TOWNSHIP OF SOUTH FRONTENAC
COMMITTEE OF THE WHOLE MEETING
AGENDA

TIME: 6:00 PM,
DATE: Tuesday, March 12, 2019
PLACE: Council Chambers.

1.	*Call to Order*	
2.	*Frontenac County Strategic Planning Process*	
(a)	Council Input requested on the County Strategic Planning Process (6:00 pm to 7:00 pm)	3
3.	*Declaration of pecuniary interest and the general nature thereof*	
4.	*Approval of Agenda*	
5.	*Scheduled Closed Session - n/a*	
6.	****Recess*** - n/a*	
7.	*Public Meeting - n/a*	
8.	*Delegations*	
(a)	Jim Miller, Utilities Kingston, re: 2018 Sydenham Water Treatment Plant Report	4 - 27
9.	*Reports Requiring Direction*	
(a)	Changes to the Tax Levy By-law	28
(b)	New Administration Offices - Next Steps	29 - 62
(c)	Joint County Meeting - Waste and Roads	63
10.	*Reports for Information*	
(a)	Response to Meela Melnik Proud questions from February 19	64 - 65
11.	*Rise & Report from Committees of Council*	
(a)	Cataraqui Region Conservation Authority	
(b)	Quinte Conservation Authority	
(c)	Portland District and Area Heritage Committee	
(d)	Rideau Valley Conservation Authority	
12.	*Information Items*	

13. *Notice of Motions*
14. *Announcements/Statements by Councillors*
15. *Question of Clarity (from the public on outcome of agenda items)*
16. *Closed Session (if requested)*
17. *Adjournment*

FRONTENAC

□ County Strategic Planning □
TOWNSHIP DISCUSSION GUIDE

Tuesday, Mar.12 (6pm) | Twp. Offices, 4432 George St. Sydenham

Consultation with South Frontenac

Facilitator: Rob Wood

Our goal for this consultation is to explore Township perspectives on county-level issues as the County develops its strategic priorities, direction and plans for the current term of Council. Input is being gathered from all four townships in the Frontenacs, and will be compiled for a County Council strategic planning workshop in late March. We appreciate your input and look forward to the discussion.

1) The County of Frontenac must consider a wide range of issues as it develops its next strategic plan, including those below. **Which of the following priorities, choices or key issues do you feel are most important from the perspective of local residents and/or the Township?**

- □ Fairmount Home and Long Term Care
- □ Frontenac Paramedic Services
- □ Planning and Property Development
- □ Economic Development
- □ Transportation (Moving People)
- □ Roads and Bridges
- □ Regional Waste Management
- □ Future Use and Impacts of Technology
- □ Broadband and Gaps in Cell Services
- □ HR and Talent Management
- □ Advocacy/Communications/Branding
- □ Shared Delivery of Services
- □ Financial, Debt and Tax Issues
- □ Relationships with Municipal Partners
- □ Relationships with Other Partners
- □ Environmental Issues
- □ Impacts of Climate Change
- □ Other?

2) **What do you feel are the most important outcomes to be accomplished by the County through its next strategic plan?**

3) **What opportunities, risks or challenges do you see (or not) in working more closely with the County of Frontenac to deliver services and work together to find solutions on community issues?**

4) **If the County could accomplish just one breakthrough goal in its next strategic plan, what do you feel that should be?**

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ANNUAL SUMMARY REPORT
2018

SYDENHAM
WATER TREATMENT PLANT

WATERWORKS NUMBER: 260069290

Reporting Period

January 1, 2018 – December 31, 2018

Submitted by:
Jim Keech, Professional Engineer
President & C.E.O.

Utilities Kingston

ANNUAL SUMMARY REPORT 2018

SYDENHAM WATER TREATMENT PLANT

WATERWORKS NUMBER: 260069290

This annual summary report has been prepared as required under Ontario Regulation 170 03 of the Safe Drinking Water Act to acknowledge compliance with the terms and conditions of the Drinking Water Works Permit (DWWP)and Municipal Drinking Water Licence (MDWL) issued for the Sydenham Water Treatment Plant, to comment on any incidents of non-compliance during the reporting period, to summarize the quantities of the water supplied and to compare the summaries to the rated capacity and flow rates approved in the system's permits and approvals during the reporting period.

This report is specific to the Sydenham Water Treatment Plant (WTP) located at Point Rd. in Sydenham, and its associated distribution system which serves Sydenham's municipal water customers in the village of Sydenham. The WTP and its associated distribution system are owned by the Township of South Frontenac, with Utilities Kingston acting as the operating authority.

Non-Compliance with Terms and Conditions of the DWWP and MDWL

There were no incidences of non-compliance during this reporting period.

Compliance with the Terms and Conditions of the DWWP and MDWL

The Treatment Group of Utilities Kingston, for the Township of South Frontenac, operates and maintains the Sydenham Water Treatment Plant (WTP) and complies with the terms and conditions of the Drinking Water Works Permit (DWWP) and Municipal Drinking Water Licence (MDWL) issued for the WTP. The Underground Infrastructure Department and the Treatment Group of Utilities Kingston operate and maintain the associated distribution system and storage facilities. Staffing is maintained at levels to ensure adequate numbers of trained and licensed personnel are available for proper operations during emergency or upset conditions, vacation/sick relief, or to deal with equipment breakdown.

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Quality management systems, contingency plans and operations manuals are established and are located in the appropriate facilities and available to appropriate staff.
A quality management system (QMS) for the Township of South Frontenac's drinking water supply systems has been developed and implemented by Utilities Kingston management and staff to ensure the continued safety and security of the community's drinking water by meeting or exceeding the requirements of all relevant legislation and regulations, and the Drinking Water Quality Management Standard.
Operations manuals include information necessary for the day to day operations and maintenance of the WTP and distribution system as well as information that may not be regularly used but that might be required to be accessed quickly for various purposes. Contingency plans include information that may be required for proper operation of the WTP or distribution system during emergency or upset conditions, and contain items such as emergency plans and contact lists, alternate materials supply sources and notification lists.

The operations strategy of Utilities Kingston includes: ensuring that permits and approvals are in place, that efficient maintenance and operations ensures the quality of water supplied to its customers meets or exceeds the minimum requirements as set out in the Safe Drinking Water act, and that permissible flow rates are not exceeded. The Township of South Frontenac, as a means of source water protection, considers the impact of decisions made within its authority on the drinking water supply source for the WTP.

Flow measuring devices for measuring the amount of water taken from Sydenham Lake, and the amount of water supplied to the distribution system are calibrated annually by a third party. Accuracy in these measurements ensures that treatment chemicals are precisely applied and that flows do not exceed the capacity at which the WTP is designed to be effective. These flows are recorded to provide current and historical information which is used for operational decision making, and to allow both the public and the Ministry of the Environment, Conservation and Parks (MECP) the ability to review WTP operations.

Water quality analyzers that monitor parameters such as chlorine residual and turbidity of critical process streams and of the water directed to the distribution system are alarm equipped and are maintained in accordance with the manufacturer's recommendations as well as the conditions of the DWWP and MDWL.

Water sampling is conducted to the minimum requirements of schedule 13 of Ontario Regulation 170 03 of the Safe Drinking water Act. Raw water sampling is conducted to give operational staff information required to determine the level of treatment to make the water potable. In-plant process stream samples provide monitoring of treatment processes. Treated and distribution system sampling provides information regarding the quality of water delivered to customers. All of these samples are analyzed by either licensed staff or by laboratories accredited by the Standards Council of Canada through the Canadian Association for Environmental Analytical Laboratories.

All sampling information, annual reports, and all other documentation required by the DWWP, DWML and regulations are available for public viewing on the Utilities Kingston website as well as at the Utilities Kingston and Township of South Frontenac offices. Residents of the village of Sydenham are encouraged to review this information, the availability of which is advertised through various local media.

Notifications of Adverse Water Quality Results

Under Ontario Regulation 170 03, notifications are required for any instances where a sample result indicates that a parameter used to measure water quality exceeds a Maximum Acceptable Concentration (MAC). Once a notification is received from a laboratory, corrective action as dictated by the regulations is initiated in an effort to confirm the initial result. If confirmed, further action may be recommended by the Medical Officer of Health. If not confirmed, sampling will typically return to the normal schedule or depending on the parameter, Utilities Kingston may choose to increase the sampling frequency to more closely monitor the parameter for a period of time.

- Notification of an indicator of adverse water quality was received from Caduceon Environmental Laboratories regarding a sample collected on **January 10th** for Total Coliform (TC) with a count of **6 cfu/100mL**. Total chlorine residual at the time of sampling was **1.64 mg/L**. Notifications were made to the Spills Action Center and to the Environmental Health Division of the local Ministry of Health. Resamples were collected from the same location, upstream and downstream and sent to the lab for analysis. With the total chlorine residual present in the original sample and the subsequent re-samples not indicating any adverse conditions, a contaminated sample bottle or sampling error is suspected.

Summary of the Quantity of Water Supplied During the Reporting Period

Listed in Table 3 following this report are the treated water flows for the Sydenham Water Treatment Plant for the year 2018. The typical Canadian average water usage per person is 250 – 350 litres per day (source: Environment Canada). Once all services to the water distribution system are completed, an accurate calculation of water usage per person for the village of Sydenham can be calculated.

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Summary of Flow Rate Exceedances

There were no instances during this reporting period where daily total flows exceeded the maximum allowable flow rate of 1290 m3/d. Listed in Tables 1 & 2 following this report are the raw water flows (water taken from Sydenham Lake) for the Sydenham Water Treatment Plant for the year 2018.

Summary of Treatment Chemicals Used

There are three treatment chemicals in use at this treatment plant. Sodium Hypochlorite is used for primary disinfection, XL1900 (Polyaluminum Chloride) used as the coagulant and Ammonium Sulphate combined with Sodium Hypochlorite to form chloramines for secondary chlorination for the WTP.

Sodium Hypochlorite is dosed at the treatment plant at a rate which ensures that an adequate chlorine Contact Time (CT) value is maintained for the rate of flow. Average chlorine dosages for this treatment plant are approximately 4.35 mg/l. Ammonium Sulphate is added at an approximate rate of 3.5:1 ratio (chlorine/ammonia) to react with the free chlorine to form chloramines for secondary chlorination. An adequate chloramines residual is maintained at those points in the distribution system that are farthest from the point of entry of treated water to the system. Residuals are routinely measured in the distribution system and the treatment plant chlorine dosages are adjusted as required to meet the distribution system target residuals and the required CT values.

Typically XL1900 (Polyaluminum Chloride) dosages for this treatment plant were in the range of 15 – 19 mg/l. This dosage is also adjusted to ensure efficiency in the coagulation process as various changes occur in the raw water. Changes are based on things such as filter head loss, pH, temperature, turbidity, and the aluminum residual in the treated water.

Summary

The Sydenham Water treatment Plant supplied water to residents of Sydenham at rates which allowed adequate treatment while not exceeding permitted flows. Water of good

quality which is safe to drink was produced by the treatment plant during this reporting period. Further information is available for this system and is included in the annual reports which can be accessed from the Utilities Kingston Website at *www.utilitieskingston.com* or is available at the Township of South Frontenac offices. For further information about this report or any questions regarding accessibility contact Megan Lockwood at *mlockwood@utilitieskingston.com*, or call 613-546-1181 Ext 2 2 9 1.

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Sydenham Water Treatment Plant - Raw Water Flows 2018
Cubic meters per day

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				16	229	263	489	190	401	387	265	165
2		239	289	229	3		35	252			321	
3	286	115	139		318	247	2	479		328		182
4	300		119	227	272	160	286	144	334	89	102	226
5		286	151	217			489	171	313		328	
6	152	100	195	239		322	69	486	403	157		217
7	249	1	55	39	311	227	137	363		377	256	207
8			220	250	366		477	4	165		115	
9	272	285	44	227		234	489	283	380	2		166
10	279	281	220	114		264	24	489	3	291	94	270
11			78	194	258		288	490		342	387	
12	271		228	112	357	266	490	94	257			241
13	82	252		262		389	498	247	400			163
14		267	236	5			254	489	489	185	278	
15	239				306	270	491	490	139	69	246	
16	241	143	253	245	244	361	217	494		309		242
17	2	287		271			490	469	324	333		349
18			236	18	124	2	249	362	456		283	
19	216	209		248	487	321		439	489		248	1
20	205	237	270	210	20	489	279	228	312	296		281
21		2	35			166	471	535		203	233	208
22			238	93	176		295	23	165		193	
23	299	303	71	443	418	203	2	289	489			173
24	265	206	232	98		489	254	445	80	311	200	221
25	1		61	1	173	70	489			383	217	
26	209		233	157	388	2	67		293			134
27	177	266	98	426		332	236	338	489		220	309
28		219	256		225	423	489	489	29	279	216	
29			135		349		84	137		250	1	
30	255		31	242		161	258		285		280	269
31	277		259		224		473	256				193
Total	4,277	3,698	4,382	4,583	5,248	5,661	8,871	9,175	6,695	4,591	4,483	4,217
Avg. Day Production	214	205	169	183	262	257	296	328	304	255	224	211
Average	138	132	141	158	169	226	286	296	223	148	149	136
Min												
Max	300	303	289	443	487	489	498	535	489	387	387	349

		Yearly Average	184	
PTTW Amount	*1,290 m^3/day*	Average Day Production	245	Yearly Total 65,881
		Yearly Min		
		Yearly Max	535	

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Sydenham Water Treatment Plant - Peak (Raw) Flows 2018
Litres per minute

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				482	464	443	436	428	426	425	481	427
2		482	458	458	479		393	448			422	
3	450	383	455		489	460	447	430		466		462
4	429		501	481	459	395	460	416	462	419	469	417
5		478	444	472			447	460	431		446	
6	487	372	555	481		450	444	456	471	464		474
7	404	471	443	351	490	402	450	428		412	486	413
8			480	500	507		430	446	452		424	
9	455	494	361	471		467	457	457	421	471		472
10	407	513	483	483		403	416	440	432	479	463	418
11	168		461	468	440		456	447		427	428	
12	465		471	494	435	450	452	437	456	3		476
13	410	479	2	481		476	469	433	436			405
14		516	464	349			454	446	460	466	469	
15	470				443	462	446	440	5.02	399	424	
16	439	467	479	492	408	448	438	440		475		478
17	477	386		484			420	466	631	421		431
18			483	511	477	469	422	436	599		467	
19	483	478		551	430	474		427	455		416	462
20	377	458	482	448	347	444	455	423	433	474		475
21		474	471			435	530	425		420	470	417
22			491	452	448		417	434	459		427	
23	478	477	370	538	433	464	488	508	428			428
24	450	449	485	437		458	453	431	444	416	461	421
25	447		356	465	464	444	498			420	424	
26	464		476	468	447	486	499		461			480
27	426	453	468	473		462	465	448	473		477	424
28		463	475	6	462	294	437	438	418	422	422	
29			459		424		432	440		420	412	
30	460		482	484		461	464		461		460	455
31	453		466		481		428	440				420
Max	487	516	555	551	507	467	530	508	631	479	486	480

PTTW Amount	1,344 *litres/ minu*	Yearly Average
or	1,290 m^3 */day*	Average Day Production
		Yearly Min
		Yearly Max 631

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Sydenham Water Treatment Plant - **Treated Water Flows 2018**
Cubic meters per day

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1				27	145	221	395	151	331	26	267	118
2		257	280	178			19	239	2		268	
3	278	73	114		295	252	8	405		328		185
4	260		116	219	218	111	232	93	271	36	90	185
5		317	111	167			397	159	259		285	
6	143	37	210	234		313	30	382	270	156		221
7	213		12		298	184	124	275		295	244	157
8			235	253	293		359		174		83	
9	270	282	21	144		233	375	187	280			180
10	235	241	225	130		201		400	88	284	86	220
11			11	138	252		274	449		222	333	
12	269		209	127	285	262	404	33	193			250
13	45	263		148		291	386	230	223			111
14		217	205				204	411	410	173	274	
15	232				264	252	435	390	84	61	201	
16	213	144	231	238	212	260	172	390		254		241
17	2	248		190			452	388	234	276		298
18			207		115		182	310	242		273	
19	13	205		239	421	274		361	422		207	
20	182	201	258	149		380	268	208	218	285		279
21						71	439	299		151	216	173
22			226	93	175		228		151		166	
23	316	317	40	389	345	189		162	428			190
24	203	144	230	55		406	262	373	25	272	166	170
25			28		170		443			313	194	
26	235		231	147	320		20		282			147
27	99	262	55	365		313	221	210	410		217	256
28		196	242		200	321	445	428		238	187	
29			101		264	4	52	94		126		
30	287		15	251		135	246		248		278	279
31	197		212		223		408	228				132
Total	3,692	3,404	3,825	3,881	4,495	4,673	7,480	7,255	5,245	3,496	4,035	3,792
Avg. Day Production	194	213	153	185	250	234	267	279	238	206	212	200
Average	119	122	123	134	145	159	241	234	175	113	135	122
Min												
Max	316	317	280	389	421	406	452	449	428	328	333	298

		Yearly Average	152
		Average Day Production	221
		Yearly Min	
		Yearly Max	452

CoA Amount	*1,290 m^3/day*	Yearly Total	55,273

2018 ANNUAL REPORT ON DRINKING WATER QUALITY

JANUARY 1 TO DECEMBER.31 2018

SYDENHAM WATER TREATMENT PLANT

Drinking Water System Number: 260069290
Drinking Water System Owner: Township of South Frontenac
Drinking Water System Category: Large Municipal Residential

Drinking Water Quality

Utilities Kingston is proud to present this annual report on drinking water quality. This report has been prepared in accordance to Section 11 of Ontario Regulation 170 03. Regulation 170 03 sets requirements for public waterworks with regard to sampling and testing, levels of treatment, licensing of staff, and notification of authorities and the public about water quality. Free copies of this report and the Summary report prepared in accordance to Schedule 22 of Ontario Regulation 170 03, are available by public request at any City of Kingston offices, at our water plant locations and at *www.utilitieskingston.com*. Notices of availability are generally made through the local newspapers and radio. Further information on the Drinking Water Regulations can be found on the Ministry of the Environment web site at *www.ene.gov.on.ca*. For further information about this report or any questions regarding accessibility contact Megan Lockwood at *mlockwood@utilitieskingston.com* , or call 613-546-1181 Ext 2 2 9 1

Inside This Report

1. Plant Description & Treatment Processes

Raw Water Source.
The source of water treated by this plant is Sydenham Lake. The intake is located 128m east of the treatment plant, at approximately 6m of water depth.

Zebra Mussel Control.
Pre-chlorination takes place at the mouth of the intake. This protects the intake from becoming encrusted with zebra mussels, which would restrict the flow of water through the intake.

Screening.
Two stationary screens located in the low lift pumping well remove any large debris such as weeds, fish, etc.

Low Lift Pumps.
These pumps lift the water from lake level to the main treatment building. There are three submersible pumps each with a capacity of 7.8 l/sec which pump the water into the main building for treatment.

Chemical Feed System
XL1900 (Polyaluminum Chloride) is added to the water as it enters the process building just prior to passing through the in-line mixer. The particles in the water will collide with the PACl particles as the water flows in a spiral motion through the mixer, and then join together to form larger particles called floc.

Filters.
Three pressure filtration tanks containing a ceramic filtration media remove the floc formed from the addition of PACl and the particles present in the water. Water flows through the filters into two baffled clean water reservoirs called clear wells.

Backwash.
Filters are washed to remove the particulates they have collected over the previous 48 hrs. Clean water from the clear well is pumped backwards through the filter, and the filter is agitated by air scouring the filter media to break up any large particles.

Process Waste Management
Effluent water from the backwash process is directed to a backwash storage tank for further settling. The supernatant (the clear water at the top of the tank after settling) is directed back to Sydenham Lake and the settled sludge is mechanically removed and sent for further treatment.

GAC Contactors
During periods of high dissolved organic content in the source water, filter effluent water is directed to two pressure filtration tanks containing granular activated carbon (GAC). The GAC contactors assist in the removal of dissolved organics which react with chlorine to produce chlorination by-products. The GAC contactors are periodically backwashed to remove the particulates they have collected.

Primary Disinfection
Primary disinfection of the filtered water is achieved via UV light and free chlorine residual. 2 UV reactors (duty/standby) each using 12 low pressure high output lamps, provide the UV light disinfection. Free chlorine disinfection follows the UV process with the use of two chemical metering pumps

(duty/standby) which provide sodium hypochlorite to an application point downstream of the UV reactors at the entrance to the detention piping.

Secondary Disinfection

Secondary disinfection is the maintenance of a disinfectant residual throughout the distribution system which is achieved with chloramines. Following the free chlorine disinfection process, ammonium sulphate is added with the use of two chemical metering pumps (duty/standby), at an approximate rate of 4:1 ratio (chlorine/ammonia), to react with the free chlorine residual to form chloramines. The application dosages of sodium hypochlorite and ammonium sulphate is adjusted to produce a sufficient in plant combined chlorine residual to ensure that minimum residuals are maintained in the distribution system.

Clear Wells.

Two baffled clear wells, each with a volume of 115 m^3, provide storage of filtered water and allow for a sufficient amount of chlorine contact time with the water to ensure proper disinfection.

High Lift Pumps.

Three high lift pumps move treated water from the clear wells into the distribution system.

Standby Equipment.

A 130 kW standby diesel generator provides electricity to the water plant during power interruptions. The generator and standby equipment is tested regularly to ensure proper operation when required.

Elevated Tank.

The elevated tank has a storage capacity of 1019 m^3 and provides pressure to the distribution system.

Distribution System.

There are approximately 6363 meters of water mains, and 47 fire hydrants in the system. Once all connections to the distribution system have been completed, the drinking water system will supply water to 274 customer connections.

2. Monetary expenses incurred during this reporting period

Under Section 11 of Ontario Reg. 170/03, a description of any major expenses incurred during this reporting period must be included in the annual report. The major expenses for this drinking water system are listed below.

-Leak detection was performed by Utilities Kingston underground infrastructure department in order to locate water leaks in the distribution system.

- Replacement of one of the three filter pressure vessels including underdrain system, garnet and filter media.

- Replacement of UV reactor bulb and quartz sleeve.

- Installation of a Variable Frequency Drive system on high lift #3 in preparation for future work required on the water tower.

-Cleanout and inspection of both treated water clear wells at the plant.

-Extensive system flushing in the summer of 2018 for chloramination residual management

3. Notifications submitted in accordance to the Safe Drinking Water Act

Under Ontario Reg. 170/03, notifications were required for any instances where a sample result indicated that a parameter used to measure water quality exceeded a Maximum Acceptable Concentration (MAC). Once a notification is received from a laboratory or an observation of any other indicator of adverse water quality is made by operations personnel, corrective action as dictated by the regulations is initiated in an effort to confirm the initial result. If confirmed, further action may be recommended by the Medical Officer of Health. If not confirmed sampling will typically return to the normal schedule, or depending on the parameter, Utilities Kingston may choose to increase the sampling frequency to more closely monitor the parameter for a period of time.

- Notification of an indicator of adverse water quality was received from Caduceon Environmental Laboratories regarding a sample collected on **January 10th** for Total Coliform (TC) with a count of **6 cfu/100mL**. Total chlorine residual at the time of sampling was **1.64 mg/L**. Notifications were made to the Spills Action Center and to the Environmental Health Division of the local Ministry of Health. Resamples were collected from the same location, upstream and downstream and sent to the lab for analysis. With the total chlorine residual present in the original sample and the subsequent re-samples not indicating any adverse conditions, a contaminated sample bottle or sampling error is suspected.

4. Definition & Terms

TCU - True Colour Units

mg - milligram

N/A - Not Applicable

N/D - Non -Detectable

NTU - Nephelometric Turbidity Units - A measure of the amount of particles in water.

mg/1 - Milligrams per litre. This is a measure of the concentration of a parameter in water, also called parts per million (ppm).

µg/L - Micrograms per litre, also called parts per billion.

ng/1 - Nanograms per litre, parts per trillion.

Parameter-A substance that we sample and analyze for in the water.

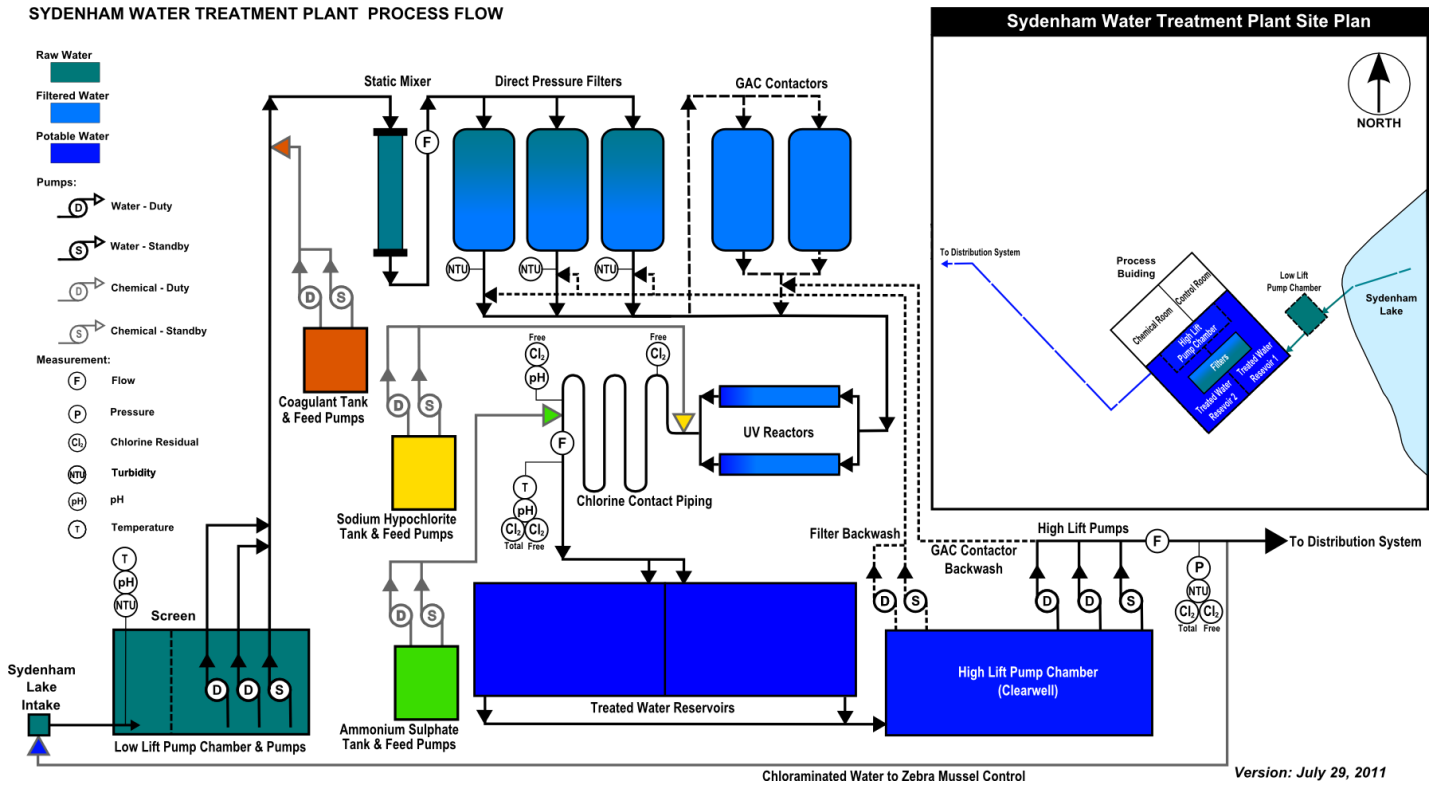
AO - Aesthetic objective. AOs are not health related, but may affect the taste, odour, colour or clarity of the water

OG - Operational guideline. Set to ensure efficient treatment and distribution of water.

MAC - Maximum Acceptable Concentration. This is a health-related drinking water standard established for contaminants having known or suspected

adverse health effects when above a certain concentration. The length of time the MAC can be exceeded without injury to health will depend on the nature and concentration of the parameter.

5. Flow Diagram



6. Water Quality Test Results

Microbiological testing done under regulation 170 03, during this reporting period

	MAC (E. Coli & Total Coliforms)	Number of Samples	Range of E. Coli or Fecal Results (min # - max #)	Range of Total Coliform Results (min # - max #)	Number of HPC Samples	Range of HPC Results (min # - max #)
Raw	N/A	52	0 - 20	0 – 1,080	0	
Treated	*	51	0	0	51	<10 – 40
Distribution System	*	107	0	0 - 6	54	<10 – 150

Indicator of adverse water quality if detected

Operational testing done under schedule 7, 8 or 9 of regulation 170/03 during this reporting period

Parameter	MAC	Number of Samples	Range of Results (min # - max #)	Results Average	Unit of Measure	Parameter Description
Turbidity Raw Water	N/A	Continuous	0.215 – 2.61*	N/A	NTU	Turbidity is a measure of particles in water.
Turbidity Treated Water	N/A	Continuous	0.131 – 1.07*	N/A	NTU	Turbidity is a measure of particles in water.
Combined Chlorine Residual Treated Water	See parameter description	Continuous	0.84 – 2.80*	N/A	mg/l	Recommended level of at least 1.00 mg/l in distribution system to maintain microbiological quality. 0.25 mg/l minimum.
Turbidity Filter#1	1.0 NTU for >15 min.	Continuous	0.03 – 0.96	0.16	NTU	Turbidity is a measure of particles in water.
Turbidity Filter#2	1.0 NTU for	Continuous	0.04 – 0.85	0.16	NTU	Turbidity is a measure of

Parameter	MAC	Number of Samples	Range of Results (min # - max #)	Results Average	Unit of Measure	Parameter Description
	>15 min.					particles in water.
Turbidity Filter#3	1.0 NTU for >15 min.	Continuous	0.03 – 0.92	0.16	NTU	Turbidity is a measure of particles in water.
Chloramines Residual Distribution System	See parameter description	Continuous	0.40 – 2.58	N/A	mg/l	Recommended level of at least 1.0 mg/l combined chlorine in distribution system to maintain microbiological quality. 0.25 mg/l combined chlorine minimum.

* *Note:* For *these parameters the range of results is determined through in house lab testing.*

Additional testing and sampling carried out in accordance with the requirements of the DWWP or MDWL

Sample Location	MAC	Parameter	Number of Samples	Results Average	Unit of Measure	Parameter Description
Backwash Wastewater Effluent	15	Total Suspended Solids	12	7.8	mg/l	A measure of the particulates collected in the filtration process.

Summary of Raw water parameters tested during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Microcystin	1.5	22	<0.10 – 1.18	µg/L	No	Naturally occurring (released from blooms of blue-green algae)

Summary of treated water Schedule 23 inorganic parameters tested during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Antimony	0.006	1	<0.0001	mg/l	No	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0.025	1	0.0002	mg/l	No	Naturally occurring in surface waters / mine drainage
Barium	1.0	1	0.045	mg/l	No	Erosion of natural deposits. Discharge from metal refineries, oil drilling wastes.
Boron	5.0	1	0.020	mg/l	No	Erosion of natural deposits, industrial waste effluents.
Cadmium	0.005	1	< 0.000015	mg/l	No	Industrial discharge
Chromium	0.05	1	<0.002	mg/l	No	Industrial residues
Mercury	0.001	1	<0.00002	mg/l	No	Erosion of natural deposits, industrial discharges.
Selenium	0.01	1	< 0.001	mg/l	No	Discharge from refineries, mines, chemical manufacture
Uranium	0.02	1	< 0.00005	mg/l	No	Erosion of natural deposits.

Summary of treated water Schedule 24 organic parameters tested during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Alachlor	5	1	<0.3	µg/L	No	Agricultural herbicide
Atrazine + N-dealkylated metobolites	5	1	<0.5	µg/L	No	Agricultural herbicide
Azinphos-methyl	20	1	<1	µg/L	No	Insecticide
Benzene	5	1	<0.5	µg/L	No	Discharge from plastics manufacturing, leaking fuel tanks
Benzo(a)pyrene	0.01	1	<0.005	µg/L	No	Formed from the incomplete burning of organic matter.
Bromoxynil	5	1	<0.3	µg/L	No	Agricultural herbicide
Carbaryl	90	1	<3	µg/L	No	Agricultural/Forestry/ Household insecticide
Carbofuran	90	1	<1	µg/L	No	Agricultural insecticide
Carbon Tetrachloride	5	1	<0.2	µg/L	No	Discharge from chemical and industrial activities
Chlorpyrifos	90	1	<0.5	µg/L	No	Agricultural/ Household insecticide
Diazinon	20	1	<1	µg/L	No	Agricultural/ Livestock Operation/ Residential insecticide
Dicamba	120	1	<5	µg/L	No	Agricultural herbicide
1,2-Dichlorobenzene	200	1	<0.1	µg/L	No	Discharge from industrial chemical factories
1,4-Dichlorobenzene	5	1	<0.2	µg/L	No	Discharge from industrial chemical factories

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
1,2-Dichloroethane	5	1	<0.1	µg/L	No	Discharge from industrial chemical factories
1,1-Dichloroethylene (vinylidene chloride)	14	1	<0.1	µg/L	No	Discharge from industrial chemical factories
Dichloromethane	50	1	<0.3	µg/L	No	Discharge from pharmaceutical and chemical factories
2-4 Dichlorophenol	900	1	<0.1	µg/L	No	Industrial contamination/ reaction with chlorine
2,4-Dichlorophenoxy acetic acid (2,4-D)	100	1	<5	µg/L	No	Agricultural/ Residential herbicide
Diclofop-methyl	9	1	<0.5	µg/L	No	Agricultural herbicide
Dimethoate	20	1	<1	µg/L	No	Agricultural/ Livestock Operation/ Forestry insecticide
Diquat	70	1	<5	µg/L	No	Agricultural/ Aquatic herbicide
Diuron	150	1	<5	µg/L	No	Agricultural/ Industrial/ herbicide
Glyphosate	280	1	<25	µg/L	No	Agricultural/Forestry/ Household herbicide
Malathion	190	1	<5	µg/L	No	Fruit & Vegetable / pest control insecticide
2-methyl-4-chlorophenoxyacetic acid (MCPA)	0.1	1	< 0.00010	mg/L	No	Leaching and/or runoff from agricultural and other uses
Metolachlor	50	1	<3	µg/L	No	Agricultural herbicide
Metribuzin	80	1	<3	µg/L	No	Agricultural herbicide

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Monochlorobenzene	80	1	<0.2	µg/L	No	Discharge from industrial and agricultural chemical factories and dry cleaning facilities
Paraquat	10	1	<1	µg/L	No	Agricultural/ Aquatic herbicide
Pentachlorophenol	60	1	<0.1	µg/L	No	Pesticide/ wood preservative residue
Phorate	2	1	<0.3	µg/L	No	Agricultural insecticide
Picloram	190	1	<5	µg/L	No	Industrial herbicide
Polychlorinated Biphenyls(PCB)	3	1	<0.05	µg/L	No	Residue from various industrial uses
Prometryne	1	1	<0.1	µg/L	No	Agricultural herbicide
Simazine	10	1	<0.5	µg/L	No	Agricultural herbicide or its residue
Terbufos	1	1	<0.3	µg/L	No	Agricultural insecticide
Tetrachloroethylene	30	1	<0.2	µg/L	No	Leaching from PVC pipes; discharge from factories, dry cleaners and auto shops (metal degreaser)
2,3,4,6-Tetrachlorophenol	100	1	<0.1	µg/L	No	Wood preservative
Triallate	230	1	<10	µg/L	No	Agricultural herbicide
Trichloroethylene	5	1	<0.1	µg/L	No	Discharge from metal degreasing sites and other factories
2,4,6-Trichlorophenol	5	1	<0.1	µg/L	No	Pesticide manufacturing
Trifluralin	45	1	<0.5	µg/L	No	Agricultural herbicide

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Vinyl Chloride	2	1	<0.2	µg/L	No	Leaching from PVC pipes; discharge from plastics factories

Summary of other regulatory treated water parameters tested during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Fluoride	1.5	1	<0.1	mg/l	No	Naturally occurring.
Nitrite	1	4	<0.1	mg/l	No	A natural component of water at this level.
Nitrate	10	4	<0.1 – 0.2	mg/l	No	Runoff from fertilizer use, erosion of natural deposits
Sodium	20	1	11.4	mg/l	No	Occurs naturally in the earth's crust. *Notification is required every 60 months if greater than 20 mg/l.

Summary of additional treated water parameters tested during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	MAC Exceedance	Parameter Description
Microcystin	1.5	22	<0.1 – <0.15	µg/L	No	Naturally occurring (released from blooms of blue-green algae)

Summary of regulatory distribution drinking water parameters tested during this reporting period

Parameter	MAC	Number of Samples	Result Value	Unit of Measure	Exceedance	Parameter Description
Alkalinity (as $CaCO_3$)	N/A	14	96 – 125	mg/l	No	A measure of the resistance of the water to the effects of acids. Expressed as calcium carbonate.
Total Haloacetic acids	0.08 (Annual avg.)	4	0.025	mg/L	No	By-product of drinking water disinfection with chlorine. Based on a running annual average
Lead	0.01	13	0.00007-0.00068	mg/l	No	Internal corrosion of household plumbing, erosion of natural deposits.
pH	6.5–8.5 OG	2	8.01 - 8.10		No	An indicator of the acidity of water.
Total Trihalomethanes	100 (Annual avg.)	4	0.033	µg/L	No	By-product of chlorination. * The MAC for THMs of 100 µg/L is based on a running annual average.

Summary of raw water testing analyzed by in house laboratory during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	Exceedance	Parameter Description
UV Transmittance	N/A	113	55.5 – 90.6	%	No	UV transmittance is a measure of the percentage of transmittance of UV light

Summary of treated water testing analyzed by in house laboratory during this reporting period

Parameter	MAC	Number of Samples	Results Range	Unit of Measure	Exceedance	Parameter Description
Aluminum	0.1	107	0.002 – 0.145	mg/l	No	May be naturally present or a residual from the coagulation process.
Free Ammonia	N/A	113	0.07 – 0.55	mg/l	No	Residual from the addition of Ammonium Sulphate for the secondary disinfection process
Monochloramines	3.0	113	0.84 – 2.50	mg/L.	No	Chloramines are produced when ammonia is added to chlorinated water during the disinfection process.
UV Transmittance	N/A	116	79.8 – 94.9	%	No	UV transmittance is a measure of the percentage of transmittance of UV light

REPORT TO COUNCIL

TREASURY DEPARTMENT

AGENDA DATE: March 12, 2019

SUBJECT: Changes to Tax Levy By-law

RECOMMENDATION:

For information

BACKGROUND:

Now that Council has adopted the 2019 Capital and Operating Budget the next step is to adopt the Tax bylaw.

Typically, the tax levy by-law is brought forward without a staff information report, however for 2019 there is a change with the wording of the by-law that will impact approximately 250 Commercial, Industrial, Multi-Residential, Parking lot or mixed assessment properties.

In 2019 capping has been completely phased out County wide. Previously, the timing of the capping information for Commercial, Industrial, Multi-Residential, Parking lot or mixed assessment required us to separately process the final tax billing for these 250 properties in August with a due date of August and September.

As capping no longer applies and to improve the efficiency of the billing process, these properties will now be incorporated into our June billing. All properties including the 250 Commercial, Industrial, Multi-Residential, Parking lot or mixed assessment properties will be processed at the same time as all other properties with a consistent due date of June and September.

Once the by-law is approved, all property owners impacted with this change will be sent a letter explaining the change to the billing cycle in advance of receiving the June tax bill.

A Tax Bylaw, incorporating this change will be brought forward on March 19.

ATTACHMENTS

None

Submitted/approved/prepared by:

Louise Fragnito, Director of Corporate Services & Treasurer

REPORT TO COUNCIL

OFFICE OF C.A.O.

AGENDA DATE: March 12, 2019

SUBJECT: New Administration Office – Next Steps

RECOMMENDATION:

That Council direct the Mayor and CAO to participate in a joint session with the County and CRCA Board members on March 27 and report back to Council.

BACKGROUND:

On February 19, Council was provided a copy of a Shared Facility Analysis. This assessment was produced as a result of preliminary discussions with the Cataraqui Region Conservation Authority and the County of Frontenac about a new, joint administration facility. Council direction was to bring this matter back for discussion prior to taking any next steps.

Forming the basis for this review, staff from each organization identified its current and future space needs. The three agencies then jointly funded an architect to conceptualize those needs and evaluate the estimated capital and operating costs of each organization building its own facility against the costs for a combined facility where common space, such as meeting rooms and washrooms could be shared.

The report is attached again for your reference.

The report considered factors beyond cost and can be reviewed independently. However readers are cautioned that the space configuration is only a block concept and has not been designed around function.

The cost implications can be summed up as a joint facility saving $2.7 million dollars in capital costs and $110,000 in operating costs.

The other two potential partners are interested in holding a joint session of their facility committees on March 27 at 1:00 pm at the County offices to further discuss the merits of proceeding and better understand the needs and concerns of all partners.

Before proceeding to far along the discussions, Council needs to consider many factors including:

- If it intends to proceed with planning for a new administration facility, as contemplated in the long range financial plan
- If it wants to enter into a shared facility model
- If it wants to explore different alternatives
- What type of ownership model is Council willing to participate in

Once this broad direction is provided, further recommendations will come through the Corporate Services Committee.

FINANCIAL/STAFFING IMPLICATIONS:

The long range financial forecast contemplates a new administration facility in 2022 and induces a place holder for $2.75million

ATTACHMENTS:

REPORT TO COUNCIL

OFFICE OF C.A.O.

- Shared facility Analysis – Feb 4, 2019

Submitted/approved by:

Wayne Orr, CAO

Prepared by:

Wayne Orr, CAO

CKA

SHARED FACILITY ANALYSIS

for

CRCA / County of Frontenac / Township of South Frontenac

CATARAQUI REGION CONSERVATION AUTHORITY

FRONTENAC

South Frontenac

February 4, 2019

COLBOURNE & KEMBEL, ARCHITECTS INC.

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CRCA / County of Frontenac / Township of South Frontenac

Shared Facility Analysis

February 4, 2018

Note to Reader: This analysis is based on basic space needs estimates provided by the users. No in-depth functional needs analysis has been completed at this point in the process. Refer to 'Background & Assumptions' paragraphs below. All floor plans and site plans have been created for cost comparison purposes only, and thus should not be considered concept designs or draft plans.

1. INTRODUCTION

1.1. The Cataraqui Region Conservation Authority, County of Frontenac, and the Township of South Frontenac are discussing the possibility of constructing a joint facility, shared by all three groups, to serve as a base for the services offered by all three bodies. Colbourne & Kembel, Architects Inc (CKA) was retained by the Planning Group to complete conceptual plans and high-level cost analysis to inform the business case for moving forward. The designs and analysis below explore two options: Individual buildings for each group, and a shared facility for all three groups. The intent is to clarify what potential efficiencies can be realized by constructing and operating a shared building, including consideration of associated site and building services, as opposed to each group building and operating its own facility.

1.2. The three groups who are considering participation in this joint facility are:

1.2.1. Cataraqui Region Conservation Authority (CRCA) -- A provincially mandated water management agency that manages 11 watersheds in the region, spanning from Brockville to Adolphustown, and north as far as Newboro, the CRCA currently runs their operations out of the Little Cataraqui Creek Conservation Area, just north of Kingston, where they house more than 30 planners, engineers, foresters, biologists, education specialists, and administrative & operations staff.

1.2.2. County of Frontenac (CF) – The county encompasses almost 4,000 square kilometres, from Wolfe Island in the south, and northward as far as Black Donald Lake. It is made up of four municipalities: Central Frontenac, Frontenac Islands, North Frontenac, and South Frontenac. Its offices are currently located on Battersea Road in Glenburnie.

1.2.3. Township of South Frontenac (SF) -- Located in Frontenac County, South Frontenac is an amalgamation of the former townships of Bedford, Loughborough, Portland, and Storrington. Their administrative offices are currently located on George Street in Sydenham.

1.3. The joint planning group provided CKA with a space allocation estimate from each user group, specifying required space for staff and the public (refer to Appendix C - Shared Facilities Concept Planning Session). In that estimate were included areas that could be considered 'shareable' in a joint facility scenario. In general, the spaces considered sharable in the client program are meeting rooms, reception, washrooms, showers / lockers, kitchen / lunch room, and mechanical room. Although not all user groups listed them as such, we would also consider the IT / server room and the mail / copier room as shareable and have shown these accordingly on our concept plans.

2. BACKGROUND & ASSUMPTIONS

2.1. For the purposes of this analysis, we have assumed that all theoretical building sites will be of adequate size to fit all interior spaces on a single storey, and large enough to fit all required site work, including parking, fire access, and site services, including a septic system. Naturally, each concept is entirely hypothetical, and is being designed solely for costing purposes. For this reason, no architectural features or finishes that are only aesthetic are being shown or considered. This means that the resulting costing is base-line and more valid for comparison purposes.

2.2. For all occupancy-related assumptions, occupant loads have been calculated based on the following loads formulas that are stipulated by the OBC or the applicable by-laws:

- Meeting Rooms (A2 Occupancy) .75 m^2/person (or 8.07 ft^2/person)
- Office spaces (D Occupancy) for water closets 14 m^2/person (or 151 ft^2/person)

2.3. In reality, those spaces may well be designed with posted occupancy limits lower than the calculated values. However, for the sake of valid comparison, we have used the regulation formulas so that all figures are comparable.

2.4. For the load calculation of the office areas (D occupancy) we've used the staff count listed in the user's space needs chart, plus 10 additional 'visiting' occupants, which would allow for increased occupancy for future growth, visiting clientele, summer students, interns, temporary staff, etc.

2.5. For the 'dedicated' floor space for each user group, we have used the estimates in the Space Allocation Estimates provided by each group, adjusted if necessary for space deemed 'sharable' in our joint facility.

2.6. For the calculation of the total area of meeting rooms required (A2 occupancy), we have used the areas on the conceptual floor plans, since the shared facility meeting room requirements are obviously based on meeting the needs of all users, and thus are based on a designed layout as opposed to hypothetical floor areas.

2.7. Similarly, for 'shared' or 'shareable' space we have used the areas drawn from the conceptual floor plans, since this area will more accurately reflect the efficiencies possible with the shared facility.

2.8. For purposes of consistency, it has been assumed that all concept buildings are in the Township of South Frontenac. Comprehensive Zoning By-Law Number 2003-75 has been used.

2.9. We are assuming the buildings would be on a lot zoned CF (Community Facility). It's possible that they would be considered RC (Rural Commercial), but the lot size and road frontage requirements are the same for both of these zones, with only a slight difference in setback requirements.

2.10. We have calculated required parking using two different methods. For the comparative cost estimates, we have used the more stringent method. In reality, the numbers may be able to be reduced using lower posted occupancy limits, and by clarifying when full capacity may or may not occur. The two methods are:

- Assuming that the entire building is a government building, and falls under by-law paragraph 5.30.1.9, where one parking space is required for every 247.6 ft^2 (23 m^2)
- Assuming that the office space and 1/2 of the common space is a government building as above, and that the meeting space and 1/2 of the common space is a place of assembly and fall under by-law paragraph 5.30.1.13, where one parking space is required for every 3 people at maximum occupancy. This is the assumption we use in our estimates below.

2.11. The required area for a septic drainage bed varies widely depending on soil and drainage conditions of a specific site. For the purposes of comparison, we have used a hypothetical drainage bed from a project with a similar occupancy to the CRCA building, and we've adjusted the size proportionally for each concept. When an actual site is selected, the size of the drainage bed would need to be based on the actual site condition and could be quite different than the hypothetical.

2.12. Note that because the user-provided floor areas were provided in imperial units, our figures in this report are also imperial. Typically, we would use metric units.

3. FACILITY OPTIONS (refer to Appendix A - Floor Plans)

3.1. Separate Facilities for Each Organization

3.1.1. Cataraqui Region Conservation Authority

3.1.1.1. According to the estimates in the 'Shared Facilities Concept Planning Guide', the CRCA requires 6,830 ft^2 of dedicated office space. This figure includes an IT Room and lockers/showers. In our analysis, we have deemed these as shareable spaces, so for our concept plan we have adjusted this to 4,805 ft^2. Based on the concept floor plan for a stand-alone CRCA building, an additional 5,613 ft^2 would be required for building services, corridors, meeting rooms, and other spaces which could be considered 'shareable' space. The meeting rooms total 1,950 ft^2. The staff count comes to 34.

3.1.1.2. The building has a gross floor area of 10,418 ft^2. For the concept plan, there is a calculated maximum occupant load of 292 persons for the calculation of water closets. For the calculation of parking spaces, we've assigned 7,473 ft^2 as office space and 2,945 ft^2 as assembly space. This means there will need to be:

- 5 water closets for males
- 7 water closets for females
- 151 standard parking spaces
- 3 barrier free parking spaces

3.1.2. County of Frontenac

3.1.2.1. According to the estimates in the 'Shared Facilities Concept Planning Guide', the County of Frontenac requires 4,374 ft^2 of dedicated office space. Based on the concept floor plan for a stand-alone County of Frontenac building, an additional 3,961 ft^2 would be required for building services, corridors, meeting rooms, and other spaces which could be considered 'shareable' space. The meeting rooms total 1,250 ft^2. The staff count comes to 27.

3.1.2.2. The building has a gross floor area of 8,335 ft^2. For the concept plan, there is a calculated maximum occupant load of 192 persons for the calculation of water closets. For the calculation of parking spaces, we've assigned 6,357 ft^2 as office space and 1,978 ft^2 as assembly space. This means there will need to be:

- 4 water closets for males
- 6 water closets for females
- 106 standard parking spaces
- 3 barrier free parking space

3.1.3. South Frontenac

3.1.3.1. According to the estimates in the 'Shared Facilities Concept Planning Guide', the Township of South Frontenac requires 6,495 ft^2 of dedicated office space.

This figure includes mail room/copier room/ lockers/showers. In our analysis, we have deemed these as sharable spaces, so for our concept plan we have adjusted this to 5,997 ft^2. Based on the concept floor plan for a stand-alone South Frontenac building, an additional 5,607 ft^2 would be required for building services, corridors, meeting rooms, and other spaces which could be considered 'shareable' space. The meeting rooms total 1,748 ft^2. The staff count comes to 33.

3.1.3.2. The building has a gross floor area of 11,604 ft^2. For the concept plan, there is a calculated maximum occupant load of 259 persons for the calculation of water closets. For the calculation of parking spaces, we've assigned 8,866 ft^2 as office space and 2,738 ft^2 as assembly space. This means there will need to be:

- 5 water closets for males
- 7 water closets for females
- 148 standard parking spaces
- 3 barrier free parking space

3.2. Joint Facility

3.2.1. Since part of the goal of this analysis was to lay out conceptual plans for a joint facility, for our occupancy calculations on the shared facility we are using the areas from our concept plan. The total area of floor space dedicated to the user groups is 15,176 ft^2. Based on the concept plan for a shared facility, an additional 11,191 ft^2 of common, or 'shared' spaces would be required, including building services, corridors, meeting rooms, etc. The meeting rooms, which are configured to meet the needs of all user groups, total 2,903 ft^2. The total staff count is 94.

3.2.2. The building has a gross floor area of 26,367 ft^2 (2,450 m^2). For the concept plan there is a calculated maximum occupant load of 422 persons for the calculation of water closets. For the calculation of parking spaces, we have assigned 21,860 ft^2 as office space and 4,507 ft^2 as assembly space. This means there will need to be:

- 7 water closets for males
- 10 water closets for females
- 274 standard parking spaces
- 4 barrier free parking spaces

4. BY-LAW ANALYSIS AND SITE AREA

4.1. For the purposes of this study, it has been assumed that all hypothetical sites will be in the Township of South Frontenac, and that Comprehensive Zoning By-Law No. 2003-75 will apply. In reality, the hypothetical individual buildings could be located in other jurisdictions, but overall this would not have a significant impact on the requirements or costs, and to simplify the comparison, we have based our analysis on one jurisdiction.

4.2. We have assumed that an appropriate lot can be found for each building within South Frontenac, and although by-law paragraph 5.17.1 allows that local government buildings can be built in any zone so long as they comply with the restrictions of that zone, our analysis is based on the restrictions of a CF Zone (Community Facility), as laid out in Section 29 of the by-law:

- Lot Area (Minimum) 8000 sq. metres (86,114 sq. ft.)
- Lot Frontage (Minimum) 76 metres (250 ft.)
- Front Yard (Minimum) 10 metres (32.8 ft.)

- Rear Yard (Minimum) 10 metres (32.8 ft.)
- Interior Side Yard (Minimum) 7.5 metres (24.6 ft.)
- Exterior Side Yard (Minimum) 10 metres (32.8 ft.)
- Lot Coverage (Maximum) 40 percent
- Off-street parking shall be provided in accordance with Section 5.30.

5. Ontario Building Code (OBC) ANALYSIS

5.1. As stated earlier, we have assumed the site for each of the concept buildings will be of sufficient size to allow for a one-storey building. For every building, the selection of which OBC building conformance article to design to is based on site and design specific criteria. Factors that influence the decision and impact the required design include Occupancy Classification, building area, # of storeys, # of streets (or on-site access lanes) facing, combustible or non-combustible, and sprinklered or not.

5.2. If the selected site is on municipal water service, then providing a sprinkler and/or standpipe system is easier and less costly than if the site relies on a well for water supply. Since the only area in Frontenac County that has municipal water is the village of Sydenham, it is appropriate to consider that this building may be on a rural site with well water supply.

5.3. In terms of occupancy, all three User Groups are a Group D (offices) occupancy, however the inclusion of public meeting space above and beyond meeting space for occupants means that this becomes an A2 (Assembly) occupancy. If the building is designed to avoid a sprinkler system, the applicable Conformance Article would therefore be 3.2.2.25.

5.4. For all three of the individual buildings, the building area is small enough that under 3.2.2.25 they can face just one street, be non-sprinklered, and be of either combustible or non-combustible construction.

5.5. For the Joint Facility, the estimated building area of 2,450 m^2 slightly exceeds the maximum permitted area under 3.2.2.25, even assuming it faces 3 streets. However, there are various options in the subsequent design stage to resolve this issue, including sprinkler the building if it lies in the serviced area of Sydenham (and use a different conformance article), reduce the building area slightly to be under 2,400 m^2 (but this then leaves no flexibility for future additions unless they are separate 'buildings'), or divide the 'building' in to two 'buildings' with a firewall.

5.6. If the building is not sprinklered, then depending on its location, fire department response time and availability of nearby fire department accessible water supply, there may be the need to include a fire tank on-site.

6. COST ESTIMATES (refer to Appendix B - Cost Estimates)

6.1. Initial Costs (site & construction)

6.1.1. **Separate Facilities**: If each user group were to purchase their own site and construct a stand-alone facility using standard commercial-grade construction materials, the total sum cost would be approximately $9.9 M.

6.1.2. **Joint Facility**: A shared site and facility that housed all three user groups constructed using standard commercial-grade construction materials would cost approximately $7.2 M, for a savings of $2.7 M.

6.1.3. **Environmental Sustainability**: If an energy efficiency certification system (see 6.3.1 below) is utilized in the design and construction of stand-alone buildings, the total sum cost would be approximately $11.9 M (based on a rough up-charge of 20% for high energy efficiency design and construction, including consulting fees for certification). If the same

system was utilized in the design and construction of a joint facility, the cost would be approximately $8.6 M, for a savings of $3.3 M compared to three stand-alone sites.

6.2. Operating Costs

6.2.1. **Separate Facilities**: Using rough estimates of the cost to run and maintain these hypothetical buildings, we estimate that the sum total annual cost to operate three stand-alone facilities of standard commercial-grade construction would be approximately $455 K.

6.2.2. **Joint Facility**: The annual cost to operate and maintain one site and building that houses all three groups in a building of standard commercial-grade construction would be approximately $345 K, for savings of $110 K per year compared to three stand-alone sites.

6.2.3. **Environmental Sustainability**: If an energy efficiency certification system (see 6.3.1 below) was utilized in the design and construction of stand-alone buildings, the total sum annual cost to operate and maintain the three sites would be approximately $340 K (based on a rough savings of 25% in maintenance & operating costs). If the same system was utilized in the joint facility, the annual operating and maintenance cost would be approximately $260 K, providing an annual savings of approximately $80 K compared to three stand-alone sites. Note that the savings realized by a certified energy efficient joint facility are *less than* those realized by a non-certified facility because the overall operating costs are lower. The life cycle costs are lowest in a certified joint facility, as illustrated in the attached life cycle cost spreadsheet.

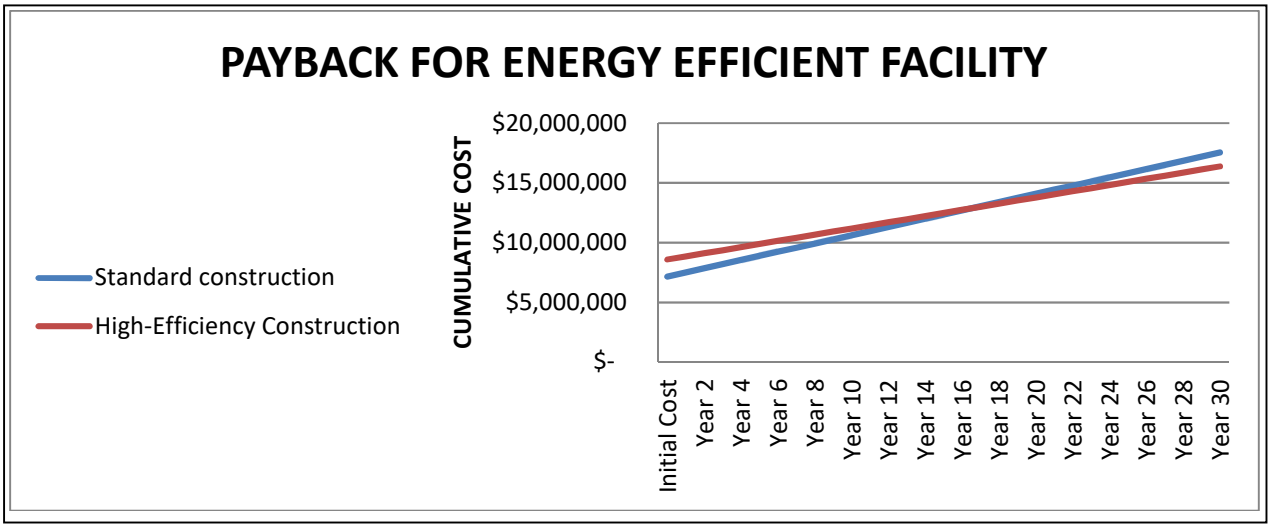
6.3. Life Cycle Cost Analysis:

6.3.1. There are several recognized certification systems used in Canada to quantify and designate the design and construction of buildings as environmentally sustainable and responsible. The most widely recognized of these would be 'Leadership in Energy and Environmental Design' (LEED), but there is also the 'Zero Carbon Building Initiative' (aka Net Zero, or Carbon Neutral), 'Passive House', and 'Green Globes'. All of these systems have their pros and cons, but each of them in their own way promotes and recognizes building owners and designers for constructing a structure that responds to the global crisis of our times by investing in methods, materials and technologies that reduce or eliminate the carbon footprint of a construction project. 'Zero Carbon', operated by the Canadian Green Building Council, is currently considered the best practice certification system in Canada.

6.3.2. Using a standard 30-year study period, the attached spreadsheet calculates a simple linear life cycle projection of a certified high-efficiency building (as per Zero Carbon, LEED, or other energy efficiency certification system) versus a non-certified facility. Note that the analysis does not include projected capital costs, financing costs, residual costs, or discount rates. This is simply an annualized operating cost projection to illustrate the long-term benefits of employing an energy efficiency certification system in the design and construction of a new building.

6.3.3. Although the initial cost of a high-efficiency building is higher, the utility costs (due to efficient energy and water uses) and maintenance costs (due to higher-quality and more durable finishes and materials) are lower. Additionally, user comfort and air quality both contribute to lower absenteeism and lower health care costs (these are difficult to include in a life cycle analysis, but financially benefit the owners of a building nevertheless).

6.3.4. Our analysis shows a payback period for a high-efficiency facility at approximately 16 years. Over the 30-year life cycle, a total savings of approximately $1.17 M could be realized from a facility designed to a high level of energy efficiency.



7. SUMMARY

7.1. Advantages of a Shared Facility:

7.1.1. A shared facility has both reduced site area and building area.

Total Site Area for 3 Separate Sites:	9.85 Ac
Shared Facility Site Area:	5.12 Ac
% Savings:	48 %
Total Building Area for 3 Separate Sites:	30,357 ft2
Shared Facility Building Area:	26,367 ft2
% Savings:	13 %

7.1.2. Reduced capital cost due to reduced land cost and reduced construction cost.

7.1.3. Elimination of duplication in common site and building services (e.g. water, electrical, sanitary), and associated further cost savings.

7.1.4. Elimination of duplication in shareable site and building spaces (e.g. parking, meeting rooms, reception, mail room, copy room, IT services, lunch room, locker rooms), and associated further cost savings.

7.1.5. Reduced Construction cost /ft2 to build one larger facility than 3 smaller facilities.

7.1.6. Reduced overall operating costs.

7.1.7. Significant reduction in inactive time of meeting rooms and associated washrooms and parking spaces. If all three groups were to construct separate buildings, there would be a total of 4,950 ft^2 of meeting space, with a calculated total occupancy of 613 persons, along with all the associated washrooms and parking spaces required by this quantity. In the joint facility, with meeting rooms that satisfy the minimum stated needs of all users, there is a total of 2,903 ft^2 of meeting space, with a total calculated occupancy of only 359 persons. These rooms themselves would cost LESS to construct, and the reduced requirements for washrooms and parking would further reduce construction and operating costs.

7.1.8. Housing these three sites in a common facility would allow for cooperation, collaboration, and team-building between these various governmental bodies with separate but overlapping areas of authority, governance, and expertise.

7.1.9. Buildings have environmental impact two different ways -- they create waste and greenhouse gases when the building is constructed, and they create waste and greenhouse gases when they are being operated and occupied. The design and use of one shared facility versus three individual facilities will reduce the environmental impact of all three user groups in both of these phases.

7.1.10. Additionally, having the user groups in a combined space adds flexibility and efficiency for future expansions. If one user group expands and another shrinks, there will be possibilities for space exchange with the existing building. And any additions or expansions to the building will similarly be able to be shared between user groups in a more efficient manner.

7.1.11. Lastly, having these three user groups located in one community hub will allow all groups to provide on-site integrated service delivery, and to develop each group's image with the public. Any member of the public using the services of one group will automatically be made aware of the presence and location of the other two groups, and community members will be able to efficiently get the information they need from any or all groups at one location and with one visit.

7.2. Disadvantages of a Shared Facility:

7.2.1. Locating all three user groups on one site forces each group to compromise on their ideal location. For instance, the CRCA is currently housed at the Little Cataraqui Conservation Area. A joint facility would likely be located some distance from any of the CRCA properties. Similarly, either of the other groups may end up having to locate somewhere distant from what they would consider their ideal location.

Fortunately, all three user groups do have overlapping jurisdictions. The Township of South Frontenac is within Frontenac County, which is mostly within the Cataraqui Region Conservation Authority. Ideally, a location for a joint facility will be able to be positioned reasonably central to all three regions.

7.2.2. Having all three user groups in one building may present some challenges regarding the branding and identity of each group, as the groups may blur in the mind of users that are only going to one building for all services.

With good architectural design, distinct branding between user groups housed within a common building can be maintained and even enhanced. CKA has done this on previous projects. Additionally, the incidental exposure to the other two groups when a user visits one group means that public awareness of all three groups increases, which can only improve the delivery of services.

8. RECOMMENDATIONS

8.1. Based on the projected capital cost savings, operating cost savings, life cycle cost savings, reduced environmental impact, and operational synergies, **it is our recommendation that development of a joint facility be pursued**.

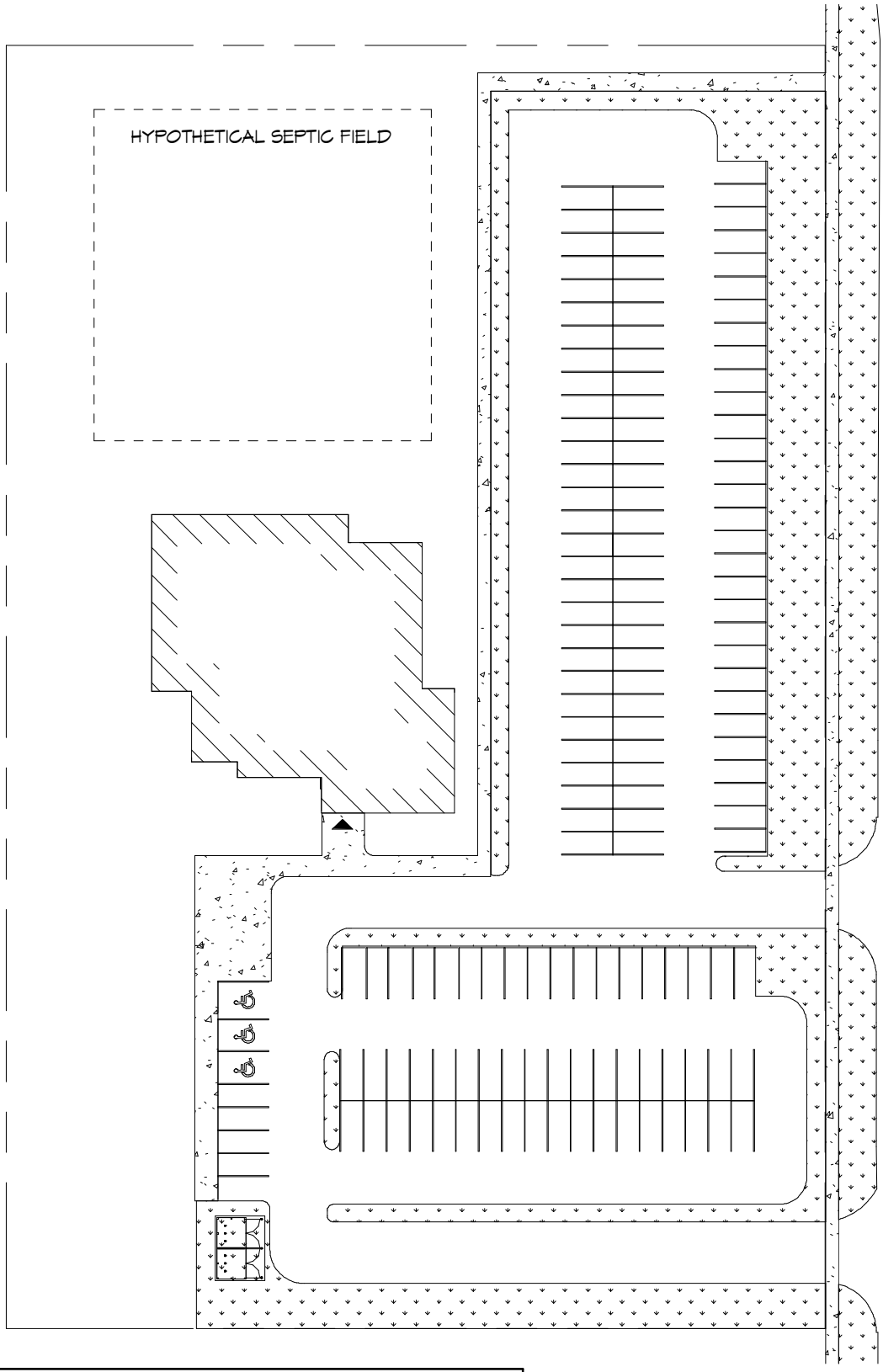
8.2. Furthermore, due to its central location within the user groups' boundaries, and the fact that it is the only community within Frontenac County with municipal water service, we recommend that users acquire a roughly 5.0 Acre site somewhere in or adjacent to the water-serviced area of Sydenham, Ontario.

8.3. Lastly, CKA would recommend that an energy-efficiency certification be pursued for the project, ideally the 'Zero Carbon Building Initiative' recognition discussed above. Government projects act as a role model and standard for private construction projects of all sizes -- the only way to encourage Canadians to build responsibly is for governments to take the lead, and the construction of high-profile carbon neutral project such as this would be a great opportunity to demonstrate Leadership.

8.4. CKA would be pleased to assist in defining required site parameters and assisting in a site options analysis and property acquisition process.

Appendix A

Hypothetical Floor Plans

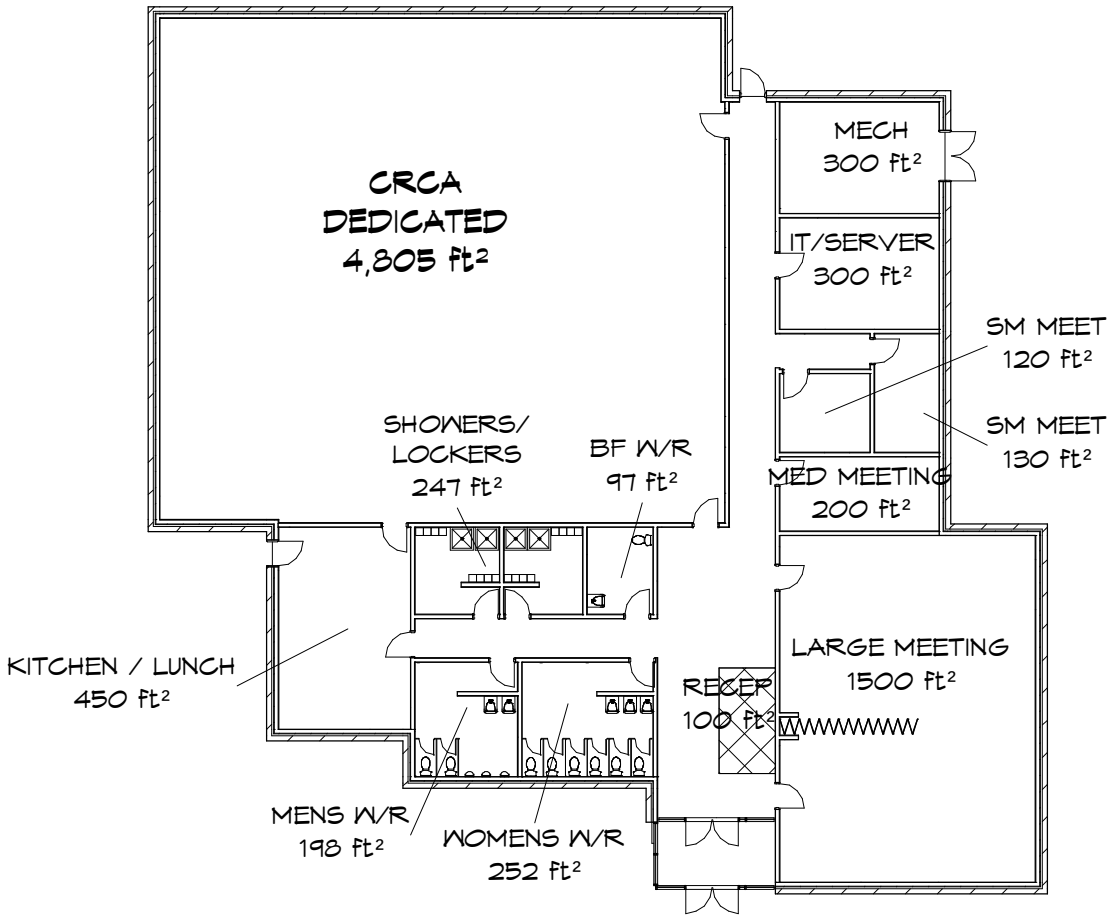


SITE AREA	156,600 FT² (3.6 ACRES)
STANDARD PARKING SPACES	151
BARRIER-FREE PARKING SPACES	3

FIRE TRUCK ACCESS REQUIRED ON ONE SIDE ONLY.

COLBOURNE & KEMBEL, ARCHITECTS INC.
739D ARLINGTON PARK PLACE
KINGSTON, ONTARIO K7M 8M8
TEL 613-384-2240 FAX 613-384-1277
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING CRCA STAND-ALONE SITE		
LOCATION Project Address:	SCALE N.T.S.		DWG. No. SK-1
CLIENT CRCA/FC/SF	DATE 1.29.2019	REVISED	



BUILDING AREA = 10,418 ft²

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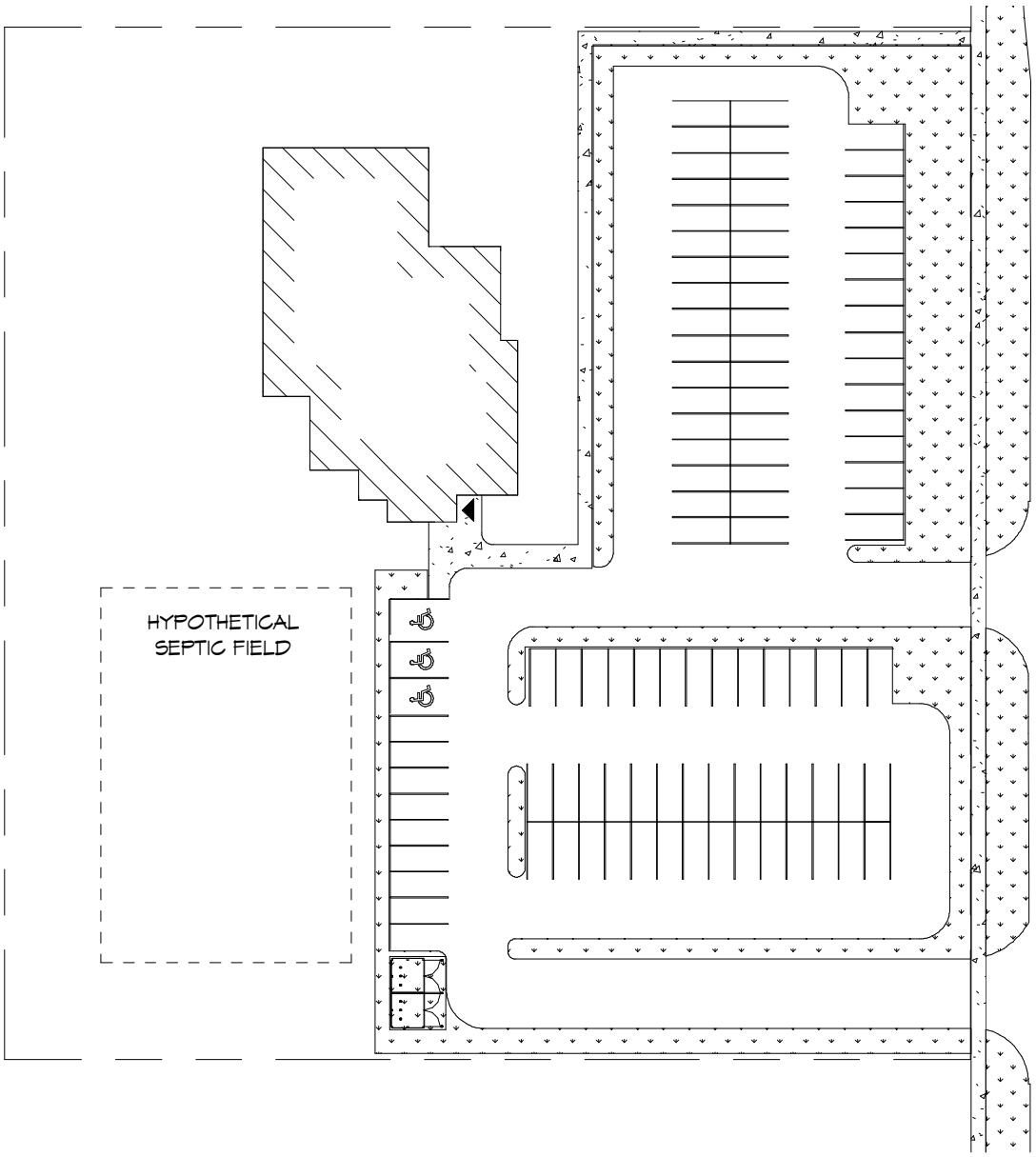
TEL 613-384-2240 FAX 613-384-1277
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING CRCA STAND-ALONE BUILDING		
LOCATION Project Address:	SCALE N.T.S		DWG. No. SK-2
CLIENT CRCA/FC/SF	DATE 1.29.2019	REVISED	



SITE AREA	116,000 FT² (2.7 ACRES)
STANDARD PARKING SPACES	106
BARRIER-FREE PARKING SPACES	3

FIRE TRUCK ACCESS REQUIRED ON ONE SIDE ONLY.

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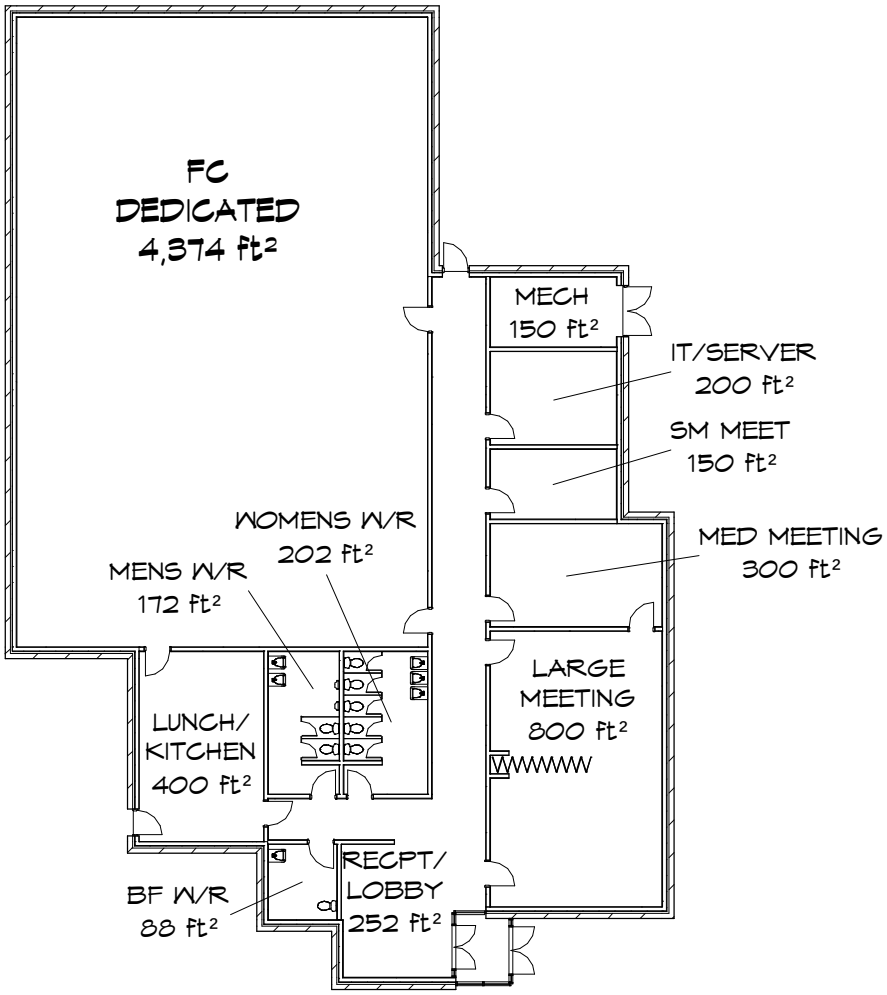
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS		DRAWING FRONTENAC COUNTY STAND-ALONE SITE	
LOCATION Project Address:		SCALE N.T.S.	DWG. No. SK-3
CLIENT CRCA/FC/SF	DATE 01.29.2019	REVISED	



BUILDING AREA = 8,335 ft²

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ARCHITECTS INC.
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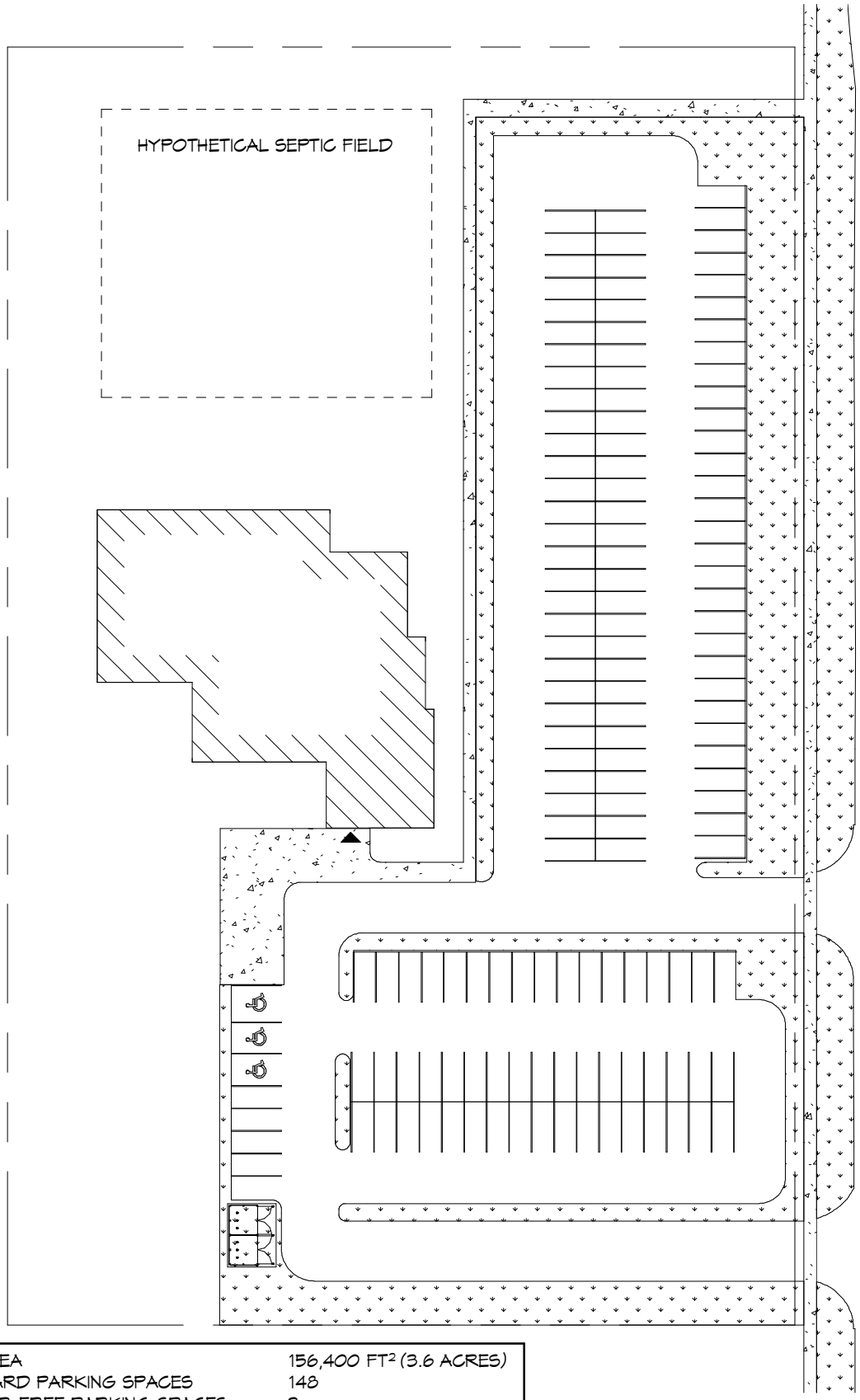
PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING FRONTENAC COUNTY STAND-ALONE BUILDING		
LOCATION Project Address:	SCALE N.T.S		DWG. No. SK-4
CLIENT CRCA/FC/SF	DATE 01.29.2019	REVISED	



SITE AREA	156,400 FT² (3.6 ACRES)
STANDARD PARKING SPACES	148
BARRIER-FREE PARKING SPACES	3

FIRE TRUCK ACCESS REQUIRED ON ONE SIDE ONLY.

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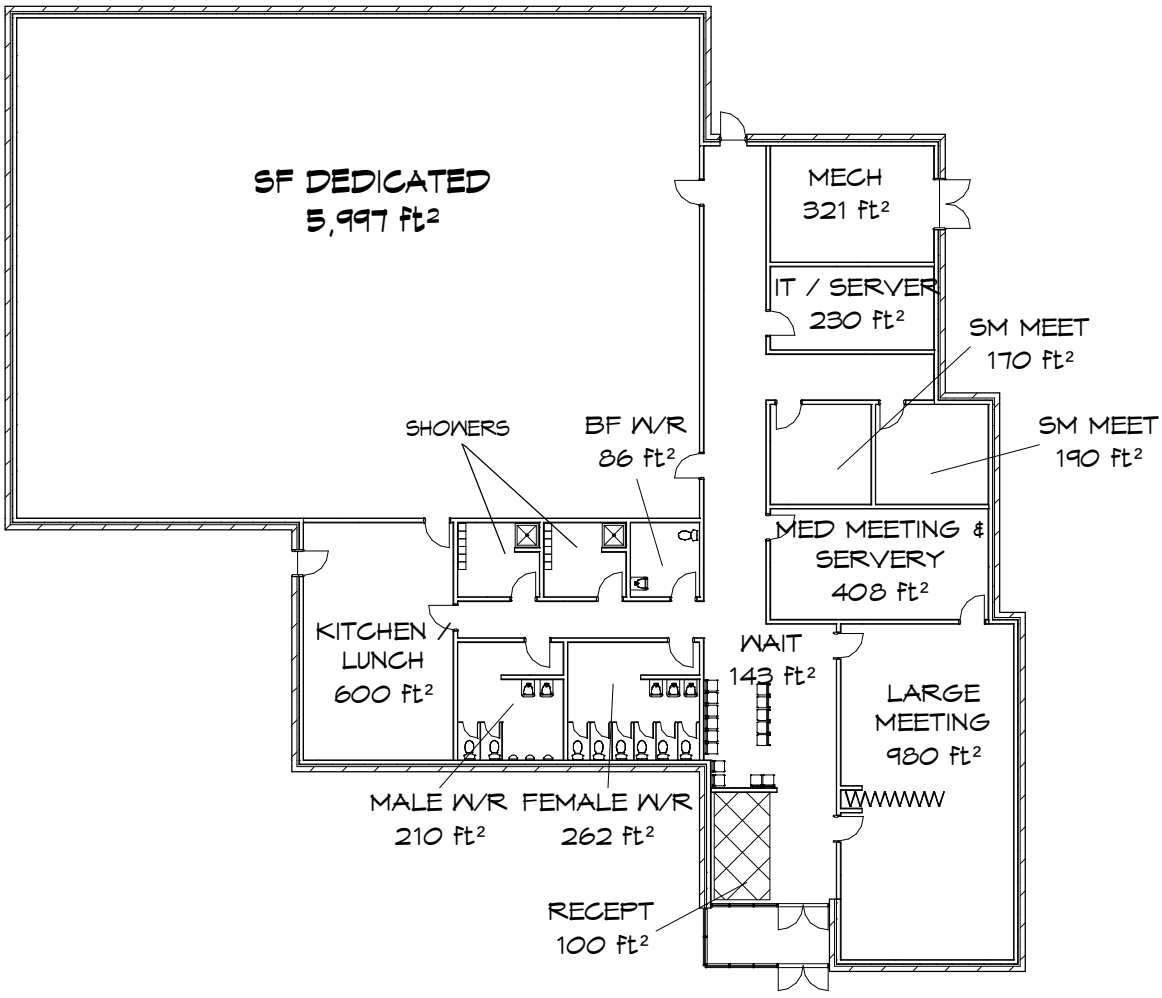
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS		DRAWING SOUTH FRONTENAC STAND-ALONE SITE	
LOCATION Project Address:		SCALE N.T.S.	DWG. No. SK-5
CLIENT CRCA/FC/SF	DATE 1.29.2019	REVISED	



BUILDING AREA = 11,604 ft²

COLBOURNE & KEMBEL,
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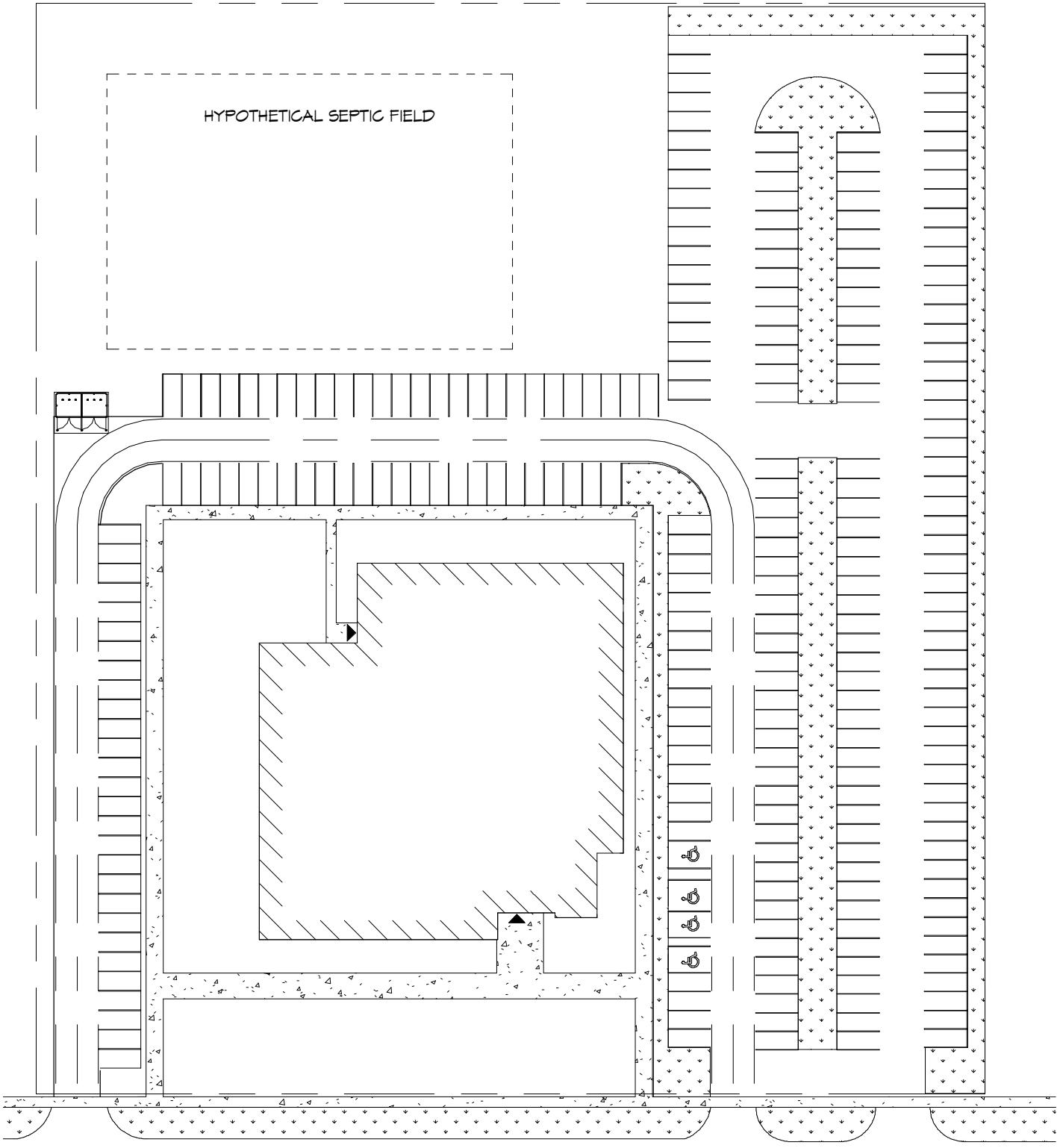
KINGSTON, ONTARIO K7M 8M8
TEL 613-384-2240 FAX 613-384-1277
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING SOUTH FRONTENAC STAND-ALONE BUILDING		
LOCATION Project Address:	SCALE N.T.S		DWG. No. SK-6
CLIENT CRCA/FC/SF	DATE 1.29.2019	REVISED	



SITE AREA	223,200 FT² (5.1 ACRES)
STANDARD PARKING SPACES	274
BARRIER-FREE PARKING SPACES	4

FIRE TRUCK ACCESS REQUIRED ON THREE SIDES.

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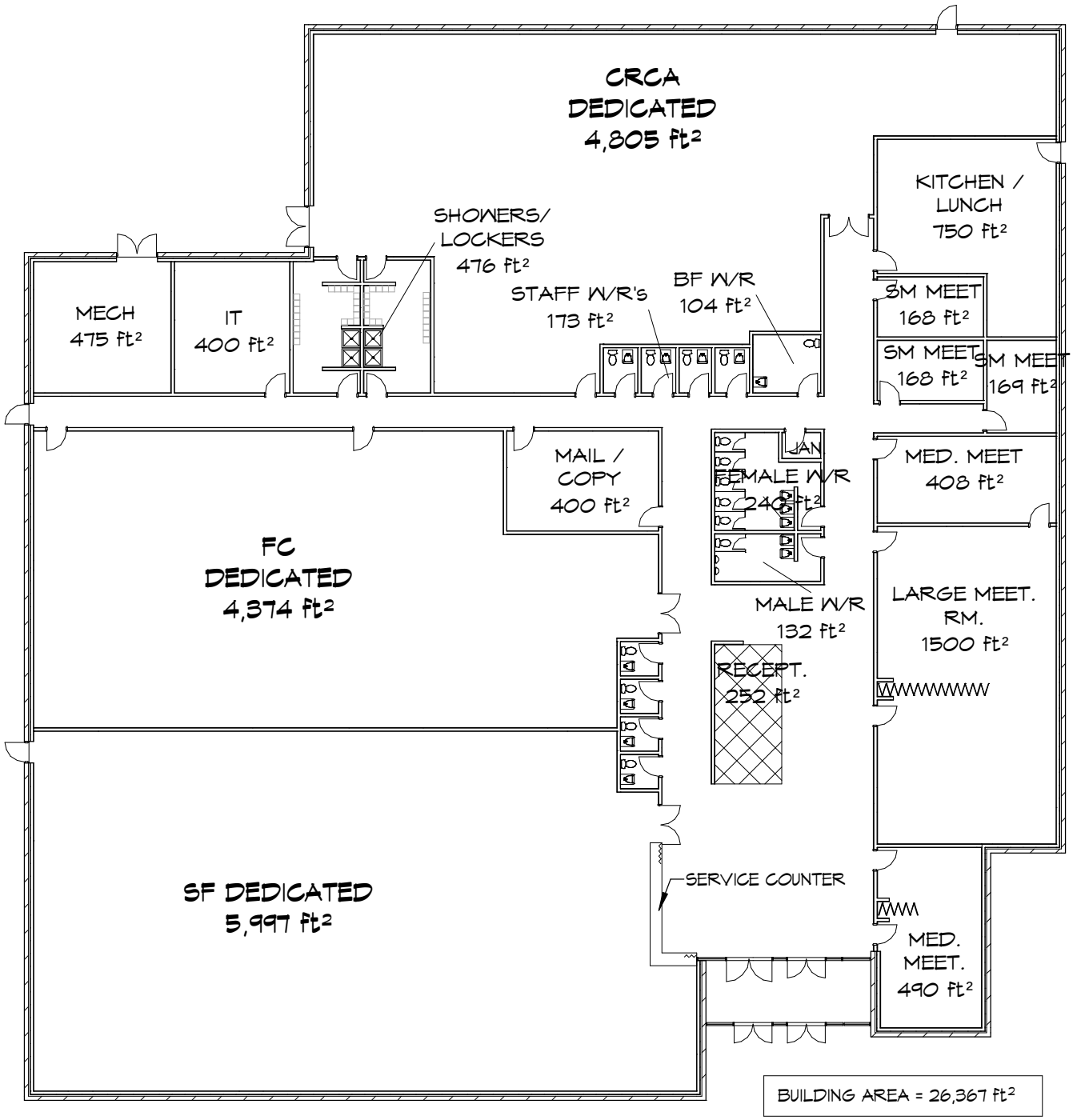
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING SHARED SITE		
LOCATION Project Address:	SCALE N.T.S.		DWG. No. SK-7
CLIENT CRCA/FC/SF	DATE 01.22.2019	REVISED	

	STAND-ALONE BUILDING AREA
CRCA	10,418 ft²
SOUTH FRONTENAC	11,604 ft²
FRONTENAC	8,335 ft²
TOTAL =	30,357 ft²
SHARED BUILDING AREA =	26,367 ft²
DIFFERENCE =	3,990 ft²



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TEL 613-384-2240 FAX 613-384-1277
info@ckai.ca www.ckai.ca

PROJECT No. 18091 CRCA / FRONTENAC / SOUTH FRONTENAC ANALYSIS	DRAWING SHARED BUILDING		
LOCATION Project Address:	SCALE N.T.S		DWG. No. SK-8
CLIENT CRCA/FC/SF	DATE 01.22.2019	REVISED	

Appendix B

Cost Estimates & Life Cycle Cost Analysis

Feasibility Study for Shared Building - CRCA, Frontenac County, South Frontenac Township
Class D Cost Estimate

	Area	Unit	Cost/unit	Cost	
CRCA Concept Building					
Site Purchase	3.6	acres	$ 50,000	$ 180,000	
Building	10,418	ft²	$ 240	$ 2,500,320	
Site Construction				$ 400,000	
Development Costs				$ 50,000	
Consultant Costs				$ 250,000	
Total Cost				$ 3,380,320	
Including upcharge for LEED certification			20%	$ 4,056,384	
County of Frontenace Concept Building					
Site Purchase	2.7	acres	$ 50,000	$ 135,000	
Building	8,335	ft²	$ 250	$ 2,083,750	
Site Construction				$ 350,000	
Development Costs				$ 50,000	
Consultant Costs				$ 225,000	
Total Cost				$ 2,843,750	
Including upcharge for LEED certification			20%	$ 3,412,500	
Township of South Frontenac Concept Building					
Site Purchase	3.6	acres	$ 50,000	$ 180,000	
Building	11,604	ft²	$ 240	$ 2,784,960	
Site Construction				$ 400,000	
Development Costs				$ 50,000	
Consultant Costs				$ 250,000	
Total Cost				$ 3,664,960	
Including upcharge for LEED certification			20%	$ 4,397,952	
Sum of Total Cost for 3 separate bldgs (excl. LEED)				$ 9,889,030	
Sum of Total Cost for 3 separate bldgs (incl. LEED)			20%	$ 11,866,836	
Shared Facility Concept Building					
Site Purchase	5.1	acres	$ 50,000	$ 255,000	
Building	26,367	ft²	$ 220	$ 5,800,740	
Site Construction				$ 600,000	
Development Costs				$ 50,000	
Consultant Costs				$ 450,000	
Total Cost				$ 7,155,740	
Including upcharge for LEED certification			20%	$ 8,586,888	
Approx. capital savings for shared facility excl. LEED				$ 2,733,290	**28%**
Approx. capital savings for shared facility incl. LEED				$ 3,279,948	**28%**

ANNUAL OPERATING COST ESTIMATES						LIFE CYCLE COSTING ANALYSIS								
	Area	Cost/ft²	Annual O&M Cost	Estimated Savings if LEED	Annual Operating Cost (LEED)	Period (Years)	Lifecycle Operating Cost	Lifecycle Operating Cost (LEED)	Lifecycle Savings (LEED)	Initial Cost	Initial Cost (LEED)	Lifecycle Cost	Lifecycle Cost (LEED)	Lifecycle Cost Savings if LEED
CRCA Concept Building														
Building	10,418	$ 13	$ 135,434											
Site			$ 20,000											
			$ 155,434	25%	$ 116,576	30	$ 4,663,020	$ 3,497,265	$ 1,165,755	$ 3,380,320	$ 4,056,384	$ 8,043,340	$ 7,553,649	$ 489,691
County of Frontenace Concept Building														
Building	8,335	$ 13	$ 108,355											
Site			$ 20,000											
			$ 128,355	25%	$ 96,266	30	$ 3,850,650	$ 2,887,988	$ 962,663	$ 2,843,750	$ 3,412,500	$ 6,694,400	$ 6,300,488	$ 393,913
Township of South Frontenac Concept Building														
Building	11,604	$ 13	$ 150,852											
Site			$ 20,000											
			$ 170,852	25%	$ 128,139	30	$ 5,125,560	$ 3,844,170	$ 1,281,390	$ 3,664,960	$ 4,397,952	$ 8,790,520	$ 8,242,122	$ 548,398
Three separate buildings: Total			$ 454,641		$ 340,981					$ 9,889,030	$ 11,866,836	$ 23,528,260	$ 22,096,259	$ 1,432,002
Shared Facility Concept Building														
Building	26,367	$ 12	$ 316,404											
Site			$ 30,000											
			$ 346,404	25%	$ 259,803	30	$ 10,392,120	$ 7,794,090	$ 2,598,030	$ 7,155,740	$ 8,586,888	$ 17,547,860	$ 16,380,978	$ 1,166,882
Approx. operating cost savings for shared facility			**$ 108,237**		**$ 81,178**			**Approx. Lifecycle cost savings for shared facility**				$ 5,980,400	$ 5,715,281	

Note: This life cycle analysis is a simple annualized operating cost projection, and doesn't include projected capital costs (e.g. Roof replacements), financing costs, residual values or discount rates to compensate for inflation. This is simply a linear comparison of LEED (or other high-efficiency benchmark) and non-LEED construction and operating costs.

Appendix C

Shared Facilities Concept Planning Session

Shared Facilities Concept Planning Session: August 13th, 2018

Noon, Mon. August 13 ***Location:*** Frontenac County Offices - Frontenac Room ***Facilitator:*** Rob Wood

Discussion Guide:

Our goal for this session will be to confirm whether or not the CRCA and County of Frontenac (and/or South Frontenac Township) wish to pursue next steps to validate the potential for a partnership and co-location of administrative offices at a shared site.

Noon — Informal Mixing Time / Lunch Provided

12:30 pm — **Welcome and Overview of the Session**

12:40 pm — **Decision Point:** Validate the Case for Shared Facilities, or Not?

- Review identified space requirements and potential efficiencies (pg 5).
- Review "downstream" issues to be set aside for now (shared services, site).
- Determine whether to further validate the initial concept in a next step, or not, and if so, to confirm what work-up might be required for partners to make their final, individual "in/out" decisions on a project — for example:
  - — architectural/engineering analysis of the initial needs assessment,
  - — preliminary conceptual/schematic floor plan based on partner needs,
  - — potential configurations of common space for best efficiencies,
  - — requirements for parking, water & similar services, building code etc,
  - — potential options to preserve brand identities on shared site, and
  - — initial budget-level estimates for comparison with stand-alone options.
- Confirm specific partnerships & sharing options for further analysis (pg 2).
- Confirm general search area/boundaries for any potential shared sites (pg 3).
- Review/confirm the timelines applicable to any potential shared options.

2:10 pm — *Break*

2:30 pm — **Time Reserved for Further Discussion** (as required)

- Determine immediate next steps and timelines for decisions
- Communications and process tasks

3:15 pm — **Wrap-up/Next Steps & Takeaways**

Highlights from Partner Meetings Since June 27th, 2018:

Following the joint meeting held June 27th, the partners each held their own planning sessions to consider their positions on the shared administrative office option. These notes highlight some of the more significant outcomes.

Clarification of the Decision Framework:

- Each partner plans to compare the costs and benefits for a shared option against their own stand-alone options, which vary from partner to partner.
- A significant potential (and credible) benefit will be needed to justify the trade-offs involved in sharing. For example, one suggested criteria was that a shared option should offer savings of 15% or more vs. going alone.
- Non-financial concerns and brand/identity desires emerged more strongly as factors in any final decision.
- The Township of South Frontenac has since indicated its potential interest in a shared facility and has engaged in the process. Some see the two municipalities as having a natural functional and brand fit on a shared site. Township participation is predicated on a location in South Frontenac.
- Critical timelines for proceeding with either shared or stand-alone options vary from partner to partner. The process may require joint agreement on a "fish or cut bait" deadline, perhaps shortly after year end, for commitment decisions on whether to proceed together or not.

Process concerns:

- One concern was expressed about the potential risk of a partner bailing on a sharing deal part-way through the process, and how to manage that risk.
- Resolutions will be needed from councils.

Current shortlist of options to be explored:

- County and CRCA
- Three-way (CRCA, County and South Frontenac)
- CRCA alone and County with South Frontenac
- All three go on their own.

Even if the idea of a shared option goes no further, the current process needs to demonstrate due diligence and be able to explain a "no-go" for a joint project.

Functional space and other site/building requirements:

- Partners expressed desire for closer scrutiny of how much space (and cost) would really be saved by sharing a facility.
- Further analysis of site requirements will also be needed, related to
  - parking lot and service/amenity needs,
  - impact on site services if a three-way/90-staff building is pursued, and
  - implications for "customer" or "user" traffic.

A shared site is not critical to opportunities for shared services:

- Consensus seemed to emerge that options for sharing services (such as back-office functions) are not that dependent on sharing a site/facility. Some services are shared now and others could be in future, either way.
- Some expressed scepticism about hard cost savings on services (although there may be potential for service quality improvements, ease of staffing, and/or better management of risk and future growth in costs).
- It is probably premature and would complicate matters at this stage to enter into discussions with community agencies or other potential tenants who would not be full partners in developing the project.

Area of search / parameters for potential location of a shared site:

The question of *how many and which partners* are willing to pursue a shared option must be resolved before more specific criteria for a site search can be determined.

Location preferences, site size, building size and service requirements, brand implications and other strategic considerations will all depend on the priorities of the particular partners involved.

In discussions with all parties to date, however, the boundaries of a potential area of search have been narrowed to:

- North of 401, south of Rutledge Road, east of Hwy 38 and west of Hwy10
- South Frontenac (Harrowsmith, Inverary, Sydenham)
- North part of Kingston close to the 401

Proximity to natural or other assets, services and infrastructure will no doubt be factors in selection of any final site. Information from studies currently under way, such as the Frontenac Communal Services Study expected later this year, may also inform or influence site selection options.

Budget estimates / options for capital and lifecycle costs:

- There is continuing interest in design/build/lease options (if possible/available).
- Partner options must take into account the costs of renovation and/or disposition of current assets. There may also be financial opportunity costs (e.g. other projects need investment).
- Different financing options and costs depend on the partners involved.
- A timeline for proposed building/financing etc should be 20 years (leases <21).
- A growth factor of 2.5% per year has been built into estimates.

Timelines/milestones:

- Proposed timelines seem acceptable:
  - 2018: work through agreement in principle ("pre-nuptial") by early fall
  - 2019: sort out the financing arrangements / budget issues
  - 2020: complete the design work
  - 2021: start the construction build, for completion perhaps in 2022
- Any delays in moving forward will probably mean increased construction costs.
- It will be necessary to accommodate the municipal election cycle in October and new councils taking office thereafter.

Next Step: Proposal for Decision/Direction

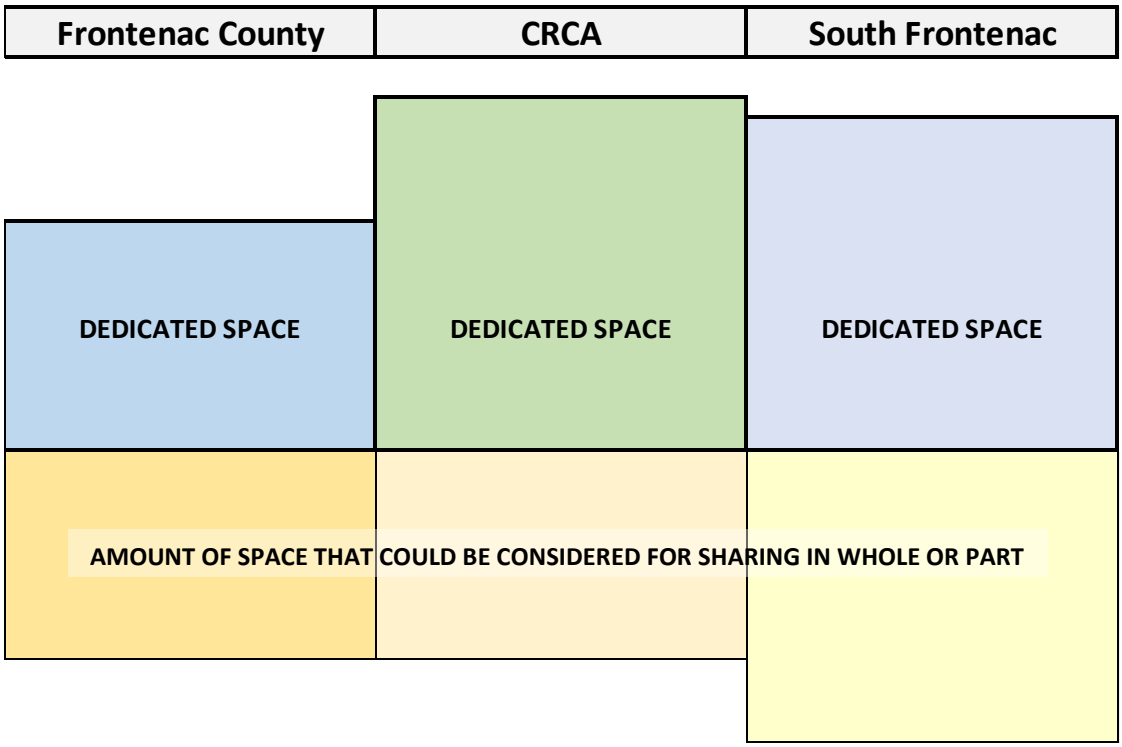
THAT, on the basis of the partners' initial discussions and high-level assessment of the potential for savings and other benefits by sharing administrative offices on a common site, IT IS RECOMMENDED that a budget of $12,000 be allocated to engage appropriate architectural and engineering expertise to confirm these assessments and provide a report by the end of October enabling the partners to make a final decision on pursuing a shared development project, or not. Costs of this assignment are to be shared equally among the partners.

Scope of the assignment is to include:

- architectural/engineering analysis of the initial needs assessment,
- preliminary conceptual/schematic floor plans to meet partner needs,
- options for potential configuration of common spaces for best efficiencies,
- implications for parking, water & similar services, building code etc,
- potential options to preserve brand identities on shared site, and
- initial budget-level estimates for comparison with stand-alone options.

Comparison of Space Needs and Potential for Sharing

A follow-up task assigned at the June 27th joint meeting was to confirm initial estimates of space requirements for each partner (figures below now include South Frontenac), and to identify spaces that could be shared and might be further explored for potential space savings in a shared facility. The summary below provides highlights. (*Note: Areas are estimated in square feet, with a 35% gross up to cover full space requirements beyond core functional needs.*)



Estimates of Sq. Ft. Required	**FC**	**CRCA**	**SF**	**Total**	
Dedicated:	4,374	6,830	6,495	17,699	[58%]
Potential Shareable:	3,842	3,729	5,391	12,962	[42%]
TOTAL REQ'T:	8,216	10,559	11,886	30,661	

Spaces identified for potential sharing include reception, storage and IT/server areas and meeting spaces. The major functional uses for *potential* sharing include:

- Council Chambers/Large Meeting Room (4,833 sq. feet total used by three)
- Lunchrooms and Kitchens (2,103 sq. feet total currently for 3 partners)
- Public & Staff Washrooms (2,160 sq. feet total currently for 3 partners)

Note: The potential for space reductions would vary upon levels of shared use.

Frontenac County Space Allocation Estimate

Gross Up Pct: 35%

Position	Space Need (sq. ft.)	Need Gross Up (sq.ft.)	Functional Group	Open/ Private	Comments
Communications Officer	96	130	C.S.	Open	Access to public required
Exec Assistant	96	130	C.S.	Open	Confidentiality concerns - secure area/Adj. to CAO
Receptionist	96	130	C.S.	Open	Needs to be near foyer - security concerns
Foyer/Reception Area	150	203	C.S.	Open	Seating for 4 to 6
Finance Clerk A/P	96	130	Finance	Open	Confidentiality concerns - secure area
Finance Clerk A/P	96	130	Finance	Open	Confidentiality concerns - secure area
Payroll Clerk - 1	96	130	Finance	Private	Confidentiality concerns - secure area
Payroll Clerk - 2	96	130	Finance	Private	Confidentiality concerns - secure area
Financial Analyst	96	130	Finance	Open	Confidentiality concerns - secure area
Flex Workspace (4)	384	518	Flex	Open	Students, Interns, mobile office, quiet lounge
GIS Specialist	120	162	I.S.	Open	Confidentiality concerns - secure area
Service Desk Analyst	96	130	I.S.	Open	Confidentiality concerns - secure area
Desk Top Space for I.S.	96	130	I.S.	Open	Workbench area
Community Planner	96	130	Pl & Ec Dev	Open	Access to public required
Comm Dev. Officer	96	130	Pl & Ec Dev	Open	Access to public required
Director of Corp Srv/Treasure	200	270	C.S.	Private	Confidentiality concerns - secure area
Mgr of Leg Srv/Clerk	120	162	C.S.	Private	Ideally close to Lg Meeting Room
Chief Administrative Officer	200	270	C.S.	Private	Ideally close to Lg Meeting Room
Storage Space	144	194	C.S.	Private	Maybe two spaces
Deputy Treasurer	120	162	Finance	Private	Confidentiality concerns - secure area
Occ Health Nurse	120	162	HR/Occ H	Private	Confidentiality concerns - easy access for staff
Mgr of HR	144	194	HR/Occ H	Private	Confidentiality concerns - secure area
HR Generalist	96	130	HR/Occ H	Private	Confidentiality concerns - secure area
Network Administrator	120	162	I.S.	Private	Confidentiality concerns - secure area
Mgr of I.S.	120	162	I.S.	Private	Confidentiality concerns - secure area
Server Room	200	270	I.S.	Private	Maybe two spaces
Mechanical	150	203	Mech	Private	Secure area
Meeting Room Sm	150	203	Meeting	Private	Generally staff use
Meeting Room Med	300	405	Meeting	Private	Access to public required
Meeting Room Lg/Council Ch	800	1080	Meeting	Private	Access to public required
Mgr of Ec Dev	96	130	Pl & Ec Dev	Private	Access to public required
Dir of Pl & Ec Dev	200	270	Pl & Ec Dev	Private	Access to public required
Accessible Washrooms	400	540	Washroom	Private	Assumes same as Fairmount Auditorium
Copy Room	200	270	I.S.	Private	Noisy space
Kitchen	200	270	Staff	Private	Ideally close to Lg Meeting Room
Lunch Room	200	270	Staff	Private	
Total	**6086**	**8216**			

Potential Sharable	2846	3842

South Frontenac Space Allocation Estimate

	Gross Up Pct:	35%		
Position	Space Need (sq. ft.)	Space Need Gross Up (sq.ft.)	Room Ty	Public
CAO	150	203	OFFICE	
Executive Assistant	100	135	PRIVATE	
Clerk	120	162	OFFICE	
Mayor	120	162	OFFICE	
VAULT	120	162	STORAGE	a
storage	120	162	STORAGE	a
Council Chamber / meeting room for (9 council, 5 staff, 40 public)	980	1323	MEETING	public
Council Recess Room for (9 council and 5 staff)	300	405	MEETING	public
Servery	108	146	KITCHEN	public
Treasurer	120	162	OFFICE	
Deputy Treasurer	120	162	OFFICE	
Accounting Clerk	100	135	OPEN	
Payroll Clerk	100	135	PRIVATE	
Treasury Clerk	100	135	OPEN	
Treasury Clerk	100	135	OPEN	
HR Officer	120	162	OFFICE	
Student	100	135	OPEN	
IT specialist	100	135	OPEN	b
IT WORKSPACE	100	135	OPEN	b
Roll Files	144	194	STORAGE	
Front Counter	200	270	OPEN	
storage	144	194	STORAGE	a
Director of Development Services	120	162	OFFICE	
Planner	120	162	OFFICE	
Planning Assistant	100	135	PRIVATE	
GIS Specialist	100	135	OPEN	b
Building Admin Assistant	100	135	OPEN	
Chief building Official	120	162	OFFICE	
Building Inpsector	100	135	OPEN	
Building Inspector	100	135	OPEN	
Student	100	135	OPEN	
Roll Files	144	194	STORAGE	
Counter service	200	270	OPEN	
Intake room / meeting for 8	168	227	MEETING	public
Intake room / meeting for 8	168	227	MEETING	public
Reception / waiting area for 6	144	194	OPEN	public
Receptionist	100	135	OPEN	
Washrooms for public	600	810	WASH	public
mail/copier/office supplies	144	194	OPEN	
Kitchen and lunch room	600	810	KITCHEN	
Washrooms for staff	600	810	WASH	
lockers and showers	225	304	WASH	
IT Server Room	225	304	IT	b
Growth: 3 offices	360	486		
Growth: 5 staff	500	675		
Total	**8804**	**11885**		

Potential Sharable	3993	5391

CRCA Basic Space Needs			Admin, ODC, Maint Subtotal	Admin, ODC, Maint Subtotal	Admin, Maint	Admin
	Office Dimensions	Open/Closed	Area (Ft2)	Grossed up - 35% Area (Ft2)	Area (Ft2)	Area (Ft2)
General Manager	10x15	C	150	203	150	150
Assistant, Chair & General Manager	10x10	C	100	135	100	100
Receptionist/Clerk	10x10	O	100	135	100	100
			350	**473**	**350**	**350**
Manager, Corporate Services	10x10	C	100	135	100	100
Supervisor, Information Technology	10x10	C	100	135	100	100
GIS Analyst	8x9	O	72	97	72	72
Applicaton Support Analyst	8x9	O	72	97	72	72
Student	6x6	O	36	49	36	36
Supervisor, Finance	10x10	C	100	135	100	100
Financial Analyst	8x9	O	72	97	72	72
Student	6x6	O	36	49	36	36
Supervisor, Communication & Education	10x10	C	100	135	100	100
Coordinator, Communications	8x9	O	72	97	72	72
Coordinator, Strategic Partnerships	8x9	O	72	97	72	72
Senior Conservation Educator	8x9	O	72	97		
Conservation Educator	8x9	O	72	97		
Conservation Educator	8x9	O	72	97		
Student	6x6	O	36	49	36	36
			1084	**1463**	**868**	**868**
Manager, Conservation Lands	10x10	C	100	135	100	100
Supervisor, Operations & Maintenance	10x10	C	100	135	100	
Coordinator, Forestry	8x9	O	72	97	72	
Coordinator, Operations & Enforcement	8x9	O	72	97	72	
Conservation Operations	6x6	O	36	49	36	
Conservation Operations	6x6	O	36	49	36	
Coordinator, Operations Planning	8x9	O	72	97	72	72
Coordinator, Mac Johnson Wildlife Area	8x9	O	72	97	72	
Coordinator, Little Cataraqui Creek	8x9	O	72	97		
Student	6x6	O	36	49	36	36
			668	**902**	**596**	**208**
Manager, Watershed Planning & Engineering	10x10	C	100	135	100	100
Supervisor, Development Review	10x10	C	100	135	100	100
Resource Planner	8x9	O	72	97	72	72
Resource Planner	8x9	O	72	97	72	72
Development Officer	8x9	O	72	97	72	72
Coordinator, Lands Stewardship	8x9	O	72	97	72	72
Engineer, Water Resources	8x9	O	72	97	72	72
Technologist, Water Resources	8x9	O	72	97	72	72
Coordinator, Watershed Planning	8x9	O	72	97	72	72
Coordinator, Source Protection	8x9	O	72	97	72	72
Student	6x6	O	36	49	36	36
			812	**1096**	**812**	**812**

CRCA Basic Space Needs		Open/Closed	Admin, ODC, Maint Subtotal Area (Ft2)	Admin, ODC, Maint Subtotal Grossed up - 35% Area (Ft2)	Admin, Maint Area (Ft2)	Admin Area (Ft2)	Potential to Share - Grossed up
Meeting Rooms							
Small (4 - 6 people)	10x12	C	120	162	120	120	162
Small (4 - 6 people)	10x12	C	120	162	120	120	162
Medium (10 people)	10x20	C	200	270	200	200	270
Large (30 people)	30x50	C	1500	2025	1500	1500	2025
			1940	**2619**	**1940**	**1940**	**2619**
Meeting, Lunch, Storage Rooms							
Storage - Filing, Library & Office Supplies	15x20	C	300	405	300	300	300
Storage - Monitoring Equipment	10x12	C	120	162	120	120	
Storage Building Maintenance	8x9	C	72	97	72	72	72
Locker Room(s) and Showers	30x40	C	1200	1620	1200	1200	
Lunchroom/Kitchen	15x30	C	450	608	450	450	450
			2142	**2892**	**2142**	**2142**	**1110**
Laboratory Space							
Electronics - rain gauges, telemetry, batteries	15x15	C	225	304	225	225	
Wet - water quality, biology	15x20	C	300	405	300	300	
Computer - desktop setup, servers, switches	15x20	C	300	405	300	300	
			825	**1114**	**825**	**825**	
	Total Staff Space Requirements		**7,821**	**10,558**	**7,533**	**7,145**	**3,729**

REPORT TO COUNCIL

OFFICE OF C.A.O.

AGENDA DATE: March 12, 2019

SUBJECT: Joint County Meeting – Waste and Roads

RECOMMENDATION:

That Council attend a Joint County meeting, with the other Frontenac member municipalities, to discuss Solid Waste and Roads on April 17 at 5:00 pm in Fairmount Auditorium

BACKGROUND:

The County as part of its strategic plan has been coordinating a Solid Waste Study on behalf of the entire County. All Public Works Managers have been participating and the Consultant will be presenting the final results and recommendations to members of all five Councils.

In addition the Joint CAOs group in conjunction with the Treasurers and Public Works Managers have been looking at ways to improve access to Provincial grants for Roads. This meeting will provide an opportunity to share the insights gained and the options available.

FINANCIAL/STAFFING IMPLICATIONS:

To be determined.

ATTACHMENTS:

- None

Submitted/approved by:

Wayne Orr, CAO

Prepared by:

Wayne Orr, CAO

REPORT TO COMMITTEE OF THE WHOLE

DEVELOPMENT SERVICES DEPARTMENT

AGENDA DATE: March 12, 2019

REPORT DATE: March 7, 2019

SUBJECT: Response to February 19, 2019 delegation, Meela Melnik-Proud, re: Walking Bridge on Lot 6, Johnston Point

RECOMMENDATION:

THAT Council receive this report for information.

BACKGROUND:

Ms. Meela Melnik-Proud made a delegation to Township Council at the February 19, 2019 meeting regarding concerns about the construction of a walking bridge on Unit 6, Johnston Point.

In that delegation, Ms. Melnik-Proud requested a response to the following questions:

1. Was the Township and the CRCA aware of this development activity?
2. Who authorized and supervise the installation of the walking bridge?
3. Why was this development permit, in general, and particularly in light of the fact that the overall benefit permit had not yet been issued?
4. How was it demonstrated that there would be no negative impacts on the natural features or their functions according to the Provincial Policy Statement and the CRCA's Ontario Regulation 148/06?
5. Why hadn't the Township's lawyer raised the issue of the walking bridge prior to recommending that the Township enter into the Condominium Agreement last May?

Response

Cataraqui Regional Conservation Authority (CRCA) staff issued a permit for the walking bridge on Unit 6 under Ontario Regulation 148/06 in April 2018. CRCA staff confirmed that the work that has been done on the walking bridge to date is in compliance with their permit. The work is not fully completed and the permit with the CRCA remains open at this time. CRCA staff have supervised the construction of the walking bridge.

By way of agreement, CRCA provides environmental planning services to the Township. These services include providing comments on applications from a Natural Hazard, Natural Heritage and Water Quality and Quantity components of the Provincial Policy Statement. The Township relies on the expertise of Conservation Authority staff to review the impact of proposed development on natural features and functions.

Review of the Township condominium file cannot verify whether the Township Planner was consulted on either the design or placement of the walking bridge prior to the issuance of the Conservation Authority permit.

The OMB issued a decision on the Johnston Point Vacant Land Plan of Condominium on June 28, 2016 (decision updated on August 25, 2016 by OMB to correct mapping error).

REPORT TO COMMITTEE OF THE WHOLE

DEVELOPMENT SERVICES DEPARTMENT

The OMB decision included condition 8c):

> *That, in recognition that access to the open water of Long Bay from proposed Unit 6 is by way of an island within a wetland, a walking bridge be installed under the supervision of the Conservation Authority to provide access to Long Bay. Such walking bridge must be installed to the satisfaction of the CRCA and the Township prior to registration of the Description and the vacant land condominium Agreement.*

The OMB decision does not prescribe the design of the walking bridge. The only reference to the design of the walking bridge in the OMB decision is included in attachment "C" – site plan matrix that states "1.5m bridge to island" on Unit 6.

As stated in condition 8c) of the OMB decision, the Owner of Johnston Point, is required to construct the walking bridge on Unit 6 in before the condominium is given final approval (registration of the Condominium Description) and before the Owner enters into the Condominium Agreement with the Township.

The developer has been advised by the Township Chief Building Official that a building permit is required for the walking bridge. A building permit application has been forwarded to the developer.

Status of Johnston Point Development

Council authorized the Mayor and Clerk to enter into a Condominium Agreement with Magenta Waterfront Development Corporation and 1324789 Ontario Inc. as a condition of draft plan approval of Johnston Point in June 2018.

The Condominium Agreement was prepared by the Township solicitor. To date, the developer has not yet entered into this agreement with the Township.

The OMB issued draft plan approval for Johnson Point on June 28, 2016. They issued the decision with a 3 year lapsing (17A) condition. As such, final approval must be obtained by June 28, 2019.

In their decision, the OMB included a condition (17B) that permits the Owner to submit a request to for an extension of the Draft Plan Approval. The extension period shall be for a maximum of 3 years and must be submitted prior to the lapsing of Draft Plan Approval (June 28, 2019). Further extensions may be permitted at the discretion of the Township and the County.

The last meeting date that County Council could consider extension to draft plan approval is June 19, 2019.

FINANCIAL/STAFFING IMPLICATIONS: None

ATTACHMENTS: None

Submitted/approved by: Wayne Orr, CAO & Deputy-Clerk

Prepared by: Claire Dodds, Director of Development Services