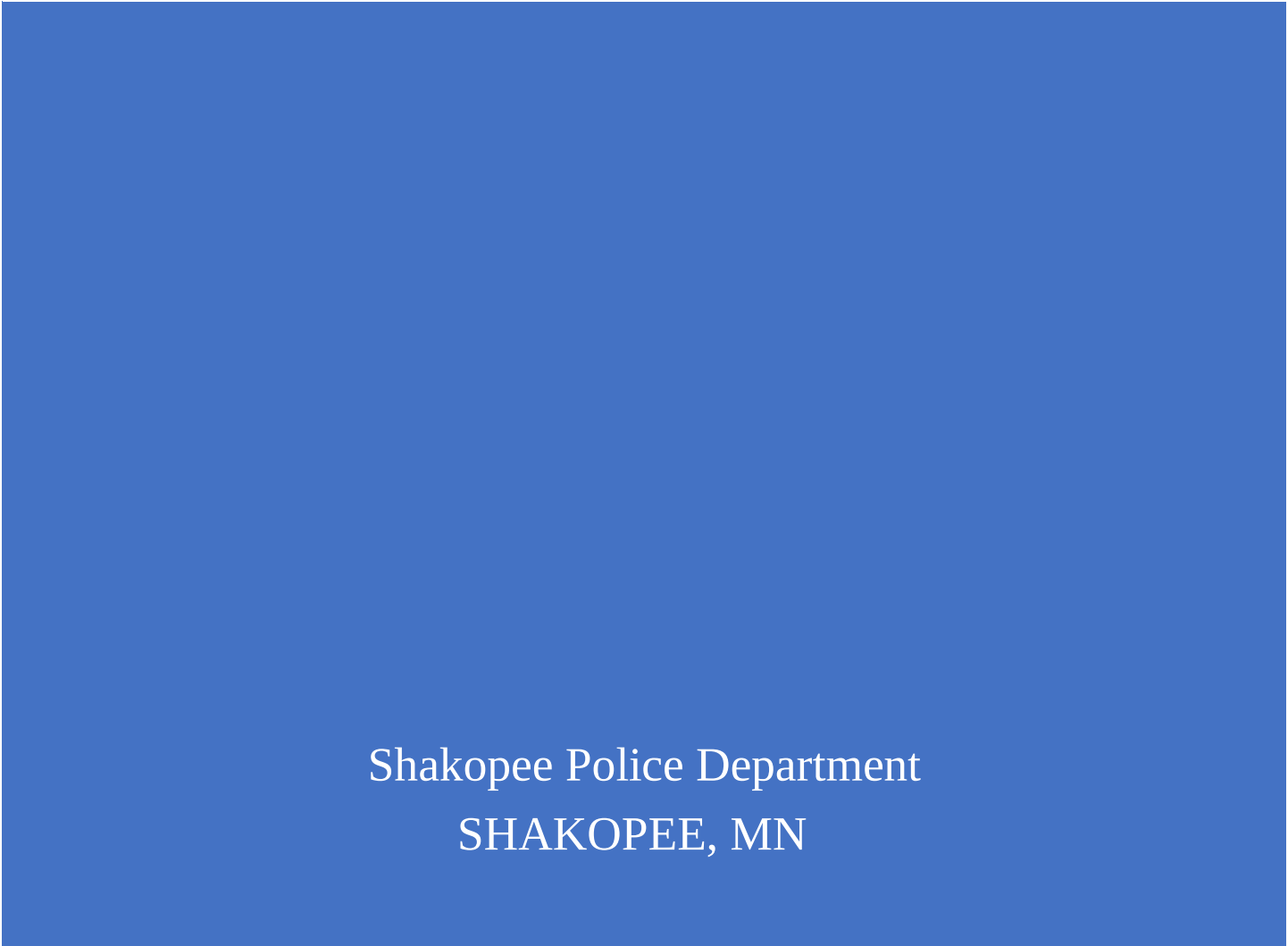




2020 COPS SCHOOL VIOLENCE PREVENTION PROGRAM APPLICATION



Shakopee Police Department
SHAKOPEE, MN

TABLE OF CONTENTS

PROJECT NARRATIVE	2
I. BACKGROUND AND PROBLEM DESCRIPTION	2
II. SCHOOL SAFETY PLANNING EFFORTS	5
III. FUNDING REQUEST AND INTEGRATION	7
IV. MANAGEMENT AND IMPLEMENTATION PLAN	8
V. SUSTAINABILITY PLAN	9
BUDGET NARRATIVE	10

Project Narrative:

I. Background and Problem Description

Located 25 miles southwest of Minneapolis, Minnesota, the City of Shakopee is a historic and growing community benefiting from the expanse of the Twin Cities metropolitan area. Shakopee covers approximately 30 square miles. Shakopee is the county seat of Scott County and is the county's largest city. Since 2000, Shakopee has seen its population increase by 101 percent. The US Census Bureau shows Shakopee's population in 2000 was 20,568, and as of July 1, 2018 the Bureau estimated a population of 43,362. During the 2000s, it was one of the fastest growing cities in Minnesota.

With this tremendous growth in population came growth in the number of students attending the Shakopee Public Schools. The school district currently serves over 8,000 students; 2,700 of these students attend grades 9 through 12 at the Shakopee High School. A new high school was built in 2007 to accommodate the population growth. Eight years later, the high school outgrew its capacity and a referendum was passed to expand the high school. In 2018 the Shakopee School District completed the expansion, going from a 300,000 plus square foot building to one which is 644,600 square feet.

The Shakopee Police Department (SPD) currently staffs two school resource officers (SROs) at the Shakopee High School. The SPD also services Shakopee's growing community with a department comprised of 50 sworn officers and 13 civilian staff. The SPD strives to provide services with integrity and professionalism, protect citizens through enforcement of the law and work in partnership with the community to enhance the quality of life in the City of Shakopee; the SROs partner with the school they serve to provide a safe and secure environment and protect the lives of those on school grounds.

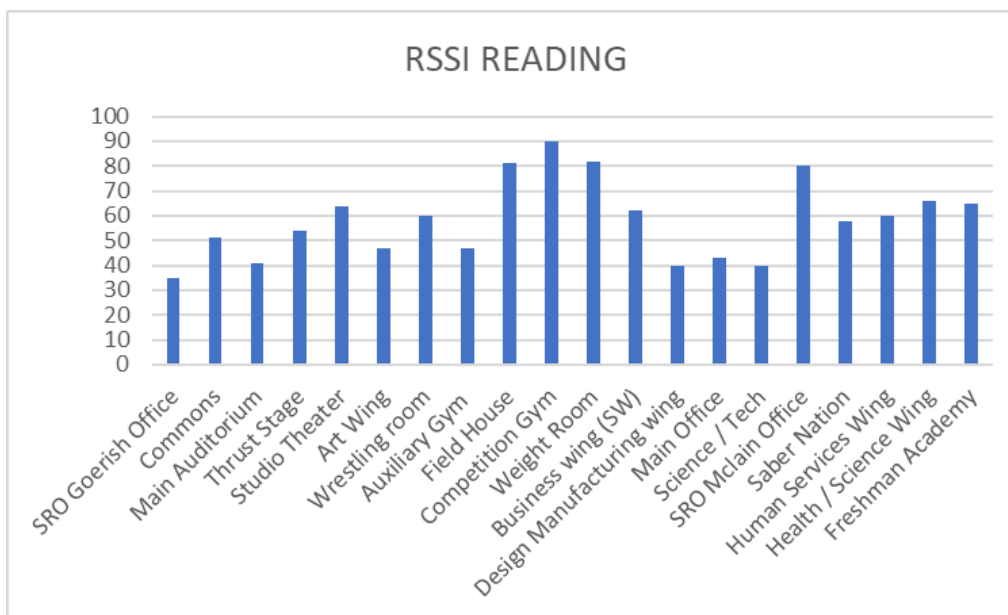
SROs investigate crimes that occur at the school or may involve students as suspects, victims or witnesses. SROs work with school staff and other community resources to help solve problems involving students. They provide a valuable resource to students, staff and the police department. SROs also assist school administrators in writing policies about truancy or items which are banned from school grounds. The SROs may also assist the administrators in keeping up to date on local, state, and federal laws as they pertain to the school. The SROs play a role in assisting students with certain topics they may be learning about in school, such as civil rights, gun control and career choices.

Currently, the two SROs at the high school are stationed on opposite sides of the building, so they are available to cover incidents throughout the school. The SRO's are equipped with a police department issued Motorola APX 6000Li, 800-megahertz radios. The radio is used to communicate with county dispatch, local officers, school administration, emergency personnel and each other. Radios are a standard piece of equipment used by most SROs in a school setting.

With the expansion of the high school, an unforeseen issue arose; it was discovered there were radio transmission "dead zones" within the school, and SROs are unable to communicate with each other, dispatch and other first responding agencies. Construction of the expansion, building size and area topography have been identified as contributing factors to the degraded radio signal strength. The radio tower, which provides the needed radio signal for the area and is located approximately a half mile from the school, has a much higher elevation in relation to the high school. It is believed the tower's signal skips over the school building, resulting in various areas within the school having no radio transmission.

A recent study of the high school and its Received Signal Strength Indicator (RSSI) was conducted. RSSI is an estimated measure of power level that a radio frequency device is

receiving from an access point or router. At larger distances, the signal gets weaker and the wireless data rates get slower, leading to a lower overall data output. The chart below illustrated the results of the study. Any RSSI scoring a 60 or lower presents a weak signal:



Twenty areas in the high school were RSSI tested. Of the 20 areas, 12 had a score of 60 or below which equates to 60 percent of the high school areas tested had weak or no signals.

SRO Travis Goerish provided an example of an incident where he was unable to communicate when needed during an incident involving an assault, physical obstruction and narcotics. He was notified by school staff of a student who was out of control. He attempted to contact his partner SRO McLain by radio, but he was unable to transmit on his radio. He exited the school to confront the student just outside the main entrance and, again, was unable to transmit. He physically engaged and restrained the student on the ground near the parking lot, where he then was able to transmit on his radio and contact dispatch. Patrol officers responded and assisted. Officer McLain was unaware of the situation until after Officer Goerish was able to transmit to

dispatch his need for backup in the parking lot. Officer Goerish finally reached Officer McLain by phone to advise him of the incident.

SROs, school administration, dispatch and emergency services MUST have the ability to communicate during emergency, hostile or mass casualty events. If a mass casualty/hostile event at the high school occurs, with no reliable means of communication with those on the inside, the SPD will not be able to effectively coordinate responding emergency personnel to mitigate existing threats and direct rescue personnel to victim locations. Reliable communication is a critical response component to safeguard against these types of incidents and is necessary to protect students, staff and officers.

II. School Safety Planning Efforts:

The safety and protection of students and staff is a top priority for the Shakopee Public School District; within the schools and at school related events, the number one goal is to keep students, staff and visitors safe. Emergency plans are in place at each building. Practice drills are held each year (five lock down drills, five fire drills, one tornado drill), in partnership with Shakopee Police and Fire Departments.

Additionally, a voter-approved referendum in 2015 set aside funding for safety and security improvements across the district. The following are some of the measures already in place:

1. A.L.I.C.E.: Shakopee Public School District implemented A.L.I.C.E. in the 2016-17 school year. A.L.I.C.E. is a lockdown procedure, which stands for Alert, Lockdown, Inform, Counter, and Evacuate. The A.L.I.C.E. protocol empowers all teachers to get students away from danger following certain guidelines. Over the summer, leading up to the start of the 2016-17 school year, building staff participated in extensive training to include the following: reviewing the A.L.I.C.E. video and holding drills and staff

meetings to provide opportunities to ask questions. At a minimum, staff reviews A.L.I.C.E. protocols yearly. The district continues to monitor and evaluate all safety/emergency drills, reflect and debrief to continually improve.

2. Raptor Visitor Management System (RVMS): Shakopee Public Schools is in the process of implementing the RVMS over the 2019-20 school year. The system enhances school security by reading visitor drivers' licenses (or other approved government-issued ID) and comparing information to a sex offender database. Potential matches will alert school administrators and local police that a match has been found. When a visitor is cleared through the system, a visitor badge is produced which may include a photo of the visitor.
3. Security cameras: Security cameras are installed in heavily used hallways, common areas, entrances and exits in Shakopee schools. More than 600 cameras are installed throughout the district.
4. Door Access: In the 2017-18 school year, Shakopee schools upgraded to a more user-friendly control system which allows the Buildings and Grounds Department to schedule when doors (with card readers) are locked/unlocked.
5. Lockdown Card Reader System: As of the 2018-19 school year, Shakopee Public Schools implemented a new card reader system in which the cardholder can lock down buildings automatically. Once the card scans, the system can lock exterior doors (that have card readers), in the event of an emergency.
6. PREPaRE: As part of the effort to continuously improve the approach to school safety and crisis planning, the district is implementing the PREPaRE framework. PREPaRE stands for Prevent (and prepare for psychological trauma), Reaffirm (physical health and perceptions of security and safety), Evaluate (psychological trauma risk), Provide (interventions) and Respond (to psychological needs) and Examine (the effectiveness of

crisis prevention and intervention). In August of 2019, approximately 100 Shakopee Public Schools staff participated in a one day workshop. PREPaRE is a framework that was developed by the National Association of School Psychologists as part of a decade-long journey in providing evidence-based resources and consultation related to school crisis prevention and response. The PREPaRE training outlines several benefits for school districts: school crisis are relatively unique and require their own model; school climate and safety are associated with academic achievement and at some point, all schools may experience some level of crisis.

III. Funding Request and Integration:

The evidenced based study conducted by John Hopkins University Applied Physics Laboratory in 2016 entitled “A Comprehensive Review of School Safety Technologies” researched variety of technologies currently used in schools, what was or wasn’t working and how effective the technology was regarding school safety. The study was intended to help school administrators make informed decisions on technology used for the betterment of the safety at their schools.

The Shakopee Police Department in partnership with the Shakopee High School is seeking funding from the COPS School Violence Prevention Program (SVPP) to purchase and install an ARMER Public Safety Hybrid Distributed Antenna System (DAS). This DAS system falls under allowable use of SVPP funds: (1) Acquisition and installation of technology for expedited notification (to law enforcement) during an emergency and (2) Coordination with local law enforcement. And, in the John Hopkins University study, when using two-way radios for communication in relation to emergency situations, **response** and **recovery** are ranked “high.”

Device	Prevention	Protection	Mitigation	Response	Recovery
Two-Way Communications					
Two-way radio	NONE No effect on prevention noted	NONE No effect on protection noted	NONE No effect on mitigation noted	HIGH Can be a primary means of communication during an event.	HIGH Can be used immediately after an emergency for communicating recovery activities

(Johns Hopkins University Applied Physics Laboratory, *A Comprehensive Report on School Safety Technology*, (2016). Retrieved from pg. 5-2
<https://www.ncjrs.gov/pdffiles1/nij/grants/250274.pdf>).

This grant request also coordinates with two of the authorized purpose areas under statute 34 U.S.C. § 10551(b)(5) – (8): (1) coordination with local law enforcement and (2) acquisition and installation of technology for expedited notification of local law enforcement during an emergency. The goals of obtaining funding for the implementation of a hybrid DAS are to (a) eliminate the problem of existing “dead zones” when using two-way radios within the Shakopee High School and (b) increase SROs’ and other emergency agencies’ response and recovery times and (c) make Shakopee High School a much safer environment for all. The objective for all three goals is to have the hybrid DAS system installed in Shakopee High School.

IV. Management and Implementation Plan:

Because it is part of a municipality, the Shakopee Police Department (SPD) falls under Minnesota's Office of State Procurement which lists authorized vendors under its state request for proposal process. Motorola is an authorized technology vendor under Minnesota State procurement. ANCOM Communications is a Motorola-authorized two-way radio dealer providing sales, service and rental of Motorola radios and pagers. If awarded funding, ANCOM will be contracted to install the ARMER hybrid DAS. ARMER is the name given to Minnesota’s radio system for emergency services/public safety. It stands for Allied Radio Matrix for

Emergency Response. ANCOM has worked with the ARMER system since its inception in 2004 and were a crucial part of the initial build out. They also will continue to be a part of each upgrade. ANCOM will provide a project manager who will work with Captain Chris Dellwo of the SPD and Senior High School Principal Jeff Pawlicki.

ANCOM is a complete turn-key solution vendor. Their in-building team can deliver any or all aspects of a DAS project. From pre-site survey, to design, to construction, to optimization, every task is handled professionally in-house. This enables them to be much more responsive to “last minute” changes or modifications that can and do arise during construction. When equipment and parts are ready for installation, the ANCOM project manager will coordinate with said partners to arrange the start date.

The system will be tuned and adjusted to provide optimal signal flow in both directions. Upon completion of the install, ANCOM will perform signal testing inside the building to ensure proper operation and adequate coverage. The installation will take approximately one week to complete. Post-testing of the DAS will be performed by ANCOM. Unlike most projects, this DAS installation is straight forward, requires very little implementation time and has only one milestone – the installation and proper operation of the system.

V. Sustainability Plan:

The ARMER hybrid DAS requires little maintenance after installation. The most common maintenance issue is two-way radio replacement. Everyday wear and tear can cause the radios to breakdown. The radios will be replaced on an “as-needed” basis by the Shakopee Police Department. The system, itself, may experience a malfunction, but it is abnormality. The Shakopee High School will be responsible for expenses related to repairs to the DAS.

Budget Narrative:

The Shakopee Police Department (SPD) had ANCOM Communications, the State of Minnesota's designated Motorola procurement vendor, analyze the radio dead zone issue within the high school. ANCOM looked at how to bring the radio system fully operational and provided a quote. The proposed solution for the Shakopee High School is to furnish and install a Public Safety Hybrid Distributed Antenna System (DAS). This system consists of a parabolic donor antenna on the roof oriented toward the closest ARMER radio site, a Class-A Digital Fiber DAS Main Unit, three DAS Fiber Remote Units, and a network of coaxial cable and antennas installed throughout the building to distribute signal.

ANCOM will install the donor antenna on the roof and connect antennas via outdoor rated coaxial cable with lightning protection. It will be bonded to the building structure. From there, plenum rated coax will be routed down to the third floor data room where the DAS Main Unit will be located.

The DAS Main Unit will condition the incoming radio frequency (RF) signal and convert it into an optical signal which will travel along armored fiber optic cable to each of the three DAS Fiber Remote Units. These Remote Units will convert the optical signal back into RF and amplify the signal so that it can be distributed via coaxial cable to antennas installed throughout the building.

Subscriber radios will receive this signal as if it were coming directly from the ARMER radio site, and they will be able to transmit back along the same pathway described above. The system will be tuned and adjusted to provide optimal signal flow in both directions. Upon completion of the install, ANCOM will perform signal testing inside the building to ensure proper operation and adequate coverage.

Because of the complexity of the system and its many parts, the ANCOM quote provided to the SPD was broken down into five categories: Active Components, Passive Components, Cable/Jumpers/Connectors, Miscellaneous and Labor:

ANCOM DELIVERS SOLUTIONS		1800 Cliff Road East Burnsville, MN 55337 (952)808-7699
Project:	Shakopee High School	Date: 20.Apr.2020
Active Components		
Description		Ext. Price
This category includes all components that require power. (Bi-directional Amplifiers, Fiber DAS Main Units, Fiber DAS Remote Units, Etc.)		\$ 35,800.00
Passive Components		
Description		Ext. Price
This category includes all components that do not require power. (Antennas, Splitters, Directional Couplers, Etc.)		\$ 3,980.00
Cable/Jumpers/Connectors		
Description		Ext. Price
This category includes all Cabling, Connectors and Jumpers required.		\$ 22,248.00
Miscellaneous		
Description		Ext. Price
This category includes all miscellaneous parts required. (Ground Bars, Antenna Mounts, Brackets, Cable Management, Etc.)		\$ 9,532.00
Labor		
Description		Ext. Price
Pre-site and Design		\$ 3,000.00
Fiber Labor		\$ 2,000.00
Installation Labor		\$ 14,720.00
Testing and Commissioning		\$ 2,000.00
Trip Charge		\$ 1,260.00
Totals		
Materials Total:		\$ 71,560.00
Labor Total:		\$ 22,980.00
Grand Total:		\$ 94,540.00

All the above quoted components are needed to implement a hybrid DAS (objective) and reach the following goals of this School Violence Prevention Program (SVPP) project:

1. Eliminate the problem of existing “dead zones” when using two-way radios within the Shakopee High School,
2. Increase School Resource Officers’ and other emergency agencies’ response and recovery times, and
3. Make Shakopee High School a much safer environment for all.

The SPD acknowledges the local match requirement of the SVPP grant of 25 percent of the total project cost (\$94,540) which equates to \$23,635.