSGROVE, P. ENG.
DIRECTOR OF OPERATIONS
VALERIE HARVEY
SUPERVISOR OF
TRANSPORTATION SERVICES

RECOMMENDED

THAT the Ormond Street Bridge be posted at a 20 tonne maximum load capacity; and

THAT the Beecher Street Bridge be posted at a differentiated maximum load limit capacity ranging from 14 to 35 tonnes by truck type; and

THAT City of Brockville Traffic By-law 21-93 be amended accordingly.

PURPOSE

To post the maximum weight load capacity of the bridges based on their current structural integrity.

BACKGROUND

A biennial inspection of bridges and culverts by a qualified structural engineer is mandated by the Public Transportation Act and Highway Improvement Act. The inspection and report requirements are specified in the Ontario Structure Inspection Manual (OSIM). The City completed its most recent inspection during December of 2011.

For information purposes, a copy of the 2011 Municipal Structure Inspections Executive Summary, Bridge Summary Statistics, Bridge List, Culvert List and Capital Needs Report are included with this report as Attachment A.

ANALYSIS

As identified in the report, the Ormond Street Bridge is deficient in load capacity and it was recommended that the bridge be immediately posted at a 20 tonne maximum load capacity or be reduced to a single lane in the middle of the bridge. As this was identified as being urgent, the 20 tonne load limit signs were installed on December 21, 2011.

A 20 tonne load is roughly equivalent to a dump truck with a full load. Transport trucks with full loads will not be able to use the Ormond Street Bridge until it is replaced.

Trucks greater the 20 tonnes will have to use North Augusta Road, Park Street or Stewart Boulevard as alternatives to Ormond Street. It is proposed to replace the Ormond Street Bridge as part of the 2012 Capital Budget.

The Beecher Street Bridge could be deficient in shear capacity. As a precautionary measure the bridge was posted on December 22, 2011 at a differentiated maximum load limit capacity ranging from 14 to 35 tonnes by truck type until such time as the bridge is evaluated or proof loaded to verify its actual load capacity.

It is anticipated that this posting will not have much impact on truck routing as Beecher Street is a local residential street.

This report is to officially update the by-law to coincide with current bridge signage.

POLICY IMPLICATIONS

Amendments to the City's Traffic By-law 21-93, require Council's authorization.

FINANCIAL CONSIDERATIONS

Annually Public Works budgets for the installation of a variety of signs throughout the City. There are sufficient funds in the Public Works Operating Budget in account 3390-3620 to accommodate the supply and installation of these signs.

CONCLUSION

The Ormond and Beecher Street Bridge load limit restrictions be authorized and the Traffic By-law amended accordingly.

C.J. Cosgrove, P.Eng.
Director of Operations

V. Harvey
Supervisor of Transportation Services

D. Cyr
Director of Finance

B. Casselman
City Manager

Report 2012-010-01
ORMOND AND BEECHER STREET BRIDGES
LOAD LIMIT RESTRICTION

Attachment A

2011 Municipal Structure Inspections Executive Summary	11 pages
Bridge Summary Statistics	1 page
Bridge List	1 page
Culvert List	1 page
Capital Needs Report	3 pages

Executive Summary

Keystone Bridge Management Corp. was retained by the City of Brockville to provide bridge inspections for all of its bridges and large culverts. The field inspections were completed on November 15 and 25, 2011 by Messrs. Stephen Reid, C.E.T. and Harold Kleywegt, P.Eng. Twenty-one structures were inspected of which 12 were proper bridges and the remainder large culverts.

Approximately $3.9 million is required in Capital Investment to continue to maintain the bridge and culvert inventory in good serviceable condition for the next 15 years to 2026. Four bridges and two culverts require replacement within the present planning horizon. An annual capital budget of not less than $600K for the next six years, and $100K thereafter is recommended to preserve and renew the present bridge and culvert inventory.

The structure inventory is substantially depreciated to well below desirable levels. There is an immediate need to replace the Ormond Street Bridge. In the interim, it is recommended the Ormond Street Bridge be load posted at 20 tonnes.

A total of 8 of the inspected structures have a BCI less than 70. This is equivalent to 38.1%. A healthy bridge inventory should maintain at least 80% of its structures with a BCI greater than or equal to 70.

Capital Needs

The Capital Needs for the City of Brockville are summarized in a separate included report in the Auxiliary Reports section of this binder.

The report is organized from the most immediate needs to the less immediate needs by the Recommended Year sub-headings. The capital needs picture is graphically presented at the end of the Report. A Grand Total of $3,860,000 is the projected capital need from the Present to 2025.

It is recommended that on an average basis the City of Brockville budgets at least $600,000 per year from 2012 to 2017, and $100,000 per year thereafter for capital improvement and replacement of its bridge and culvert assets. This amount may not have to be spent each year, but should be accumulated to provide for those years that expenditures are higher.

The Ormond Street Bridge constructed in 1945 is the most pressing capital need. It is shown in Year 2012 as a replacement project. This bridge has several perforated steel girders. The strengthening girders inserted to support severely crippled girders have a very poor splice detail that could fail with little or no warning. This structure is seriously deficient in load capacity and should be load posted immediately.

The work shown for 2015 includes the Elm Street Bridge replacement. This bridge is functioning acceptably as a pedestrian bridge.

The Beecher Street Bridge (1910) is well beyond its service life. It has details similar to the Elm Street Bridge that was removed from service in 2007. An overload on this bridge would seriously compromise its integrity. Fortunately repairs have helped keep up this bridge, but it is very probably deficient in shear capacity. The previous load posting for the Elm Street Bridge is suggested as a cautionary load posting for the Beecher Street Bridge. Such a load posting should discourage heavy traffic on this mainly residential bridge.

The Church Street Bridge (1910) continues to suffer from alkali-aggregate reactivity, and is substantially affected by leaching. The arch shape of the filled spandrel does offer a superior structural form; however the material of the arch is slowly losing its properties and should not be reasonably relied on for very much longer. It is recommended the bridge be replaced in 2017. It would be unwise to keep this bridge in service beyond 2017.

The Front Ave. Culvert is also substantially deteriorated and nearing the end of its service life. It is not economical to repair this culvert. A replacement culvert should be installed not later than 2025. This date may need to be advanced pending the outcome of future inspections.

Bridge Maintenance

Detailed maintenance needs are captured in the **Maintenance Needs Report** in the Auxiliary Reports section of this binder.

The City of Brockville is providing satisfactory maintenance to most of the structures inspected. Keeping brush clear of structures is especially challenging on the slopes and river banks. The City is encouraged to aggressively continue brushing out around its bridges. Brushing permits air circulation so that bridges dry. It also helps prevent water channel obstruction. Trees that have fallen into a river or stream may exacerbate bank scour, and this was noted at a few locations in Brockville.

Deck drainage maintenance of bridges has in some instances been neglected. It is very important to rod or water-jet all of the bridge deck scuppers and drains in the spring and fall of each year. Good drainage prevents ponding on the deck (a traffic hazard) and encourages salt brine from winter maintenance to run off quickly.

It was noted that the City marks the locations of the deck drains in preparation for winter maintenance. This would be an appropriate time to clean and flush the scuppers and drains.

Bridge cleaning is widely recognized as an important maintenance activity. Ideally spring maintenance should include a thorough sweeping of the bridges' horizontal surfaces, and power washing of the bridge seats especially where expansion joints are open or the seal is compromised. Early sweeping removes brine laden winter sand from the bridge decks. This greatly helps forestall the onset of corrosion of the reinforcing steel.

Expansion joints should be cleaned of debris caught inside the gaps in the spring and fall of each year.

Depreciation

Included in the Auxiliary Reports section of this binder is the **Parabolic & Straight Line Depreciation** Report for all of the bridges. The culverts are not included.

The New Value of each bridge is premised on the geometry and deemed unit price of the main components, and summing the individual values. The costs of foundations are not included. The deemed unit prices are relative, and not necessarily reflective of current actual costs.

The loss in relative value of a bridge due to Defects and Damage is shown as a percentage, and actual cost. For example, the Kingston Bridge (Bridge ID 16-115) has lost 14.2% of its New Value due to Defects and Damage assessed at the time of inspection. One percent damage devalues a component by five percent. Therefore, a component that is 20% damaged has lost all of its value. Ten percent defects to a component is equivalent to one percent damage. Examples of four depreciation functions are illustrated in the following Figure 1.

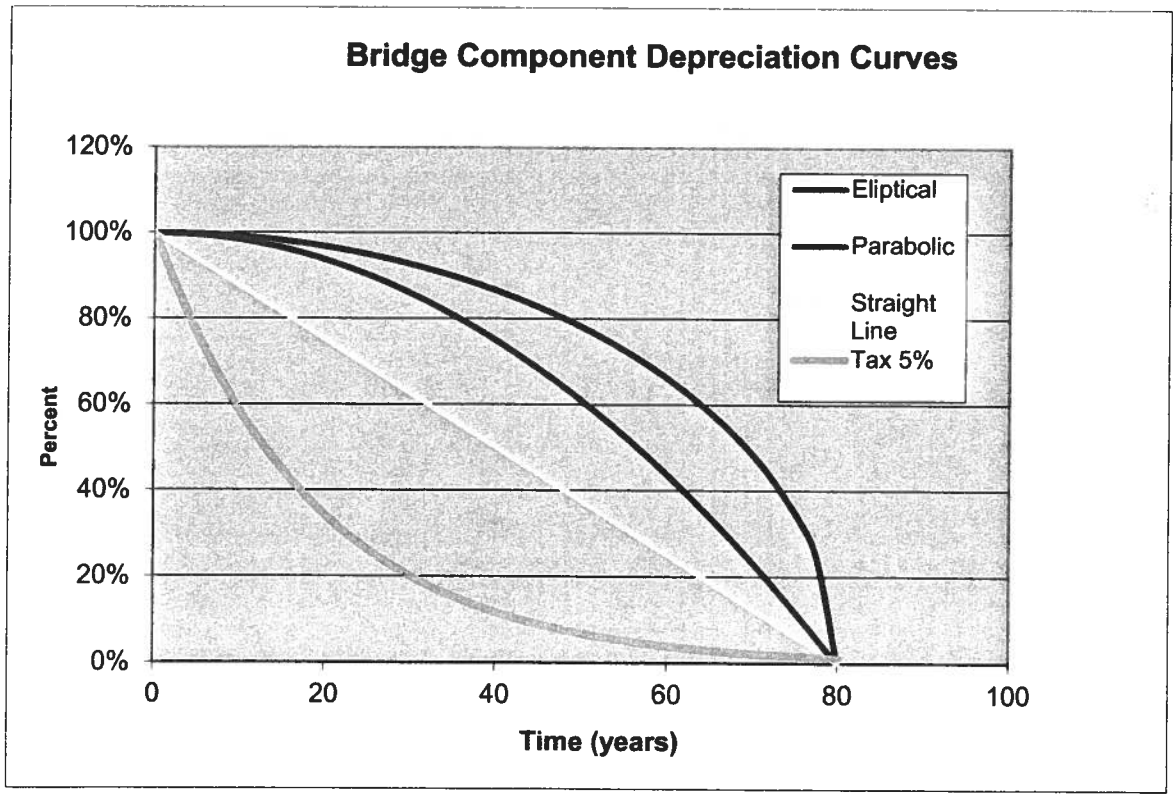


Figure 1. Examples of four depreciation functions for a bridge component with an 80 year deemed service life

The Present Value of a bridge is expressed in terms of how much of the original value is retained after considering Depreciation, Defects and Damage. Depreciation is calculated as Parabolic or Straight-Line (S/L). With a parabolic depreciation function, only 25% of the depreciation takes place in the first half of the components life. Parabolic depreciation sustains a bridge's value in the early part of its life. Straight-line depreciation is probably a more realistic and conservative approach to describing the present value of a bridge.

The Kingston Bridge was constructed in 1981. The deemed New Value of the Bridge is shown as $676,396. If parabolic depreciation is assumed, the bridge still retains about 63.9% of its original deemed value. The Straight-Line depreciated value of the bridge is 44.3% of the new value.

The most telling part of this report is the bottom line. The deemed new value of all of the bridge assets is approximately $7.5M. The loss in value to the assets due to Defects and Damage is assessed as 11.5% or $869K. The total depreciated value of the bridge inventory is 46.1% of the deemed New Value if parabolic depreciation is assumed. Similarly for straight-line depreciation the value has declined to 31.5% of the original deemed new value.

There were some errors regarding the depreciation values of the William Street CNR Bridge in the 2009 report. Correcting these errors has caused a slight improvement in the depreciation numbers from 2009 to 2011.

It is a desirable target to maintain the entire bridge inventory depreciation level at or above 50% if Straight Line Depreciation is adopted. Similarly, for Parabolic Depreciation, it is desirable to maintain the level of depreciation above 67%. Depending on the choice of Depreciation function, the City of Brockville is behind target by 20.9% or 18.5%.

It is recognized that the City has invested significantly in bridge renewal over the past decade with the renewal of the North Augusta Road CNR Overhead. Continued strategic investment in rehabilitation and renewal will improve the depreciation numbers. Those structures with more than 10% Defect & Damage depreciation should be prioritized for rehabilitation.

It should be noted however that in some instances it is prudent to allow a structure to live out its natural life before investing in renewal. For example the Church Street Bridge is fully depreciated. Keystone's recommendation as noted previously for this bridge is to keep it in service until 2017 and then replacing it.

Bridge Depreciation Forecast

In the Auxiliary Reports Section of this binder is a forward looking graphical representation of the projected depreciation of the inspected bridge components. The aggregate value of the inspected components is shown in terms of the Original Value in current dollars, the Present Depreciated Value, and the Forecast Depreciated Value in five year increments extending 20 years hence.

The Depreciated Value is calculated based on the deemed value, deemed life, and age of each bridge component. Once Defects or Damage is identified on a component, the Defects and/or Damage is assumed to grow at 0.5% per year non-compounded. Thus a sidewalk with 5% scaling (Defect) at the present time is assumed to have 7.5% scaling in another five years time.

Examining the red bars in the graph, the Original Value has declined from about $7.5M to about $3.7M considering only parabolic depreciation. A further approximate $1.8M of depreciation is forecast over the following 20 years.

Contrast this against the worst case scenario of straight-line depreciation including on-going growth of defects and damage. The Original Value declines $2.4M to the present and a further $1.8M in the next 20 years.

The projected depreciation is $90K per year in both scenarios. It usually takes two dollars of investment to restore one dollar of depreciation. On this basis the City of Brockville should be spending at least $180K per year on its bridges just to maintain their asset value. Furthermore, significant depreciation is occurring with the culvert inventory.

It was identified earlier that the depreciated value of the bridges is below desirable target levels. A minimal expenditure of $180K per annum will help hold the value of the assets but will do nothing to raise the asset value to the desired depreciation levels. The annual recommended capital budget of $600K per annum for 2012 to 2017 followed by annual expenditures of $100K thereafter, recommended earlier will yield a much needed improvement in the present asset value of both the bridge and large culvert assets.

Additional Investigations

Biennial inspection of bridges as mandated by OSIM (Ontario Structure Inspection Manual) provides a cost effective means of inspecting and reporting on the general condition of a bridge. Where, in the opinion of the Engineer, additional investigation is required, it is prescribed as part of the Inspection Report. No additional investigations are recommended at this time.

Load Postings

The load posting signs at the at the Elm Street bridge have been removed since 2009. This was requested in our previous report as the bridge is closed. No bridges owned by the City of Brockville are currently load posted.

The Ormond Street Bridge should be load posted at this time. It is our recommendation that the bridge be signed for a single load posting of 20 tonnes. Alternately, the bridge should be reduced to a single lane centred on the deck. In single lane configuration a load posting would not be required. A structural evaluation is normally required together with a very comprehensive inspection of the superstructure to determine the appropriate posting. Given the advanced nature of corrosion and inaccessibility to view all of the

girders it may not be reasonably possible to complete an analytical structural evaluation of the present bridge.

A precautionary load posting is recommended for the Beecher Street Bridge. This was discussed earlier in the 2009 report.

Bridge Condition Index

The **Bridge Condition Index** (BCI) was requested by the Client. The BCI is a key piece of data requested by OGRA and incorporated into Municipal Data Works.

The calculation of BCI requires inspection following the OSIM Excellent-Good-Fair-Poor (EGFP) rating system. Up to 55 structural elements are considered in the calculation. This is a very onerous task if done manually but is considerably eased when performed on enterprise software such as the Keystone Bridge Management System (KBMS).

Keystone follows its proprietary Triple-D approach instead of the EGFP method of rating a bridge. In order to translate the Triple-D method to EGFP the following approach is observed. Anything considered Damaged in Triple-D format is mapped 1:1 as Poor in EGFP format. All bridge components transition from Excellent to Good in a straight-line decay function over a 20 year period. Thus a new bridge component becomes 10% Excellent and 90% Good after ten years of service. The determination of Fair is based on the percent Defects and considers the percent Damage loosely following OSIM philosophy. The calculation of Fair is performed following an algorithm implicit to KBMS. The percent Good is determined as 100% less the percent Excellent, Fair, and Poor. Excellent, Good, Fair, and Poor are weighted 1.00, 0.75, 0.40, and 0.0 respectively in the BCI calculations following the published MTO methods of July, 2009.

The calculated BCI information is provided in the included report of the same name. Although the numbers are generally reliable there may be notable exceptions. Fortunately the City of Brockville inventory is well conditioned for calculating reasonable BCI values.

Where the BCI is less than 70 the index is printed in green font. Where the BCI is less than 60 it is shown in orange font. A total of 8 of the inspected structures have a BCI less than 70. This is equivalent to 38.1%. A healthy bridge inventory should maintain at least 80% of its structures with a BCI greater than or equal to 70.

A common challenge with inspection ratings is the propensity for staff to be conservative and classify components as Poor when in fact they are probably only mostly Fair. The Keystone approach largely solves this by concentrating on Defects which are simply cosmetic changes and Damage which is of structural and performance relevance.

In summary, the BCI is a useful measure of the overall condition of common bridges and culverts, but is still highly variable and dependent on the judgement of the individual bridge inspector. The BCI calculations could easily be ten points less if determined by others essentially because of the ambiguity and lack of consistency in differentiating between Fair and Poor in strict OSIM methodology inspections.

Performance Deficiencies

A proper inspection of a bridge or large culvert evaluates both the material and performance characteristics. Performance deficiencies are noted on the individual inspection reports. They are reproduced in the summary **Performance Deficiencies Report** in the Auxiliary Reports Section.

Those bridges with numerous performance deficiencies deserve added attention and should be prioritized for earlier rehabilitation or replacement.

Triple-D Inspections

Keystone's approach to Bridge Management is fundamentally different from all others anywhere in the world. Keystone models bridge assets in terms of their **D**epreciation, **D**efects, and **D**amage. This "**Triple-D**" approach is unique to Keystone, and is the soundest and most reliable method ever conceived to accurately ascertain or predict the condition of a bridge.

The "**Triple-D**" approach is imbedded in a highly sophisticated MS Access database application developed by Keystone. The design of the database easily facilitates porting the data to any other application, and is highly customizable to any client.

Every bridge is modeled in terms of its components. Each component has a life expectancy and value based on its material and geometric properties. As a bridge ages, the components depreciate in accordance with a simple depreciation function that is client specified. Either a straight-line or parabolic depreciation function is recommended. The overall depreciation of a structure is expressed in terms of the sum of the depreciation of all the components.

This deterministic approach to assessing the condition of a bridge provides an extremely reliable, reproducible and predictable approach to stating the condition of not only a bridge, but an entire bridge inventory.

Imagine a municipality that was incorporated in 1900. Every year on its anniversary it builds an identical bridge, for 100 years running until 2000. For simplicity, presume each bridge is constructed of only one component, and the deemed life of that component is exactly 100 years. From this example, it is easy to see that the oldest bridge constructed in 1901 has completely depreciated and now has zero value. Whereas, the centennial bridge constructed in 2000 would on its completion retain its full value. If straight line depreciation is assumed, the centennial bridge would be depreciated to 91% of its original value in 2009. In 2001, the depreciation of the entire bridge inventory of 100 bridges would be 50% assuming straight-line depreciation. It is this simple straight-forward approach that Keystone has adopted.

Defects are any relatively benign but unintended changes to a bridge that cannot be attributed to normal wear and tear, or aging. Mild to moderate scaling of a concrete surface is an example of a **D**efect. Early alkali-aggregate reactivity in concrete is another example of a **D**efect. **D**amage is any change to a structure that reduces the section properties or intended performance of a structural component. **D**amage includes

spalling, delamination, disintegration or severe cracking of concrete; plastic deformation or gouging of steel, or decay of timber.

Defects and **D**amage are detected, quantified, qualified and recorded when the bridge is inspected. The **D**epreciated value of a component is adjusted to account for **D**efects or **D**amage. Keystone recommends that any component that is more than 20% **D**amaged is considered as fully **D**epreciated. Ten percent **D**efects is equal to one percent **D**amage.

The concept of **D**efects and **D**amage is very easily understood and applied as compared to the more traditional subjective ratings of Excellent, Good, Fair or Poor. Consequently, the information resulting from bridge inspections is an order of magnitude more reliable and accurate.

Understanding the Inspection Forms

Inspection reports are headed **Bridge/Culvert Inspection Report**. In the top-right of each form is a general arrangement photograph of the structure taken on the day of inspection.
In the top-left box is basic tombstone data as follows:

- Name of the bridge in large bold font
- The type of bridge
- The road the structure is on
- Name of the Owner
- Structure Location Information
- The Owner specified Structure Identification Number (Site ID)
- Length of the Bridge per legacy information
- Width of the Structure per legacy information
- Number of spans
- Year of original construction per legacy information.
- The span arrangement is shown in metres

In the next box down is recorded the date of inspection, principal inspector, assistant inspector, the weather for the entire day, and the approximate temperature range on the day of inspection.

In the small box under the General Arrangement photograph is shown the AADT per legacy information, (or updated as the case may be), the number of available traffic lanes crossing the structure, the structure skew angle in degrees, and the general direction of the road that crosses the structure, for example E-W means East to West.

The Component Inspection Information is recorded next. The number of components varies based on the complexity of the structure. In the left column for each component is listed:

- Component name in bold with the component count in parenthesis.
- The general category for the component in Italics.

- The Length, Width, Diameter, & Height of the component in metres based on legacy information, or field measure, and as appropriate. Please note that measurements for substructure items are approximate only. For this assignment the overall bridge length, overall width, span lengths and girder depths were consistently field measured.

The second column of the Component Inspection Information captures the actual field inspection information for each component. Information is generally recorded on an exception basis. If there are no annotations it can be safely assumed that the component is generally in satisfactory condition for its age. The following sub-headings explain in detail the inspection information:

Defects

Defects are relatively benign changes to a bridge component that cannot be attributed to simple aging. They result from material Defect or lack of required maintenance. The amount of Defects is estimated to the nearest percent based on visual inspection of all similar components included in the component count. For example, bridges have typically four wing walls, so the estimated defects are applied over all four wing walls. The Defects are characterized with a qualifying comment that is computer generated from drop-down lists in the Keystone Bridge Management System. Where Defects exceed 10% they are highlighted in Yellow.

Damage

Damage is any change to a structure that alters its structural form, strength, or function. Damage may result from untended Defects. The Damage is estimated and reported analogous to Defects. Where Damage equals 5% to 10% it is highlighted in Amber. When Damage is equal to or greater than 10% it is highlighted in Red.

Maintenance

Maintenance recommendations are selected from a component specific drop-down menu in the Keystone Bridge Management System. Up to two maintenance recommendations can be selected and reported.

Capital Rec.

Capital Recommendations are selected from a list of three options; Do Nothing, Repair, or Replace. The number of years in the future the Capital investment should take place is based on the inspector's best judgement, without considering the optimal timing for a comprehensive rehabilitation.

Performance

If a component has a functional impairment, this may be noted in the Performance comment. The Performance comment is created through a context sensitive drop-down menu.

Note

Where the above categories are insufficient to capture the inspection information, Keystone adds an unlimited comment shown in bold font at the bottom of the second column.

Capital Needs Estimate Breakdown

At the end of each Inspection Report is a section titled as per the above.

Capital costs estimates are automatically generated by the Keystone Bridge Management System for standard items which include:

- Deck Replacement
- Deck Concrete Overlay (O'Lay)
- Barrier Wall Replacement (B/Wall)
- Waterproof & Pave (WP&P)
- Expansion Joint (X-Jnt)

Unit prices for the above work are based on MTO data and extensions are based on geometric data residing in the KBMS database.

The cost for Coating Structural Steel is based on a look-up table and engineering judgement. This is also true for Traffic Management & Civil Items costs. The Contract Administration & Contingencies is a straight 20% mark-up.

The Budget Estimate is the rounded Total with additional discretionary judgement applied.

Inspection Images

All of the photographs taken at the time of inspection are displayed six per page in the section immediately following the Inspection Report. The Image Number is displayed in the top-left corner of each photo. A brief caption is provided below each photo. The date of inspection is displayed in the top right corner of every page. For a more detailed look at a photo, the original images are provided with this report in digital format, in separate folders for each structure.

Also included in the digital files is a Report indicating all of the bridge image numbers and captions, in order of each bridge. In some instances the full caption cannot be displayed in the Inspection Report. Hence this report.

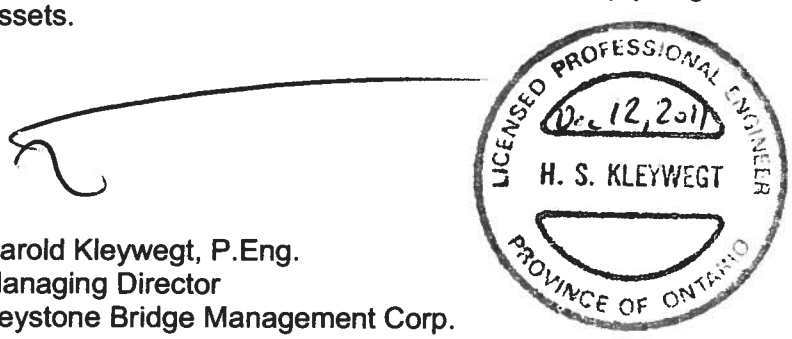
Digital Copy

This entire report is reproduced in PDF format together with all of the image files in a DVD disc shipped with this report. Individual inspection reports are included in their own folder. All of the original images are provided in slightly compressed format in a folder for each bridge site.

Closing

Keystone Bridge Management is pleased to report on the condition of the City of Brockville's bridge and large culvert assets. Should there be any lingering concerns or additional information required with respect to this assignment, then Keystone will be happy to respond.

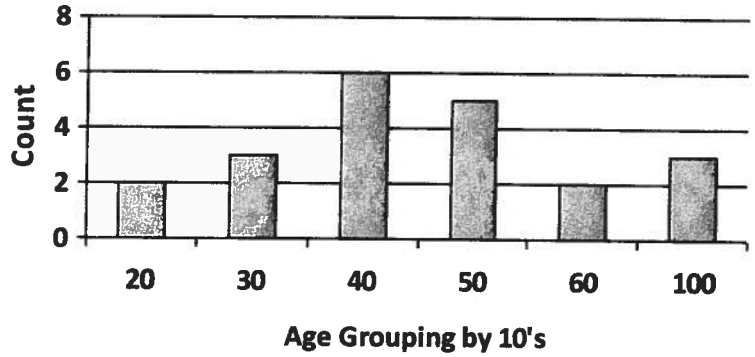
We trust the services rendered are complete, and in full keeping with the Terms of Reference. It is Keystone's sincerest desire that the recommendations stemming from this work will be helpful to the City of Brockville in keeping their structural inventory, safe, sound, and serviceable. Keystone strives to help you get the most out of your structural assets.



Harold Kleywegt, P.Eng.
Managing Director
Keystone Bridge Management Corp.

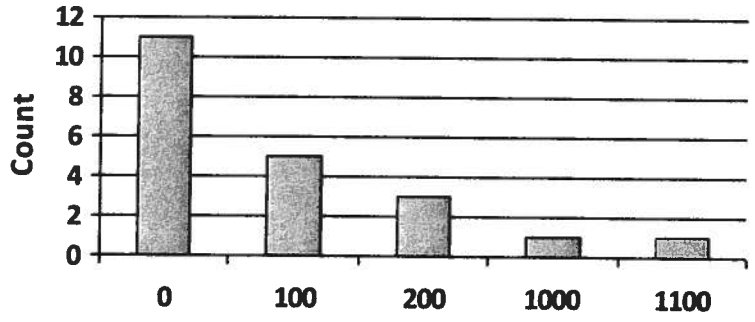
City of Brockville
Bridge Summary Statistics

Bridge Age Histogram



Bridge Count	**21**
Average Age	52.9
Youngest Age	23
Oldest Age	101

Bridge Size Histogram



Average Area	220.8
Min Area	59.8
Max Area	1126.7
Total Area	**4,636**

City of Brockville
Bridge List

Bridge ID	Name	Route	Length	Width	Spans	Const Yr
16-115	Kingston Bridge	King St. West	16.8	16.3	1	1981
16-127	William St CNR O'Hd	William St	63.1	17.1	3	1960
16-143	Ormond St. Bridge	Ormond St.	8.7	11.3	1	1945
16-144	Brock St. Bridge	Brock St.	20.1	11.3	1	1974
16-145	Elm St. Bridge	Elm St.	11.5	5.2	1	1910
16-146	Abbott Street Bridge	Abbott St	12.7	14.0	1	1964
16-147	Church St. Bridge	Church St.	11.5	11.2	1	1910
16-148	Beecher St. Bridge	Beecher St.	9.9	6.7	1	1910
16-156	N. Augusta Rd CNR O'Hd	North Augusta Road	59.3	19.0	1	1960
16-171	Bartholemew St Bridge	Bartholomew St	7.0	10.9	1	1964
16-215	Perth St. Bridge	Perth St	16.9	13.4	1	1979
16-903	Park St. Bridge	Park St.	5.0	14.8	1	1964

Those bridges where the span is highlighted in amber are not subject to the Ontario Statute for biennial inspection.

City of Brockville
Culvert List

Culv. ID	Name	Route	Length	Span	Cells	Insp Date
16-142	North Augusta Rd. Culv.	North Augusta Rd.	30.5	6.1	1	15/11/2011
16-150	St. Paul St. Culvert	St. Paul St.	11.3	7.6	1	15/11/2011
16-183	Stewart Blvd. Culverts	Stewart Blvd.	18.4	4.3	2	15/11/2011
16-188	Oxford Ave. Culverts	Oxford St.	25.6	3.9	2	15/11/2011
16-219	Central Ave Culvert	Central Ave.	21.1	6.0	1	15/11/2011
16-900	Ferguson Culvert	Ferguson Dr.	17.0	5.0	1	15/11/2011
16-901	Front Ave. Culvert	Front Ave.	24.0	4.0	1	15/11/2011
16-902	Millwood Ave. Culvert	Millwood Ave.	27.2	3.4	1	15/11/2011
16-904	Parkdale Ave. Culvert	Parkdale Ave.	30.0	5.8	1	15/11/2011

City of Brockville
Capital Needs Report

Year **2012**

Bridge ID	Name	Route	WORK	Cost $K
16-115	Kingston Bridge	King St. West	Replace seals, remove styrofoam	30
16-143	Ormond St. Bridge	Ormond St.	Replace Bridge	540
16-150	St. Paul St. Culvert	St. Paul St.	Wall repair	15
16-904	Parkdale Ave. Culvert	Parkdale Ave.	WP&P	85
			Sum for Year	**670**
			Percentage of Grand Total	**17.36%**

Year **2013**

Bridge ID	Name	Route	WORK	Cost $K
16-171	Bartholemew St Bridge	Bartholomew St	WP&P,Repl Deck Drains	45
16-188	Oxford Ave. Culverts	Oxford St.	Channelling	25
			Sum for Year	**70**
			Percentage of Grand Total	**1.81%**

Year **2015**

Bridge ID	Name	Route	WORK	Cost $K
16-145	Elm St. Bridge	Elm St.	Bridge Replacement	510

Sum for Year	**510**
Percentage of Grand Total	**13.21%**

Year **2016**

Bridge ID	Name	Route	WORK	Cost $K
16-127	William St CNR O'Hd	William St	X-jnt,Brgs,Abut Rep.	500
16-142	North Augusta Rd. Culv.	North Augusta Rd.	O'Lay,WP&P,Concrete repairs	215
16-148	Beecher St. Bridge	Beecher St.	Replace bridge	540
16-215	Perth St. Bridge	Perth St	WP&P,Conc Repair	125
			Sum for Year	**1,380**
			Percentage of Grand Total	**35.75%**

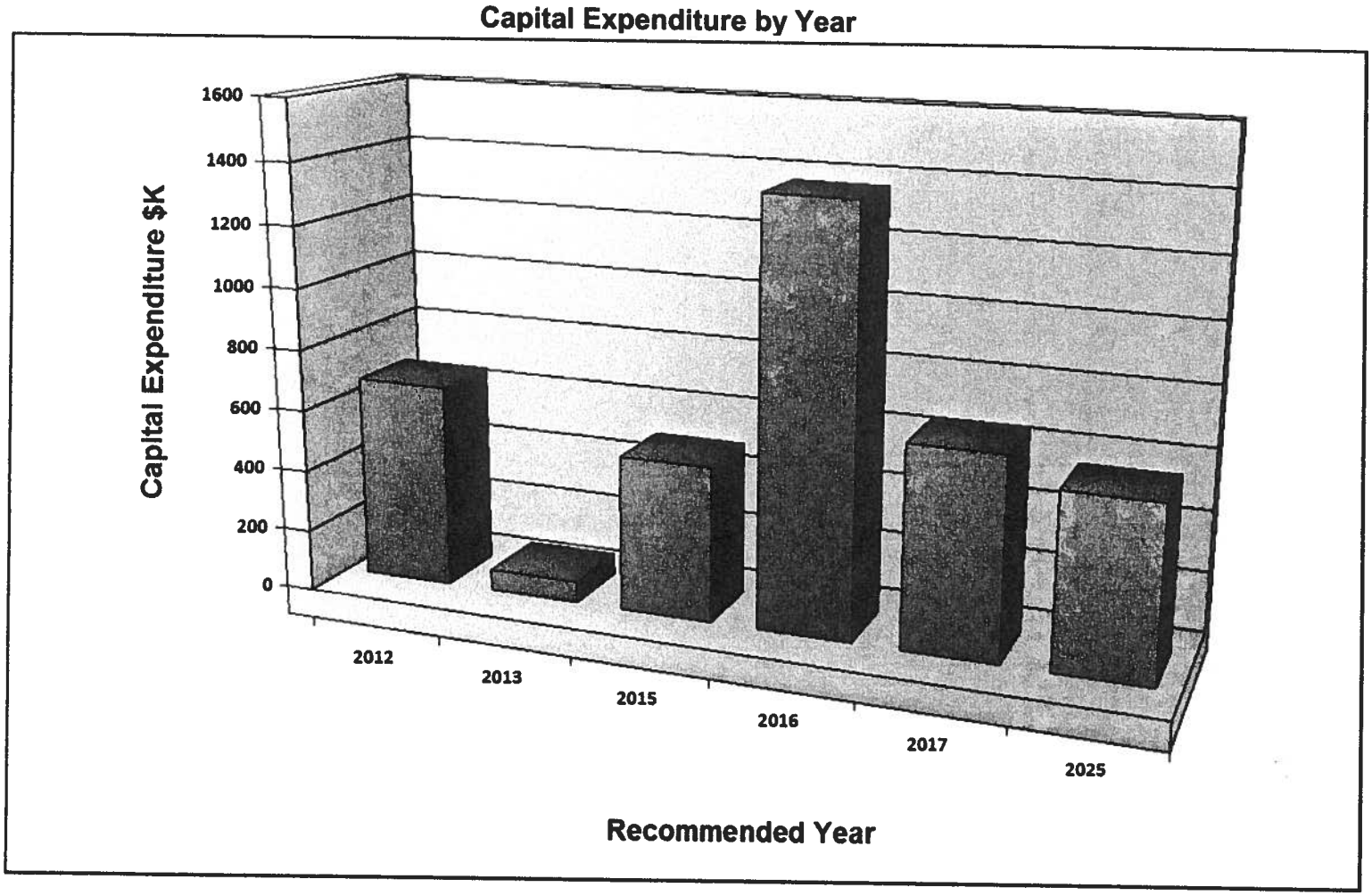
Year **2017**

Bridge ID	Name	Route	WORK	Cost $K
16-147	Church St. Bridge	Church St.	Replace bridge	660
			Sum for Year	**660**
			Percentage of Grand Total	**17.10%**

Year **2025**

Bridge ID	Name	Route	WORK	Cost $K
16-219	Central Ave Culvert	Central Ave.	Replace	270
16-901	Front Ave. Culvert	Front Ave.	Replace	300
			Sum for Year	**570**
			Percentage of Grand Total	**14.77%**

Total Capital Needs ($K) 3,860



December 19, 2011

REPORT TO FINANCE ADMINISTRATION, OPERATIONS COMMITTEE – JANUARY 17, 2012

2012-005-01
2011 FACILITY FEE WAIVER ANNUAL REPORT
FILE: F11-11

D. CYR
DIRECTOR OF FINANCE
C. COSGROVE
DIRECTOR OF OPERATIONS

RECOMMENDED

THAT Council receive the 2011 Facility Fee Waiver Annual Report [Attachment #1 to Report 2012-005-01].

PURPOSE

To provide Council with an annual report regarding facility fee waivers granted for the fiscal year 2011 as required by the City's Facility Fee Waiver Policy.

BACKGROUND

Council approved a Facility Fee Waiver Policy in June 2007 which included the following internal guidelines:

- an annual amount must be approved by Council each year during the budget process towards this program
- the budget amount shall be divided equally and allocated semi-annually in March and September
- the City Treasurer and the Director of Parks and Recreation (changed to Director of Operations in conjunction with Organizational Review in 2010), or their designates, shall review all applications, prioritize and award fee waivers based upon an established set of criteria
- any requests for facility fee waivers which have special circumstances shall be directed through the Finance and Administration Committee
- an organization/group is eligible to receive only facility fee waivers for one event per year
- an annual report shall be presented to Council

During the 2011 budget deliberations Council allocated $15,000 in the budget for facility fee waivers only.

ANALYSIS

The City received 22 requests for facility fee waivers in 2011 totaling $28,997.61. The City Treasurer and Director of Operations reviewed all applications and awarded fee waivers based upon the established set of eligibility criteria.

There were eleven applications received for the first round of 2011 of which seven requests were approved for a total of $11,813.67.

Ten applications were received for the second allocation in 2011 of which six were eligible. One eligible event was cancelled, thus, five requests were approved for $3,175.30.

Attachment #1 to Report 2012-005-01 is a summary list of all application requests and the allocation of waivers.

POLICY IMPLICATIONS

An annual report to Council is a requirement of the City's current Facility Fee Waiver Policy.

FINANCIAL CONSIDERATIONS

A total of $14,988.97 facility fee waivers were approved resulting in a small surplus under the budget allocation of $15, 000.

The continuance of the program is conditional on funds being allocated into future years budgets by Council.

CONCLUSION

Many non-profit organizations and civic groups have come to depend upon the City to assist in their projects and activities which benefit the community and enhance the quality of life of Brockville's citizens. The facility fee waiver policy provides for an equitable way to distribute the available fee waivers based upon an established set of criteria.

C. Cosgrove
Director of Operations

D. Cyr
Director of Finance

B. Casselman
City Manager

Date of Event		Facility		Request	Approved	Amt to be Paid By Organization	
Round One							
April 28 - 30	3 days	Memorial Centre	Arena + Kitchen	3,293.21	3,233.21	60.00	SOCAN fees due by user
January 29 - 30	2 days	BAC	Auditorium/Lobby	2,404.08	1,808.00	596.08	
December 18, 2010	1 day	Memorial Centre	Hall			-	n/a as pertains to previous fiscal year
April 16	1 day	Memorial Centre	Kitchen + Hall	692.80	632.80	60.00	SOCAN fees due by user
Apr 8 - 10	3 days	Memorial Centre Youth Arena	Arenas + Halls	6,922.10	2,196.72	4,725.38	use non-prime hrs rate + SOCAN fees due by user
May 6 - 7	2 days	Memorial Centre	Arena + Halls	3,727.59	2,344.75	1,382.84	Invoice needs to be adjusted for rates charged
January 29	1 day	Memorial Centre	Hall	158.20	n/c		include as part of ice rental; cancel invoice
June 17 - 18	2 days	Memorial Centre	Arena + Halls	3,726.74	1,265.60	2,461.14	
August 27	1 evening	BAC	???	-	-		not yet booked; Food for All serves South Grenville; Loaves & Fishes already has 1 fee waiver for 2011
various	12 1/2 days	Memorial Centre	Hall	1,335.83	332.59	1,003.24	2 events prior to Aug 1; 1 event post Aug 1
April 18	1 evening	BAC	Auditorium	689.30	-	689.30	
			Round One Total	**22,949.85**	**11,813.67**	**10,977.98**	
Round Two							
September 22	1 evening ?	BAC	Auditorium	621.50	-	621.50	does not fully meet criteria of FFW Policy; prev approved as surplus funds available
May 13	day perform	BAC	Auditorium	621.50	621.50	-	
September 29	1 evening	Memorial Centre	Hall	632.80	632.80	-	
June 1	1 day	Memorial Centre	Hall	632.80	-	632.80	does not fully meet criteria of FFW Policy; no budget included
March 24	1 day	BAC	Lobby & Auditorium	610.20	610.20	-	
December 17	1/2 day	Memorial Centre	Arena + Halls	332.22	-	332.22	does not fully meet criteria of FFW Policy; receives discounted youth rate
November 4	evening	BAC	Auditorium	621.50	621.50	-	
September 27	afternoon	BAC	Auditorium	621.50	-	621.50	does not fully meet criteria of FFW Policy;
December 18	afternoon	Memorial Centre	Hall	664.44	-	664.44	Location of event changed
September 19	evening	BAC	Auditorium	689.30	689.30	-	
			Round Two Total	**6,047.76**	**3,175.30**	**2,872.46**	
			OVERALL TOTAL	**28,997.61**	**14,988.97**	**13,850.44**	

HAO JAN

Waterfront and Urban Design Master Plan Report
Brockville Youth Advisory Committee
Compiled By: Councillor Leigh Bursey

Earlier this fall, we as the Brockville Youth Advisory Committee were tasked with reviewing the Waterfront and Urban Design Master Plan. We decided we would break it down by taking each of the objectives suggested in the strategy and select the top 5 to 10 that we want to encourage city council to focus on over the remainder of this term. Some of us went above and beyond those guidelines, and have made additional recommendations to council that specifically address youth needs in this area, or have outlined how some of the existing recommendations closely relate to youth in the community

We are in favour of highlighting **"supporting improvements to the area surrounding the historic tunnel entrance."** We trumpet the train tunnel as a vital piece of our economic development strategy, but until we strive to make it more accessible and interactive, it can be considered lacklustre, and uninteresting to many who may not see it's value. The Tunnel Committee has been recently resurrected, and as such, we should strive to support their efforts as they move forward on ideas and strategies to make the tunnel a more effective tourism destination, and thus we should consider volunteering our services for advice on ideas related to making the tunnel appealing to youth.

Under **Community Planning** and **Urban Design Principles**, a **"vibrant downtown and tourism destination"** is coined. This speaks indirectly to the suggestions some of our members have made on public transit changes. We as youth would all like to see hours of operation increased, and a reduced student rate or youth rate, if not to benefit us directly, to at least encourage continued use. However, making transit passes available for purchase at more partnered locations (like you see in major urban centres) could likely lead to more people purchasing transit passes in bulk. Especially, if we advertise that they are tax deductible when purchased in books of 10, monthly, or the popular 40-ride pass. Then, if people use them or not, more money is being pumped into local infrastructure. As well, if more students are riding the bus, there is a greater likelihood of them venturing downtown and spurring economic activity. Live-in tourism per say. Improve signage for public transportation, and improved shelters at more heavily used stops, coupled with increasing the number of shelters at the depot downtown by Courthouse Avenue, we feel would have a positive overall impact.

We would also encourage Council to expedite plans to connect walking paths, improve path infrastructure, and expand paths. And, we would also encourage continued discussion on the potential of using bike lanes on select streets to help connect paths.

Another item that stood out to us was the inclusion of **Public Art** under **Quality of Living**. We have seen great gains in this department with Youth Liaison Officer Mark Heffernan working alongside public youth and the Off The Wall Youth Centre for the Community Art Project, but we should advocate in favour of this project continuing, and

maybe expand it into a community art festival to keep with the plan to include two more festivals in our community as a strategic initiative, drawing artists from other areas in the process. It was also noted that in terms of **Culture and Tourism**, the Brockville Arts Centre was noted in the report, but that many youth still feel there is a greatly identifiable need for a public art space and performance venue for upstart performers who's music may not fit the more conventional artistic template.

One integral item that we would like to support, is continued encouragement for the city to continue discussions with interested parties to develop a sports complex or recreational facility of some type in the north end.

Other items that have been brought forward by committee members include:
-Realize plans to turn the Reynolds Site in to park space.
-More public consultation needed to discuss plans for downtown waterfront, specifically the realignment and extension of Water St, development on the water street parking lot, all alterations to public space and any proposed developments south of Water St.
-Also increased clarity on plans, this particular strategy calls for a moratorium on all development south of Water St. after the completion of the tall ships/MDC project yet there are sights like the Brockville Landings/ E.I.T sight that have been proposed future development sights.

We also feel that the proposed downtown façade program relates directly to youth, as many committee members feel that many youth in the area lack a sense of pride in their community because there are some property owners, specifically those who own a number of buildings along main streets often show a lack of pride in ownership. We feel proposed incentives to improve the downtown core will increase a sense of attachment to the community. Currently the city essentially subsidizes property owners downtown who have vacancies by providing money back on taxes in the hopes that those people will choose to reinvest that money in to the property to attract tenants. Since the decision is left to them, and since the money back continues each year, there is basis for argument that we should propose city officials look into a better way to encourage property owners to fill vacancies by either taxing those with vacancies at a higher rate, or requiring that all money back go to property upgrades instead of hoping that occurs, or eliminating the program to those with vacancies and reintroducing it to property owners with full occupancy. We also note that the urban façade program and the incompatible building stock are concerns that we would like to see addressed in a revised version of this plan.

This report, much like our committee's review of the Strategic Plan earlier this year, is intended to be received by Brockville City Council for **information purposes only**. We hope that some of these suggestions may be found to be useful in the coming years.