



CASE STUDY

PROVIDING NETWORK ACCESS AS REQUESTED FOR A SMARTER & SAFER CITY IN CAMBRIDGE CANADA



PUBLIC SAFETY



NORTH AMERICA

The City of Cambridge, located roughly 100 km West of Toronto in Ontario Canada, like many municipalities was concerned about crime and the spread of drug use in downtown area. Of particular concern where outdoor venues where people were congregating such as parking lots and empty lots.

THE CHALLENGES

The city has fiber connections connecting several municipal buildings and continues to deploy more where it makes economic sense. Fiber is used to connect fire stations to City Hall for example. However, this particular application, outdoor video security, was one that needed more flexibility to accommodate the necessary camera locations. Most parking lots, intersections and pedestrian walkways do not have a fiber POP nearby. This meant the answer would almost certainly have to be a wireless solution.

The solution to be chosen had several additional requirements. It needed to be flexible when it came to expanding the video security coverage, it had to be secure and it also had to have enough capacity that it could support additional high bandwidth applications, ensuring the City of Cambridge stayed on the leading edge of Smart City Technology. One example could be a deployment of Public Wi-Fi. The wireless network would then need to be able to backhaul gigabit per second public Wi-Fi APs with no additional truck rolls.

THE SOLUTION

The successful bidder on the project was, Alliance Security Systems. Alliance investigated 5GHz solutions as well as 60GHz and determined that only the 60GHz products could meet all the requirements today and tomorrow. The EtherHaul™ 600 point to point 60GHz solution from Siklu had plenty of capacity (from 100Mbps up to 1Gbps software upgradeable), was extremely flexible in deployment (up to 1km range), small in size as they would be deployed on light poles and was inherently immune to interference. The same could not be said for the 5GHz systems they reviewed as all suffered from the ever increasing Wi-Fi noise floor in 5GHz, and could not offer the capacity the mmWave solution was able to provide let alone support future high bandwidth applications such as Public Wi-Fi backhaul. Phase one of the program supported ten multi-lens camera deployments, and the network design had six 1 Gbps Siklu V-Band radios collocated at the city Clock Tower. This dense colocation was a result of the very narrow 60GHz radio beams and the abundant spectrum (14GHz) available. Deployment of the Siklu radios was accomplished within a week. Using Axis Communications P3717 multi lens cameras managed by a Genetec Security Center unified security platform.

THE RESULT

Since deployment of the initial Phase 1 with ten cameras, the city operates the network providing access to police as requested for specific incidents/investigations. Since the installation of the video security network a car theft ring was apprehended and there has been a noticeable reduction in crime. Phase 2, adding 7 new cameras to be supported by Siklu's V-Band system 1Gbps EtherHaul™ 600 units that are scheduled to be installed as soon as the light poles are available. With the flexibility to place cameras where needed additional future expansions are also in discussion. "The network was installed and is delivering in all aspects – high up time and excellent video quality.," said Trevor McWilliams, Manager of Business Development for the City of Cambridge Ontario Economic Development. "We are confident that the network deployed will operate for many years and be able to support new applications as needed."

