

EXPLORING THE POTENTIAL FOR A PUBLIC CCTV MONITORING SYSTEM IN SACKVILLE, NEW BRUNSWICK

A RESEARCH REPORT

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1. CCTV in Perspective: Streetscape Monitoring Programs in Canada

Across Canada, Closed Circuit Television Cameras (CCTV) are increasingly being explored as an alternative crime prevention strategy. While these systems hold the potential to extend law enforcement's reach and reduce costs, there are many important issues to be considered, including whether or not these systems are actually effective at deterring crime. Compared to other countries around the globe, the number of Canadian cities with streetscape public surveillance systems remains relatively low. According to research from 2010, there are approximately twenty-two Canadian cities that have implemented streetscape CCTV programs, the majority of which are concentrated in Ontario, Quebec, and British Columbia (Hier). However, Canadian public CCTV systems are not limited to cities. It is estimated that nineteen municipalities have either initiated camera schemes or have used CCTV in the past (Walby). Overall, these relatively low numbers indicate that public CCTV surveillance in Canada is still in its infancy. However, with law enforcement agencies increasingly being pressured to find more cost-effective crime reduction strategies, the establishment of CCTV is being considered in communities across the country.

When Canadian cities first began adopting public CCTV systems in the mid 1990s, they based their schemes off of those that were operating in the UK. As a result, the Canadian CCTV programs that eventually followed were, inadvertently, based on UK schemes. An example of this can be seen with the number of cities that emerged, basing their CCTV programs on Sudbury's Lions Eye in the Sky system. Canadian programs have also largely been established following mounting social concerns of anti-social behaviour, violence, and vandalism. They are also often explored following a 'trigger event' such as a riot, a murder, or a series of sexual assaults. Furthermore, despite the common assumption that CCTV is "'a big city surveillance tool' for 'big city problems' (Walby, 40)," open-street CCTV is increasingly being adopted in smaller rural centers that are seeking to deter vandalism and rowdiness. Finally, it is important to note that public surveillance programs in Canada have not always been established through a top-down approach but have also been implemented through the efforts of citizens, business associations and community groups. Canadian open-street surveillance systems have often been contested and many Canadian cities and municipalities have rejected CCTV. In considering the implementation of a public CCTV monitoring program in Sackville, New Brunswick, Canadian case studies provide valuable insight into the planning, purchasing, and operating of such systems.

1.1- Sudbury's Lion's Eye in the Sky

The City of Sudbury's streetscape monitoring program was the first CCTV system to be introduced in Anglo-Canada (Walby). It is an essential Canadian case study to review as its purported success later inspired many cities such as London, Hamilton and Barrie, to consider implementing CCTV schemes of their own.

Although monitoring programs existed in Québec since the 1980s, Sudbury (pop. 151,000) saw itself as the "first police service in Canada to test Closed Circuit Television (Hier, 68)." Plans for Sudbury's system began in the early 1990's, after several criminal incidents, robberies and disturbances were reported to have taken place in and around the Elgin Street underpass, a busy thoroughfare leading to Sudbury's downtown core. The Sudbury Women's Centre was the first to approach the police about installing CCTV after several sexual assaults on women had occurred in the area. The police responded to the request by approaching Sudbury City Council for financial and procedural support (Hier). Council then consulted community representatives and various police officials before agreeing to purchase the cameras.

In 1992, four cameras were installed in the Elgin Street underpass. Following this installation, business representatives in Sudbury began to report that they felt the police lacked a visible presence downtown. Public intoxication, prostitution, violence, and panhandling were all seen as an indication of deteriorating social and economic conditions. Funding was not available to hire more police officers and CCTV quickly

became seen as a viable alternative, especially with the Chief of Police being particularly inspired by a streetscape program operating in Glasgow, Scotland (Walby). The City of Sudbury went on to implement a one-camera pilot project that became operational in 1996. Following this pilot project, the system was expanded over various periods of time, to cover a larger area of the downtown core (Hier). Over time, Sudbury became extremely effective at generating money through donations and public fundraising and by 1999, following an independent audit conducted by KPMG, the system was seen as the primary reference point for other cities considering CCTV systems of their own (Hier). The KPMG report concluded that the system was beneficial as a tool for improving the public's perceptions of safety and for assisting police with law enforcement. The KPMG report also recommended that the system be expanded but also criticized Sudbury's, "community-funding approach on the grounds that it was unable to generate the resources needed to expand the program" (Hier, 81). The report also recommended that the City find long-term camera operators, and improve and post signs in and around the locations monitored by CCTV. Most importantly, however, the report ultimately concluded that the system had prevented between 300-500 criminal offences and that no displacement had occurred (Walby). For this reason, communities across Ontario quickly began establishing plans for their own systems, setting the pace for the diffusion of CCTV in Canada.

Today, Sudbury's police service monitors eleven cameras in the downtown core that have been credited with reducing crime in the area. Although its incremental expansion of the system is relatively complex, Sudbury evidently has experience with legitimizing, implementing, operating, funding and formulating policy for its streetscape monitoring system.

Locations of the Cameras

- The first CCTV cameras installed in Sudbury were located in the Elgin Street underpass
- Of the four cameras installed, two are located at the entrance and exit of the underpass while the other two are installed in the underpass, itself (Hier).
- These cameras are fixed models, without zoom, pan, or tilt capabilities.
- The one camera installed for Sudbury's streetscape pilot project was mounted on the rooftop of the Bank of Montreal building (BMOB), located to the north of the downtown core.
- This camera had pan, zoom and tilt capabilities, with a 360-degree viewing capability.
- In 1997, two cameras were installed in addition to the BMOB camera.
- One was installed on a building at the corner of a main intersection and the other was placed in front of the Sudbury News Service in the downtown core.
- In 1999, another camera was installed to monitor CP Rail's property, which is to the south of the downtown area.
- In 2001, two additional cameras were added to the system. One overlooking a downtown parking lot, and the other being installed on a building in the center of downtown.
- In 2008, a camera was added to the system in the of the downtown core overlooking the liquor store, the downtown Tim Hortons and a popular public transit stop (Hier).

Decision-making and Purchasing Process

- City Council agreed to purchase equipment for the underpass after consulting with police and community representatives.
- The equipment in the underpass was supplied and installed by Sudbury-based Northern Video Systems. This company has been chosen to supply all cameras since and has donated over \$30,000 worth of equipment.
- Informal consultations took place between the Chief of Police and the Sudbury Metro Centre to gain support for a streetscape program.

- The Metro's downtown safety committee conducted a small survey with downtown businesses, which showed strong support for the proposal.
- An ad-hoc CCTV committee composed of the Chief of Police, the executive director of Metro Centre, a representative from Northern Video, and eight additional police and business representatives, was established to oversee a downtown pilot project (Hier, 72).
- Prior to the pilot-project, no formal written proposal was done and only the business community was consulted. The camera was operational for one month out of the four-month period.
- It was seen to be a success and a larger committee (the Video Monitoring Advisory Committee) was then established to oversee and collect funds for the expansion of the program.
- VMAC initially struggled to raise the required funds. Renting fiber optic cables was estimated at \$7,000 and equipment maintenance was estimated at \$2,100 (Hier).
- KPMG states that, between 1996 and 1999, the total cost of installing the 5-camera streetscape system was \$31,000 (KPMG).
- In 1997, the Lions Club of Sudbury agreed to donate \$48,000 to cover many of the costs of purchasing surveillance cameras and the necessary related equipment.
- In 1998, CP Rail donated \$6,000 of the required \$10,000 for an additional camera to be added to the 5-camera system. This camera became operational in 1999.
- In 1998, the Ontario OIPC received a complaint about the downtown cameras which led the Commissioner to recommend that more signs be posted in the downtown core, and that an independent audit be conducted to justify the continued operation of the system (Hier).
- In 1999, KPMG was commissioned to conduct an independent audit for a cost of \$30,000.

Operation of the Cameras

- With the underpass cameras, "images were available for monitoring twenty-four hours per day, seven days per week, in the communication centre of the police station" (Hier, 70).
- The images were originally sent over coaxial cables, through the city's cable TV network, to a single monitor located in the previous police station.
- The images from the Bank of Montreal building camera are sent to police headquarters through fibre optic cables. Fibre optic infrastructure was easily accessible for installation at this location.
- During the pilot phase, police officers periodically monitored the cameras.
- No signs were posted around the BMOB camera to inform the public that they were under surveillance.
- Following the expansion of the downtown scheme, the VMAC decided to use volunteers rather than police officers to monitor the system.
- All images from the cameras installed downtown were routed, through fibre optic cables, to the communications centre in police headquarters (Hier).
- Images were continuously recorded and retained for two months before being disposed of.
- While the VMAC explored ways to recruit volunteers, police officers continued to periodically monitor the system.
- The cameras would pan the downtown when they were not being directly monitored.
- In 1998, the VMAC entered into an agreement with the Ontario government's workfare program to have social assistance recipients in Sudbury assigned to monitor the images (Hier).
- In 1998, the Ontario OIPC recommended that signs be posted advising the public that they were being monitored.
- The Lions Club of Canada donated \$420 to post six signs in the downtown core (Hier)
- In 2003, regulation of the system was once again transferred to the Greater Sudbury Police Service.
- From 2003 to 2006, the police aimed to have twenty-four hour live monitoring, with two monitors always on duty for four-hour shifts.

- During this time the monitoring was done by 9-1-1 call operators, police foundations and law and security students, volunteers from the community and Ontario Works employees. It was, however, difficult to secure volunteers.
- In 2006, the police stopped accepting Ontario Works clients and instead, looked to have students from local colleges earn course credits by monitoring the cameras.
- Images captured by Sudbury's 'Lion's Eye in the Sky' program continue to be monitored by volunteers. Citizens can apply for the monitoring positions through the city's website.

1.2- Kelowna, BC and the Charter Challenge

Kelowna's CCTV system was the first Canadian program to face legal action from the Office of the Privacy Commissioner of Canada. The Charter challenge against Kelowna's CCTV program caused many Canadian cities to suspend the introduction or expansion of their own monitoring programs. The Kelowna case also led to the drafting of the OPC's *Guidelines for the Use of Video Surveillance of Public Places by Police and Law Enforcement Authorities*, which was released in 2006.

Kelowna (pop. 115,000) began considering the implementation of a CCTV system in 1998, after the Mayor learned of the purported success of Sudbury's streetscape monitoring program. The City of Kelowna's interest in public surveillance mainly stemmed from growing concerns over drug use and prostitution occurring in its downtown waterfront parks (Hier). The superintendent of the RCMP's Kelowna detachment was also supportive of a CCTV system after reading Sudbury's positive claims. In 1999, an experimental camera was installed in a downtown waterfront park. Due to public awareness, this camera was generally found to displace drug deals and criminal activity to other areas of the park. However, despite this, the RCMP decided that it still proved to be a useful tool for targeted surveillance operations and it continued to be used.

The potential for a streetscape monitoring system in the downtown core began to be explored in 1999, as a way to deter drug activity, criminality and vandalism (Hier). It was this streetscape system that ultimately sparked controversy and temporarily slowed the spread of CCTV in Canada. In 2001, BC's Information and Privacy Commissioner filed a complaint with the Federal Privacy Commissioner, Radwanski, stating that Kelowna's CCTV system contravened the federal *Privacy Act*. After a federal investigation, Radwanski concluded that the system was in violation of the *Privacy Act*. However, the RCMP continued to monitor the system, recording only when suspicious activity was occurred (Walby). This technically placed them in compliance with the *Act* and the Kelowna RCMP subsequently began planning to expand the system by five cameras by 2003. Radwanski responded by sending a letter to the Solicitor General requesting that he demand the RCMP to dismantle the streetscape surveillance system. The Solicitor General dismissed the Commissioner's claims stating that he did not have jurisdiction over the RCMP in Kelowna (Hier). Finally, with support from a former Supreme Court Justice, federal Privacy Commissioner Radwanski took his reports and various statements to the Supreme Court of BC and issued a Charter challenge. "The BC Supreme Court ruled that Commissioner Radwanski did not have the legal authority to challenge the RCMP's use of video surveillance under the Charter" (Hier, 100). Radwanski was later to be found in contempt of Parliament for financial mismanagement, and the interim OPC chose to withdraw his appeal to the BC Supreme Court.

Locations of the Cameras

- The first camera was installed on a wooden pole in Kerry Park, along Kelowna's downtown waterfront. The demo camera, which was provided by the manufacturer for the pilot stage of the system, was damaged after the wooden pole was doused in gasoline and set on fire. It was later replaced.
- The first streetscape CCTV camera was installed on a 50ft metal pole in the Queensway bus loop, overlooking both the downtown bus loop and Kasugai Park.
- A second streetscape camera was installed at a main intersection in the downtown core.

- Four additional cameras were later installed in a parkade near the Queensway bus loop.

Decision-making and Purchasing Process

- The mayor consulted with the superintendent and the city manager on the potential for installing CCTV in Kerry Park.
- An RCMP corporal was assigned to plan the installation.
- He consulted with the City of Sudbury prior to the experimental CCTV camera being installed in 1999.
- The RCMP consulted the Office of the Privacy Commissioner prior to installation. As a federal agency, the RCMP falls under the jurisdiction of the OPC and the federal *Privacy Act* (Walby).
- The OPC concluded that it was legitimate as an experimental crime-control measure and that if the City could prove that it was successful in reducing drug use and trafficking in the park, then it would be justified in using the system (Hier).
- In 1999, the superintendent of the RCMP began plans for developing a six-camera streetscape system in the downtown core.
- The RCMP developed a monitoring policy and began to explore a funding partnership with the Downtown Kelowna Association (DKA) and the City.
- The DKA pledged \$5,000 to help purchase a camera to monitor the Queensway bus loop.
- Council estimated that the cost for installing the one camera would be \$17,000.
- It was installed in 2001, however, it was turned off a year later after the Privacy Commissioner, “intensified his efforts to halt monitoring practices in Kelowna” (Hier, 96).
- After the Queensway camera had been turned off, a new pilot project for a downtown camera began. The general conclusion was that this camera had failed to deter crime.
- The Queensway camera was later re-activated but control over monitoring was transferred from the RCMP to the City.

Operation of the Cameras

- The camera installed in Kerry Park was not capable of 24/7 recording. The camera also recorded on an S-VHS tape and so storage of images was limited (Hier).
- The camera was equipped with manual and automated monitoring and recording features.
- The system was only monitored by one operator.
- The monitor lacked, “resources to review video tape records” (Hier, 91).
- The camera in Kerry Park was used a few times for targeted surveillance operations, where the operator was able to tell RCMP in the park what was occurring.
- The Queensway camera was installed on a 50ft. metal pole. It was able to view 360° around.
- Eleven signs were mounted notifying the public that they were under surveillance.
- Images from the Queensway camera went to the RCMP headquarters where four civilians periodically monitored them.
- The cameras recorded twenty-four hours per day, seven day per week.
- Records were kept for six months before being disposed of.

1.3- Shediac, NB: CCTV as a Tourism Initiative

The Town of Shediac (population: 6000) provides a very good regional case study of a smaller New Brunswick community that decided to install CCTV just one year ago. Information provided from the Town Manager and the Executive Director of the Centreville Shediac Downtown/Chamber of Commerce Incorporated is useful in assessing the positive and negative aspects of CCTV.

In terms of background to this case study, it is important to note that, after much deliberation, the Town Council made an early decision that the installation and use of CCTV would not be used for policing and security reasons; rather, the decision to purchase, install and contract CCTV would be assigned to the Centreville Shediac Downtown Inc. to complete, with the Town providing a grant for the initial purchase and installation of the cameras with the express use being the use of WebCam technology for tourism attraction and citizen interest on the Town's tourism website.

According to the Executive Director of Downtown Shediac Inc., it has been a significant challenge to solicit proposals for the purchase of cameras, the installation of the cameras and their hardware and the contracting of WiFi hardware and software associated with the operation of the cameras. Further, the Downtown Shediac Inc. has now been responsible for the on-going service and maintenance contracts for the 3 cameras, as well as the monthly costs for internet services for the use of the cameras.

Locations of the Cameras

- Camera 1 is located on the roof of the Town Hall, facing east
- Camera 2 is on the roof of the downtown shopping mall facing a crosswalk on Main Street
- Camera 3 is a mobile camera that is located in Pascal-Poirier Park in the downtown area

Decision-making and Purchasing Process

- Downtown Shediac Inc. issued a Request for Proposals and received 6 RFPs ranging in estimated purchase costs from \$16,000 to \$61,000 for the 3 cameras
- They ultimately selected the three cameras from SYSCO Systems at a cost of \$50,000
- They later realized that, in order to operate the cameras, they would need to purchase two hardware/software servers and web connections and arrange for an installation contract with another company (PLEXUS from Moncton) at a cost of just under \$20,000
- After initial installation of the camera on the shopping mall, it was stolen and needed to be replaced at an additional cost of approximately \$2000. They also had to cover the costs of installing anti-theft steel plating on the roof and access point on the shopping mall property to deter further theft or vandalism to the camera (~\$1000).

Operation of the Cameras

- The decision was made that the cameras would feed into a WiFi system and be fed directly to the Town website for tourism purposes. Thus, there is no ongoing monitoring of the camera information or secure data storage system for recording and monitoring activities being captured by the cameras.
- WiFi services were contracted to Bell Aliant at a cost of \$150/month, for an annual cost of \$1,800.

After One Year

- The Executive Director suggests that the reviews on the use and effectiveness of the CCTV system in downtown Shediac are "mixed." There is a level of confidence in the feeling that simply having the cameras visible and known in the community provides some level of deterrence to vandalism and crime, yet there are no statistics available on crime reduction as a result of the presence of the cameras.
- The overall level of reliability of the cameras over their first year of service is rated at 75% effective. The Executive Director suggests that the technology is not all that reliable, as it is web-based and relies on each camera re-setting itself or being reset on an hourly basis. This means that the cameras are not functioning at least 25% of the time.

- The camera in the local park has been particularly problematic, in terms of connectivity and operational stability.
- The costs of the equipment and the installation were much higher than anticipated.
- It should be known that the Town needed to work with several different equipment and service providers and that the idea that there is one company out there that provides a complete package simply does not exist in this region of Canada.
- The Downtown Shediac Inc. or Town of Shediac now needs to consider the on-going maintenance and service of the cameras, with a need for a further contract for services being added to the on-going costs of the CCTV program.

Overall estimated cost for the first year of operation: **\$74,800**

1.4- Sturgeon Falls, ON

Sturgeon Falls (pop. 7,000) is the administrative and commercial district of West Nippissing, a small town in northeastern Ontario. Many similarities can be drawn between Sturgeon Falls and the Town of Sackville in terms of their reasoning for exploring CCTV, as well as the size of community being considered. In 1998, the town established a streetscape-monitoring program as an extension to their downtown beautification project (Hier). The cameras were installed to protect new town renovations from vandalism. The police service, business representatives and Town Council were also hopeful that the cameras would deter and control crime in the downtown core. A nine-camera system was installed for \$100,000, with the necessary funds being raised by the business community (Hier).

Locations of the Cameras

- The cameras are located in the busy commercial area of the downtown core.
- One is located on the rooftop of the municipal building, while the others are installed on the main downtown intersections.

Decision-making and Purchasing Process

- No public consultation was conducted.
- The monitoring program was established at a cost of \$100,000 (Hier).
- The business community raised the required money, partially through a public fundraising drive.

Operation of the Cameras

- The West Nippissing Police Service administers the program.
- The system includes both fixed and swivel, pan and tilt cameras.
- The cameras are routed to the police station where they are continuously recorded, and occasionally monitored by on-duty police dispatch staff (Hier).
- The chief of police evaluates the program using annual crime statistics, but there is no formal evaluation process in place.

1.5- St. John's: CCTV for Police Surveillance and Collection of Video Evidence

Beginning in May of 2011, the City of St. John's and the Royal Newfoundland Constabulary Police wished to address the high rate of vandalism, assault and threats to public safety in the George Street district – an area in the central city with a high nighttime social scene and home to many bars and clubs. The main objectives set forth by the Government of Newfoundland and the police for the CCTV surveillance system

included the express purpose of monitoring and recording for an increased sense of public safety, the deterrence of criminal activity, and the collection of valuable evidentiary information to assist in police investigations.

Recognizing the sensitivities of the CCTV decision of personal privacy and the need for a very strict set of equipment requirements for using images in police investigations, the government and the police ensured that the video surveillance system complied with existing legislation under the provincial Access to Information and Protection of Privacy Act, the Federal Charter of Rights and Freedoms and the Criminal Code of Canada. As a result, the monitoring of images and surveillance of camera information requires police officers to staff the monitoring centre at police headquarters. In terms of evidence using video images, the technical equipment required the use of high quality recording equipment and dedicated fibre-optic cable to be run from the cameras to the police headquarters building.

Location of the Cameras

- The City and Police officials decided to install 12 cameras along the downtown George Street night-club zone and dedicated a full-time police officer to coordinate the development and monitoring of the system. A dedicated fibre-optic transmission line runs to police headquarters.
- City officials are now considering an expansion of the camera system to various public buildings, such as maintenance facilities, outdoor swimming pools and parking lots. Cost considerations due to distance from police headquarters are currently limiting this expansion.

Decision-making and Purchasing Process

- An RFP for equipment and installation was made and awarded to Rogers Communications for \$300,000.
- Funding was secured from the provincial government, the city and police sources.
- A dedicated fibre-optic cable was installed by Bell Aliant and the annual cost for leasing the dedicated lines is approximately \$50,000 per year
- Police staff operate and live monitor out of a dispatch room within police headquarters where the cameras are used 24/7. Additional staffing costs for this service are estimated to be \$100,000 per year (A Police Sergeant is in charge of the operation).

Operation of the Cameras

- In a recent interview with the supervising Sergeant in charge of the CCTV monitoring program, he reports a highly successful initial period of set-up and monitoring of the 12 cameras. Sgt. Roy Hoskins believes that the deterrent effect has been substantial in terms of weekend bar activities and crime related to vandalism and assaults in the area.
- In terms of police crime investigations and the pressing of charges based on video images, he reports that the CCTV program has been “somewhat helpful”. Since the start of the CCTV monitoring program, statistics, although confidential, show that CCTV assists in police investigations from the point of view of being “eyes on the street” so that real-time monitoring allows headquarters to direct officers to areas where there are signs of problems.
- In terms of actual use of video footage for charging individuals with crimes, the results are somewhat less than expected, with only two actual court cases using footage in bringing charges against individuals.
- Overall, during the time the cameras have been in operation, there have been approximately 41 requests to view footage to assist in police investigations, including witnesses reviewing images for

identification and police advising suspects of the presence of cameras in the areas where crimes have occurred.

- Police report some technical issues in terms of the quality of images recorded due to severe weather conditions, darkness and the quality of the fibre-optic connections, at times. Also, the volume of storage of such high-resolution images takes significant amounts of space on servers and resultant problems in the transmission, uploading and downloading of images. Changing IP technology will make this easier, yet may add additional annual costs to the program.

2. Does CCTV Work?

In considering the implementation of a public CCTV monitoring program, one of the most critical questions to ask is whether or not CCTV is effective in deterring crime. When these systems were first adopted, there was a serious lack of scientific evidence to prove their effectiveness in reducing crime. Today, there is a significant body of research to reference however, methodological challenges exist that often compromise the validity of evaluations' findings. Comparing one CCTV scheme to another is extremely difficult as there are a multitude of factors that will affect results (technological capacities of the cameras, social context, other interventions used, stakeholders involved, etc.) Many of the meta-analyses that summarize the findings of CCTV evaluations have also been conducted for the British Home Office and while these studies are useful, they are from a different social, political and cultural context. These studies generally conclude that CCTV has a modest but significant effect on crime and that CCTV will be most effective when it is narrowly targeted at property crime and combined with other interventions, such as improved street lighting. These same studies, largely conducted for the British Home Office, show that CCTV is found to be much more effective in deterring crime in the UK than in North America. UK sites tend to use many crime reduction interventions simultaneously, while many of the schemes that are studied from the U.S and Canada involve only the installation of CCTV. These other measures, such as increased foot patrol and improved lighting are likely to be partially responsible for the higher success rates of the UK systems.

“The promise of CCTV lies in the expectation of deterrence” (Deisman, 10). Crime prevention strategies such as CCTV, aim to decrease the opportunity for crime and increase the perceived risk of getting caught. With this, there are “assumptions about the cognitive processes, motivational impulses, and empirical experiences of potential offenders” (Deisman, 10). These assumptions include:

- The potential offender being aware that CCTV is monitoring them.
- The potential offender holding the belief that a crime committed in a space monitored by CCTV is more likely to be detected.
- The potential offender holding the belief that they are more likely to be identified in a space monitored by CCTV.
- The potential holding the belief that they are more likely to be apprehended for a crime committed in an area monitored by CCTV.
- The potential offender weighing the costs versus the benefits of committing the crime.
- The potential offender concluding that it is not worth the risk and does not commit the crime.
- “The submerged assumption is that the potential perpetrator is actually in charge of himself or herself to the degree that s/he is capable of obeying reason rather than impulse” (Deisman, 11).

The effectiveness of CCTV will depend on the degree to which these assumptions hold true. This will be affected by a variety of factors including the type of crime being committed and the location in question. As a result, CCTV's crime reduction effects vary depending on the type of crime, with the greatest effects being on property crime, specifically in car parks. Overall it can be seen that, “the effects of CCTV on crime are both quite variable and fairly unpredictable” (Deisman, 2).

2.1- The Challenges of Measuring CCTV's Effects on Crime

- There are general trends that occur with both crime rates and crime reporting. For instance, in many areas, criminal activity will vary depending on the season but it is unlikely that seasonality of crime rates will be accounted for in the evaluations of CCTV programs (Armitrage). As a result, a decrease in vandalism during the winter season, for instance, may be disproportionately attributed to the installation of a public surveillance camera.
- There are also many other confounding factors to be considered. In many schemes in the UK, CCTV is often implemented in conjunction with many other crime reduction measures. These other interventions such as improved street lighting, increased police foot patrols, and pedestrianisation, are likely to make it difficult to determine which intervention was most effective in reducing criminal activity.
- CCTV can also potentially encourage increased reporting of crime to the police, as residents may interpret CCTV's presence to mean that police officers are likely to respond in a timely manner. CCTV may also result in increased recordings of crime by the police. In both of these cases, it can be seen that actual criminal behaviour can often become entangled with reporting and recording. This is why Welsh and Farrington (2004, 502) argue that, "both surveys and recorded crime measures are needed in any evaluation" of CCTV.
- There are often many methodological issues with evaluations that can create an unclear picture of CCTV's effects on crime. Firstly, the periods of data collection, both pre- and post- CCTV, will impact the results that are shown. North American CCTV evaluations tend to have shorter follow-up periods and as a result, "it is possible that the CCTV schemes were not given enough time to produce a clear effect on crime, either desirable or undesirable" (Welsh and Farrington, 515). Reliable evaluations must also include both an experimental area (where CCTV has been installed) and a control area (an area similar to the experimental area free of CCTV). However, it is important that the control area is not adjacent to the experimental area. If this is the case, it is possible that crime will be displaced from the area with CCTV to the area without. Conversely, it is also possible that the benefits of the CCTV camera will diffuse to the control area, resulting in statistics that may underestimate the camera's deterrent effects. However, measuring displacement and the diffusion of benefits is valuable and to do so an evaluation must include one experimental area, one adjacent area, and one non-adjacent comparable area (Farrington).
- Finally, the effectiveness of CCTV is affected by the planning, composition of stakeholders, level of public consultation, funding and publicity surrounding the system. Sudbury's 'Lions Eye in the Sky' CCTV scheme has been labeled a success, largely as a result of how the program has been framed as a community-based initiative. The high degree of publicity with the Sudbury system has also ensured that the public is extremely aware that the system exists and more importantly, is aware that the system is actively monitored and used as a tool for law enforcement. Sustained publicity will prolong the deterrent effects of a system.

2.2- What Effect Does CCTV Have on Different Types of Crime?

Studies indicate that CCTV's effects will greatly vary depending on the type of crime in question. In almost all studies evaluating the effectiveness of CCTV, the cameras were found to reduce property crime more than violent crime. CCTV located in car parks was most effective in reducing crime, likely because of the high degree of coverage that these cameras have in enclosed areas. In a British evaluation of CCTV, Farrington found that the effectiveness of CCTV in reducing crime was greatly correlated with the camera's degree of

coverage. CCTV also seems to deter criminal activity that likely involves a calculated risk assessment, such as burglary or vehicle crime. Conversely, it has been seen to be less effective in deterring impulsive crimes. Armitage (2002, 3) found that, “in crimes involving alcohol (such as public disorder) where ‘rationality’ is often lost, the deterrent or ‘risk’ effect of CCTV is weakened.” In a meta-analysis conducted for the British Home Office, improved street lighting was found to be more effective in reducing crime than CCTV in city centres. Cameras in downtown areas likely have a lower degree of coverage than those in more enclosed spaces and impulsive, personal crimes such as assaults may occur in downtown areas when rationale is weakened by alcohol.

2.3- General Findings

- CCTV is most effective in reducing property crime in enclosed areas that offer greater coverage. As a result, many studies suggest that CCTV should be more narrowly targeted towards property crimes.
- Reductions in car crime have been recorded in car parks that have installed CCTV. In many of these evaluations, deterrent effects tend to be greater for theft of, as opposed to theft from, vehicles. Many of these car park programs that recorded positive results, also implemented other interventions in conjunction, such as improved lighting.
- Improved street lighting is found to reduce crime in downtown centers more than CCTV.
- CCTV is slightly more effective at reducing property crime than improved street lighting (Welsh and Farrington).
- Both CCTV and street lighting are found to be less effective in North America than in the UK. However, there is evidence that the combination of both CCTV and improved lighting can be highly effective in reducing crime.
- CCTV is less effective at deterring impulsive crimes. (Crimes involving alcohol, drugs, provocation, etc.)
- The effectiveness of CCTV is strongly correlated with the degree of coverage of the cameras.

3. The Impact of CCTV on Crime and Fear of Crime

3.1- Fear of Crime

It is commonly stated that regardless of its deterrent effects, the presence of CCTV will provide the public with a greater sense of security and reduce their fear of crime. A number of surveys have shown that the general public also supports this claim that people will feel safer following the installation of CCTV systems. “However, [...] when people are asked whether it will make them feel personally safer far fewer think it would” (Norris, 30). Similarly, surveys also tend to show that awareness of the system has little to no impact on the respondents’ level of fear of crime. In 2005, an evaluation written for the British Home Office reported that:

CCTV was found to have played no part in reducing fear of crime; indeed those who were aware of the cameras admitted higher levels of fear than those who were unaware of them.

(Gill and Spriggs 2005: 60)

Many other studies have also shown that there is little to no connection between reduced fear of crime and avoidance behaviour, meaning that rarely will people start to frequent an area that they used to avoid after CCTV has been installed (Deisman).

While these findings are useful, they have also been contradicted by other studies that have found that the installation of CCTV will in fact reduce people's fear of crime. Either way, it is extremely difficult to accurately measure fear of crime and any findings are likely to be inconclusive.

3.2- Displacement of Crime and the Diffusion of Benefits

Before reporting on the alleged success of a CCTV system, it is critical to consider whether or not criminal activity has simply been displaced elsewhere to areas that are not being monitored. This potential for displacement is defined as the, "unintended increase in crime in other locations following the introduction of a crime reduction scheme" (Welsh and Farrington, 8). There are six forms of displacement to consider:

- Temporal (A change in time);
- Tactical (A change in method);
- Target (A change in the victim);
- Territorial (A change in location);
- Functional (A change in the type of crime); and
- Perpetrator (A change in the person committing the crime).

The degree to which CCTV systems displace crime is extremely difficult to measure since many evaluations fail to collect crime rates from both an adjacent area and a separate control area. Without having these statistics to compare, findings on displacement are likely to be inconclusive. Some observations have, however, been made. In a meta-analysis conducted by Welsh and Farrington (2005), four out of seven city centre CCTV studies reported some evidence of territorial displacement. However, in other studies that they conducted for the British Home Office, no evidence of displacement was found.

As with displacement, the diffusion of benefits—which refers to the deterrent effects of CCTV spilling over into adjacent areas—is also a difficult variable to measure. Certain reports, however, have found that the diffusion of benefits is more common with property crime than personal crime. A report done by Brown (1995) found that there was a diffusion of benefits for property offences, but a displacement of personal crime (theft, robbery, assault, etc.) to other areas of the city that were not monitored by CCTV.

Both the diffusion of benefits and the displacement of crime will greatly depend on whether a potential offender is aware that they are being monitored or aware that surrounding areas are under CCTV surveillance.

4. Operational Evaluation of CCTV: What Communities Need to Know

There are many different elements to consider in operating a CCTV monitoring program, such as the technological features of the system, the placement of the cameras, the type and positioning of signage, and the monitoring and recording practices employed. Installing cameras incrementally provides a community with the opportunity to resolve these issues and determine, over time, what will make the system most successful in terms of fulfilling its objectives. "This type of piloting strategy enables implementers to work out details in camera placement, monitoring, and video retrieval prior to widespread implementation." (La Vigne, et al. xiii).

4.1- Technological Considerations

In a CCTV system, signals from a camera are carried directly by coaxial or fibre optic cables to receiving equipment, creating a closed circuit that is not easily accessible from outside the system (Matchett 2003). Recently, wireless CCTV has become more common. In these systems, wireless signals are used to transmit

images to television monitors, not computer screens (OIPC, 14). These systems are thought to be less secure since the wireless systems that are commercially available do not usually have security and privacy measures designed into the transmission of the signal (OIPC). These systems can therefore provide outsiders with easier access to the monitoring system (Hier). For a wireless system to not be easily accessible from outside, an encrypted wireless connection should be used. It can be seen that these technological considerations also intersect with possible legal implications in terms of privacy and access to information.

4.2- Density, Camera Coverage and Positioning

Communities should be aware that even when locations for cameras are proposed by identifying 'hot spots for criminal activity,' "the ultimate locations of cameras will be guided by infrastructure (including proximity to power sources), the camera technology employed, and characteristics of the natural and man-made environment (La Vigne, et al., xiii)." It is important that obstacles both above and below the ground are considered. When planning the installation of fibre-optic cables, system designers must consider all underground infrastructure including pipes for gas, electricity and water. Above ground obstructions, "such as buildings, street furniture, high-sided vehicles using the area, festival decorations such as flags and lights, and tree foliage," must all be considered in order to ensure maximum coverage of the area under surveillance (Gill et al, 75). Furthermore, the importance of lighting cannot be overlooked. Cameras that are unable to adapt to nighttime lighting levels will be unable to provide quality images. System designers must then take into account the lighting of the area, the camera's ability to adapt to low lighting, and the position of the camera in relation to a light source. If a CCTV camera is installed too close to a light, there may be strobing or a glare that will result on the images and the focus of the camera may also be compromised when the camera is in motion (Gill et al.). With wireless systems, additional consideration to the placement of cameras and antennas is also required to ensure that signals are not being obstructed. These systems will be particularly sensitive to interferences like foliage. For this reason, CCTV systems should be installed in the spring or summer seasons when tree foliage is most obtrusive. While regularly pruning back branches is an option, it constitutes an added expense that would need to be factored in to a system's maintenance costs.

4.3- Monitoring Practices

Communities must decide how, when, and by whom their CCTV systems will be monitored. There are both advantages and disadvantages to consider with passive and active monitoring and the method chosen will largely depend on a community's purpose for installation and their available resources. If a community chooses to have their system actively monitored, crimes can be intervened by the police in real time. Active monitoring also affords the operator the opportunity to zoom in on an incident, which may produce material that can later be used in investigations and prosecutions (La Vigne, et al). This form of monitoring will, however, require greater resources and funding and may raise concerns among the public about how the cameras are being monitored. Operators will need to be well trained in how to actively monitor the cameras effectively and steps will have to be taken to ensure that they are not able to zoom in and capture images in places where people have a heightened expectation of privacy (ie. into windows, etc.) Individuals will also likely have to be hired for the specific purpose of monitoring the cameras' images and this will likely require the added expense of someone's salary. Communities may also choose to have CCTV images passively monitored. With passive monitoring, designated individuals will periodically view the CCTV footage in real time while they are working on other tasks. Many Canadian communities have chosen to have their systems passively monitored by 9-1-1 operators, on-duty police dispatch staff or volunteers. Passive monitoring is less likely to raise privacy concerns among the public, while still being a relatively effective way of potentially observing crimes in real time and being able to intervene accordingly. Communities may also decide that footage will only be monitored during certain periods of the day, or even during certain times of the year. A community may decide that it is only worth actively monitoring the cameras in the evenings on weekends, or during special events and festivals throughout the year. This is a method that will likely require fewer

resources allowing the community to cut their expenses while also eliminating many of the legal and privacy concerns associated with monitoring. While there are advantages and disadvantages to both forms of monitoring, the practice that is chosen should be what best suits the community's individual needs.

4.4- Recording Practices

A community's recording practices will be very closely related to how and when they choose to monitor their CCTV system. If communities choose to have their systems actively monitored 24 hours a day, 7 days a week, then they may decide that recording is only necessary when the operator suspects that a crime is either occurring or is likely to occur. Other communities may not have their CCTV footage monitored at all, and in this case they may choose to have the images recorded 24/7. Communities may choose this approach in order to ensure that they have images in case a crime is committed without having to hire an individual or assign someone to passively monitor the system. There are, however, added expenses with this since it demands the system to have a greater storage capacity. Without any form of monitoring, zooming in on crimes as they are being committed will not be possible and as a result, images are likely to not be as clear for investigations, and possibly subsequent prosecutions. With any form of recording, communities will also have to establish their policies on the retention of information collected by CCTV, as well as their process for disposing of this information in a timely manner. These issues, and many others related to recording, are discussed in more detail under 'Legal Considerations.'

4.5- Signage

Whether or not crime will be deterred will greatly depend on whether potential offenders are aware that they are being monitored. For this reason, signage plays an extremely important role in increasing a potential offenders' perceived risk of committing a crime in the area. Alerting the public that they are under surveillance will also increase transparency of the system and communicate its purpose to the public (Clement and Ferenbok). Signs provide operators with the opportunity to address the public's concerns, inform them of their rights, and subsequently gain their support for the system. Furthermore, signage will partially determine the degree to which the public body that is operating the system is in compliance with Canadian privacy law (See Legal Considerations). Signs should be posted along the periphery of the area that is under surveillance. They should be obvious, easy to read, and include images for people who cannot read or do not understand English. CCTV signage should not only inform citizens that they are being monitored, but also tell them why the system is in place, where more information can be found, and how a complaint can be issued if necessary (Lippert).



“NOTICE: CCTV CAMERAS ARE BEING USED IN THIS AREA. Personal information is collected by CCTV cameras to promote public safety and reduce crime. Any questions about this collection can be directed to the Staff Superintendent, Divisional Policing Command, 40 College Street, Toronto, Ontario, M5G 2J3, 416-808-CCTV (2288) TAVIS- Toronto Anti-Violence Intervention Strategy.”

(Andrew Clement. "Toronto Police CCTV Yonge and Dundas." Flickr.)



“NOTICE: CCTV CAMERAS IN OPERATION. The collection of personal information is authorized by the Winnipeg Police Service Public Space Closed Circuit Television (CCTV) Project for the investigation of crimes. Direct Inquiries to: CCTV Project Coordinator. P.O Box 1680, Winnipeg, MB, R3C 2Z7, 1-877-447-CCTV, WPS-CCTV@winnipeg.ca

5. Legal Considerations

Governments having to determine how to balance law enforcement and security with concerns surrounding civil liberties and privacy rights is by no means a new challenge (Johnson). However, as a relatively new technology, CCTV presents unique challenges that are not specifically addressed in Canadian privacy law. “In considering how the law should respond to surveillance questions, the underlying issue is the extent to which public camera surveillance is analogous to a physical search” (Johnson, 334). The Canadian Charter of Rights and Freedoms places certain requirements and restrictions on these physical searches and for the most part, public surveillance has been approached through this same framework. However, determining the degree to which public surveillance constitutes a ‘search,’ is one of the fundamental questions that have yet to be determined by Canadian courts. Overall, “until the courts have an opportunity to weigh the issues raised by public video surveillance, the actual state of the ‘law’ will continue to be an open question” (Johnson, 334). Until this is determined, legal considerations for public surveillance by public actors will largely come from the Charter, privacy and information statutes, and the OPC’s and OIPCs’ *Guidelines*.

5.1- Federal Statutes Applicable to CCTV

There are two federal statutes that are relevant to the use of public surveillance: The Privacy Act and PIPEDA (The Personal Information Protection and Electronic Documents Act). However, although the

federal Office of the Privacy Commissioner has received a number of complaints under PIPEDA, it is only applicable to private commercial actors and for this reason, will not be reviewed.

i. THE PRIVACY ACT

The Privacy Act governs the collection and use of any personal information by federal government institutions (Johnson). With this, the Act does not apply to municipal and provincial police forces but only to federal bodies, such as the RCMP. Under the Privacy Act, images captured by CCTV cameras constitute 'personal information,' and so federal institutions collecting these images can be found to be in violation of sections within the Privacy Act. The Kelowna case was the first CCTV system to ever be challenged under the Privacy Act. While the case was dismissed, it demonstrates that the Privacy Act can place certain limitations on the RCMP's use of surveillance systems.

5.2- Provincial Statutes

i. FREEDOM OF INFORMATION AND PROTECTION OF PRIVACY ACTS

Every province in Canada has a Freedom of Information and Protection of Privacy Act (FIPPA) that is regulated by their designated provincial Office of the Information and Privacy Commissioner. In New Brunswick, this provincial act is known as the Right to Information and Protection of Privacy Act and it is regulated by the Office of the Access to Information and Privacy Commissioner. This act applies to provincial institutions, including municipal and provincial police services, and it places restrictions on their ability to collect and use personal information.

According to New Brunswick's OAI/PC (OAI/PC, 2012), the following public bodies are subject to the Act:

- Provincial departments, secretariats or offices
- Crown corporations (such as NB Liquor)
- Commissions (such as NB Police Commission)
- Government boards and agencies
- The office of a Minister of the Crown
- Local public bodies (such as municipalities)

Under this Act, the public is able to make a request directly to a public body for access to information and government documents. If they are not satisfied with the response they receive, they can then file a complaint with the Office of the Access to Information and Privacy Commissioner. Likewise, if a citizen has a concern regarding the collection or use of their own personal information by a public body, they can file a complaint directly with the Office of the Access to Information and Privacy Commissioner.

5.3- Non-Binding Guidelines

Both the Office of the Information and Privacy Commissioner of Canada (OPC) and the provincial Offices of the Information and Privacy Commissioner (OIPCs) offer sets of standardized, quasi-legal guidelines that outline the 'best practices' to be used in public area surveillance (Hier). The OPC's *Guidelines for the Use of Video Surveillance of Public Places by Police and Law Enforcement Agencies* apply to both public and private organizations and law enforcement agencies. Among others, they include provisions for "determining the necessity of video surveillance as a last resort and the importance of conducting privacy impact assessments prior to commencing monitoring activities" (Hier, 3). These guidelines have been adopted and addressed to some extent in most cities however, as non-binding guidelines their implementation is inconsistent across Canada. The guidelines are also not as clear or as

comprehensive as they could be and this causes them to have various interpretations. Many provincial OIPCs have also established their own privacy protection guidelines that echo those established by the federal Commissioner. Generally, both include guidelines on the legality of streetscape monitoring programs, on public consultations, collection of personal information, the drafting of surveillance policies, the implementation of concerns, “and matters pertaining to the access, use, disclosure, auditing and disposal of surveillance records (Hier, 4).”

While both provincial and federal guidelines are more voluntary than they are compulsory, Commissioners have, “oversight powers to conduct reviews of decisions and investigate privacy breaches” (OIPC NL, 2). Commissioners can report on privacy issues through the media or report on the issues in their Annual Report to the House of Assembly (OIPC NL).

While the complete list of OPC *Guidelines* (OPC, 2006) can be found under Appendix 1, some of the recommendations include:

- Video surveillance should only be deployed to address a real, pressing and substantial problem.
- Video surveillance should be viewed as an exceptional step, only to be taken in the absence of a less privacy-invasive alternative.
- Public consultation should precede any decision to introduce video surveillance.
- The public should be advised that they will be under surveillance.
- Fair information practices should be respected in collection use, disclosure, retention and destruction of personal information.

6. Economic Evaluation of CCTV in Sackville, NB

In considering the costs of establishing a CCTV system, it is important to note that many stakeholders from various studies have, “underscored the fact that the cost of the cameras themselves is minimal compared to the costs of installation, maintenance, and monitoring” (La Vigne, et al., xiii). The Town of Sackville should also be aware of the fact that the technology of CCTV is constantly evolving and next generation cameras may offer images with greater resolution and more technically useful features. The drawback of this however, is that images of greater resolution will demand larger video storage capacity, inevitably raising costs. In a report conducted by the Urban Institute, several American stakeholders involved in establishing monitoring programs, “advised jurisdictions to plan for a larger system than they initially intend to implement, as doing so will reduce the costs of expansion of the system in the long run” (La Vigne, et al., xiii).

We met with representatives from Plexus Connectivity Solutions in Moncton in November of 2012 to discuss the original proposal of the members of Town Council to install a number of CCTV cameras at various locations around the town. These early comments by Councillors Phinney and Fullerton suggested the following locations:

- One or two cameras in the downtown (Main/Bridge Street) area
- Coverage of the Sackville Waterfowl Park— Difficult to determine the exact number of CCTV units as there are 6 or 8 entrances, it is a large area with no electricity or hydro poles, etc. It is dark and barren and covers an extensive area.
- One camera at the high school
- One camera out at the Beech Hill town park off of Walker Road
- Possibly one camera at the town water supply area on Walker Road

An estimated 8 - 14 CCTV units were discussed. The basic measure of cost per unit is based on the

availability of Wi-Fi connections or hard-wired connections of Internet and electrical power, as well as the possible use of existing structures or poles or the need to install poles (such as in the Waterfowl Park). The town does not currently support a Wi-Fi system across the community, so hard-wiring Internet connections, through the installation of fibre optic cables, would be required. Additionally, several of the proposed CCTV locations have no electricity, no existing Internet wiring and/or no place for installation (pole structures). As a result, each of these locations would have additional installation costs beyond those costs listed below.

- The basic principle of installation and operation is assumed to be distance from Town Hall, where recording equipment would likely be located.
- Camera costs range from \$200.00 – \$2000.00. However, if they are to be used during the evening/nighttime, the higher end \$2000 cost per unit would be required. Similarly, the more inexpensive cameras will have less technical capacities such as pan, tilt, zoom, multiplexing, etc.
- A Digital Video Recorder (DVR) or Network Video Recorder (NVR) (Head end unit) for the recording of images will cost \$2000.00 – \$4000.00.
- Labour to install a camera – \$180.00 per unit
- Labour to install an Internet data drop \$500.00 – \$700.00 per unit (This depends on the building/location. There would need to be Internet access nearby and with this, there would also need to be permission/payment to tap into each connection for each building. Running a connection to Waterfowl Park Locations and the more remote areas such as Beech Hill and the water supply on Walker Road would likely be over \$1000 each, plus the cost of the Internet cable)
- Costs for utility poles, electrical connections to several of the locations, Internet wiring and monthly costs for Internet and electrical services would need to be added to these estimates. Ongoing maintenance costs have also not been included.

Based on these estimates, we believe that an initial purchase and installation of 8 CCTV cameras closer to the town centre would cost at least \$150,000, plus the monthly costs of Internet service, electricity and on-going service contracts for the cameras and recording equipment, bringing this estimate to approximately \$200,000 in the first year of the project. If it is the desire of Council that the images captured by CCTV will be used in police enforcement and criminal charges and evidentiary situations, dedicated connections and high-end equipment will be needed, with an estimated cost of \$350,000 for installation and initial operation. This figure does not include the development of a monitoring room at Town Hall or other location, or dedicated police or bonded staff to monitor the cameras.

7. Recommendations for the Town of Sackville

There are evidently many factors that demand consideration in the process of planning a CCTV monitoring system and this document has merely skimmed the surface.

The Town of Sackville will first have to determine whether the potential benefits of a scheme will outweigh the costs, not only those which are financial in scope, but also inclusive of the organizational and legislative costs that are also involved. Whether or not the Town decides to move forward should depend not only on the costs, but also whether there is a specified purpose for the system that cannot be solved by any other means. Furthermore, the decision to proceed should be made in consultation with the greater Sackville community. The importance of community involvement cannot be stressed enough, as every study emphasizes the strong correlation that exists between high levels of community consultation and the overall

effectiveness of the CCTV system. In a report conducted in the United States, stakeholders from major cities that had installed CCTV monitoring programs collectively agreed that, “perhaps the single greatest investment of time associated with a public surveillance system should occur during the planning and implementation phase” (La Vigne, xii). This period will be significant in determining the public’s level of support for the system and in turn, their awareness of the program. During this period, the public should be given a clear rationale behind the installation of the system and the specific locations chosen for installation. “Apart from providing a yardstick against which to judge a scheme, a statement of objectives inspires confidence that the planners understood what CCTV could achieve, how the system might achieve its aims and in what contexts.” (Gill and Spriggs, 63)

This statement of objectives should be based on statistical evidence and should include the most accurate cost-benefit analysis possible. While such a calculation is difficult to determine, it is extremely valuable to critically assess even an estimate of these costs, and weigh them accordingly. According to Todd Cole, the Director of Parks and Recreation Facilities, and George Woodburn, the Director of Engineering and Public Works, the following constitute approximate costs of vandalism and property damage in the Town of Sackville over a one-year period:

Vandalism in Waterfowl Park:	Approx. \$5,000/year
Car theft from the Civic Centre parking lot:	No fixed costs (approx. 3-4 cars/year)
Bill Johnstone Park:	Approx. \$1,000/year
Lillas Fawcett Park:	Approx. \$500/year
Beech Hill Park:	Approx. \$2,000/year
Damage to Public Works property:	Approx. \$1,000/year
Total Approximate Costs:	\$9,500/year

A brief survey of other communities in Canada found that Sackville's annual costs to public property due to vandalism are remarkably low in comparison to these other similar-sized communities across Canada, and while these vandalism costs are not the sole reason for considering the installation of a CCTV system, they would constitute the primary purpose of the program. Town Council should proceed with these general costs in mind, determining whether the system will provide a strong enough deterrence to be worthwhile.

7.1- Physical Considerations for Sackville's System

There are specific issues to consider with the proposed camera locations in Sackville. As much of the research shows, surveillance cameras will have an insignificant effect on crime if there’s a low concentration of cameras with few overlapping viewsheds and limited coverage of the area (La Vigne). This is particularly significant for the Sackville case, as these are likely the challenges that will be faced with the installation of cameras in the proposed park-locations. These park spaces are expansive areas that are not well lit, far from City Hall, covered with foliage and other visual obstructions, and are not easily accessible for the required infrastructure. Sackville could consider installing a wireless system, however, this would mean higher costs in the short-term and greater attention would have to be given to privacy measures and upholding the requirements of the Right to Information and Protection of Privacy Act and images captured would not likely be admissible in court. Another alternative that would perhaps help solve the issues presented by these park cameras, would be the installation of very tall metal poles to increase the camera’s coverage. However, these would likely increase the costs significantly.

7.2- Management of the System

If the Town of Sackville chooses to proceed with installing a CCTV system, a project team or committee should likely be established to oversee the planning process. This committee should have access to someone who is knowledgeable and has experience with CCTV systems. This individual will be particularly important to question the information provided by consultants and to ensure that they are being held accountable for the system. Furthermore, the committee should also have a project manager that is identifiable, accessible and well-informed. The public's questions on the system will be directed to this individual and they will play an important role in addressing concerns and explaining the rationale behind the program. The committee should also be responsible for, "developing and disseminating written policies on the proscribed use and dissemination of footage, including planned restrictions and security measures, [these will] go a long way toward building public support" (La Vigne, xiii). These policies should address the use, retention, dissemination and destruction of all images captured by the cameras. Following public consultations, the committee will be responsible for deciding how, when and by whom the images will be both monitored and recorded. This decision should be made by determining whether active monitoring and continuous recording is necessary to achieve the system's stated objectives. Following these decisions, control room Codes of Practice should be established to ensure that monitoring is being conducted in a way that is in compliance with all applicable laws. The Office of the Privacy Commissioner's *Guidelines* will provide this committee with a coherent and focused list of questions to be addressed.

7.3- Financial Considerations

While approximate costs of the system have been given in this report, the Town is also advised to do their own research apart from these costs and those that vendors will provide directly. There are many different components to a CCTV system and 'shopping around' will be necessary to ensure that the equipment of the system is both of good value and of good quality. It is also important for all costs to be taken into account including maintenance costs, the leasing of infrastructure, operators' pay and any unforeseen costs. Finally, all studies indicate that CCTV is much more successful in deterring crime when it is used in conjunction with other measures such as improved lighting. These additional crime reduction measures should be considered and budgeted for accordingly.

7.4- Job Training

Many stakeholders who have installed CCTV systems have stressed the importance of training operators. "Operators obtained knowledge and skills with regard to monitoring, relevant legislation, tape management and obtaining evidential-quality images from training, most of which was provided in-house." (Gill and Spriggs). Appropriate training will ensure that monitors have a solid understanding of all applicable legislation including the Charter of Rights and Freedoms, the Criminal Code, the Privacy Act and the Right to Information and Protection of Privacy Act. Proper training will also increase the quality of the material gathered and make it more likely to hold up in court.

8. Alternative Actions to CCTV

While CCTV is one option, there are other crime reduction measures that are worth exploring in an attempt to deter crime, reduce vandalism and promote feelings of safety and security within a community. Crime Prevention Through Environmental Design (CPTED) presents a community with a long list of measures that have been proven to be effective in deterring criminal activity. These measures serve to strengthen a community's natural surveillance by altering the built environment in a way that places more 'Eyes on the Street.' Beyond improving lighting, these interventions also include maintaining and landscaping premises to

communicate that these spaces are actively occupied and under surveillance by citizens.

There are also many other community-based approaches that hold great potential for reducing crime and deterring vandalism. In a joint partnership, the Town of Lennoxville, Québec and Bishop's University run a highly effective program called "Student Patrol." The program is a student-based group of both paid and volunteer members who patrol the town each night from approximately 10:00pm to 2:00am. Additional shifts are also added for peak periods, such as Orientation Week, Halloween, and Fridays and Saturdays. The student patrollers are trained by and work closely with the police and use cell phones for communication. It has become a great partnership between the police, the university and the community, and it has allowed students to be an essential part of the solution rather than a stigmatized part of the problem. Vandalism has been reduced significantly and the immediate reporting of crime or emergencies have improved safety, reduced fear of crime and engaged students with the community, including youth, seniors and both on-campus and off-campus students. This is a very low-cost, high impact student-citizen based response to the belief that there is a high level of crime in the community. With many similarities to be drawn between Lennoxville and Sackville and their objectives for the program, it is clear that this form of intervention may be worth exploring further as a viable alternative to CCTV.

9. Conclusion

While CCTV stands as an enticing alternative to other crime reduction strategies, it is evident that the installation of a CCTV monitoring program is a long process, involving long-term financial, legal and logistical commitments. In considering the establishment of a monitoring program in Sackville, New Brunswick, the decision must be based not solely on scientific evidence regarding their efficacy, but must also be grounded in the larger questions of the desirability of such systems and their influence on our quality of life.

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