Memorandum

To: Town Administrator Kate Buch, Board of Selectman
From: Captain Robert Shreders
Date: February 19, 2020
Re: Request Grant Approval from the Darien Foundation – LaserShot JTS, FARO Scanner

LaserShot Judgement Training Simulator

Providing high quality, realistic training to police officers not only enhances the level of service and protection afforded to the public, but also serves to reduce exposure to liability. This exposure to liability increases when an officer uses force in the performance of his or her duty. The application of deadly force with the use of a firearm certainly represents the gravest extreme of any action a police officer may take. To that end, training in areas of high risk/low frequency, such as the use of a firearm, must be done under similar stressful circumstances. The goal is to inoculate officers with stress through realistic training in the hope that it will prepare them for a deadly force encounter where proper judgement is paramount.

The Darien Police Department Training Division requested funds for a live fire judgment training system, LaserShot, from the Darien Foundation. This system will be replacing our current judgement/shooting decision simulator, PRISM.

The Problem

The company that owned and provided PRISM is currently out of business and the product is unsupported. There are no means to obtain new simulations and the path to create our own is cost prohibitive. The PRISM technology hardware/software is also outdated. LaserShot JTS would allow our firearms instructors the ability to continue offering shoot/don't shoot scenarios to officers during firearms training.

Benefits/Features

LaserShot JTS provides over 900 scenarios that range from "no force is needed" to deadly force encounters with a firearm. It provides officers the ability to choose other less-than-lethal options such as the taser and OC spray. The scenarios cover all aspects of law enforcement related calls for service including but not limited to; vehicle stops, domestic disputes, crimes in progress and active shooter situations. Following each scenario, the video can be played back

and paused at key training points to provide feedback to the officer. Each scenario, that comes at no additional cost, provides anywhere from one to ten different outcomes based on the officer's response to the threat and the trainer's intention of the training. The firearms instructor can make on-the-go decisions as to where the scenario should head with the hand held tablet that is included in the package. The system is completely portable and can be used as a live fire system in the range as well as being used in its laser configuration in the training room for our defensive tactics training or at community awareness events.

The traditional police firearms training model focuses on speed and marksmanship. This involves timed shooting at paper targets and scoring each officer based on the number of shots that hit the target. Most departments continue to rely on this model even though studies show that it is poor judgment, not poor marksmanship, which plays a much more significant role in police officer fatalities, injuries, or tort liability.

The proposed shooting system will enhance the officer's situational awareness and their ability to decipher reliable threat cues. The officers interact with the system using verbal commands and movements as the scenarios evolve. Targets are no longer paper; they are moving, shooting, lunging and surrendering. This type of training will provide the officers with skills to reliably predict an impending attack. The first time an officer faces a shoot-or- don't-shoot decision should not be in the street where lives are at stake. It should be in a controlled environment where skills can be critiqued and honed; LaserShot JTS provides this much needed training environment.

The system includes:

Range projector with camera, tracking software, thermal shot camera, speakers, mini gaming PC, wireless keyboard and touchpad, JTS wireless control tablet, JTS router, JTS software (full library, remote viewer, course of fire II, CQC, practical shooting, skills drills I & II, steel challenge), 9' HD screen, self-healing screen, cover concealment, (2)SIM 7, IR, OC spray, Taser, (2) Smith & Wesson M&P Recoil Kit, M4 Upper recoil kit, CO2 refill Adapter & Tank stand, 1650 Pelican case, Installation Kit, 2-day system installation and training, 1 year warranty

Cost of removable system with shroud - $55,376

Budget Forecast – Maintenance

Software updates are free from the company once a quarter through Ethernet. Alkaline batteries power the controller for the projector ($3 every 2 years). If a projector bulb breaks, the price is $100. A CO2 tank will also be needed if the system is used in its "laser only" configuration. The CO2 is used to power the action of the pistol/rifle facsimiles. Initial cost of a

20lb CO_2 tank is approximately $150. CO_2 refills would be required on an "as needed" basis at a cost of approximately $26. Another option is to rent a tank for $7 a month plus the refill cost.

It is optional to purchase additional scenarios for the simulator. The company distributes 25-30 scenarios on a yearly basis at a cost of approximately $500 - $900. Due to the large number of scenarios that come with the system I do not anticipate purchasing new scenarios within the first 5 years.

FARO Laser Scanner Unit

Proposed Project

The Darien Police Department Accident Investigation Team (AIT) is requesting funds from the Darien Foundation for a FARO Laser Scanner to map serious injury or fatal motor vehicle accidents.

Total Monetary Request

$53,714.65

Proposed Project Description

FARO Laser Scanner is a portable scanner that provides fast and accurate measurements of indoor or outdoor scenes. The unit has a built in 8 mega-pixel, integrated GPS, HDR-camera and touch-screen that captures detailed imagery quickly at a distance of 70 meters. The scanner is light weight, small in size and has a 4.5 hour battery runtime. The scanner can be used in all types of weather conditions and at extreme temperatures. The data captured with the FARO scanner can be used with various software packages including FARO SCENE, FARO As-Built, FARO-BuildIT Construction, FARO Zone 2D, FARO Zone 3D or 3rd party software.

Project Need and Intended Results

The AIT is requesting this laser scanner due to the length of time our current equipment has been in service. Our current "Total Station" unit tends not to work properly at times, the batteries frequently fail to charge, and the connectivity doesn't always work. The Total Station unit is ten years old and the AIT is concerned that the unit will fail leaving the team without the support of this technology for an extended period of time.

Why This Solution or Approach?

FARO systems scanning unit is a state of the art, easy to use, lightweight, all-inclusive machine that would fit all of the AIT needs as well as reducing hours needed to process accident scenes. FARO Scanner comes with unlimited free training. The Darien Police Department intends not

only to train AIT but also Detectives for utilization in processing serious crime scenes. This includes but is not limited to fatal accidents not involving motor vehicles, suspicious deaths, homicides, and serious assaults.

Benefits to the Darien Community

FARO scanner will assist the Darien Police Department in providing our community the most technologically accurate investigations, reduced road closure time, can assist in improving traffic safety, and a better finished product for court purposes with the goal of providing justice for victims. The scanner can collect all data in a typical accident or crime scene in less than an hour which reduces hours spent processing scenes.

This unit can also be used to enhance school and public safety as well. It will allow Darien Police to "map" all schools and or public facilities to provide a training tool to better prepare staff and officers when responding to critical incidents.

As mentioned above, in the event there are any intricate crime scenes, the Detective Division may use the unit to map the scene. Since the scanner is so easy to use and the training is free, Darien PD will include detectives in the training.

The Police Department is in the process of creating an internship program. The FARO scanner and AIT will be included as one of the topics the intern will learn about.

Budget/Cost of Project

Total Grant Request $53,714.65 includes the following components:

$29,279.16 3D Laser Scanner Focus S 70 to include

	Battery power block
	Battery power dock
	90W power supply
	Optic cleaning fluid
	Optic cleaning tissues
	32GB SD card
	Rugged transport case
	Calibration certificate
	1 year manufacturers guarantee
	Quick start guide
	3 day training course
$200.00	Single User Hard Lock (USB Dongle) Scene software
$3,693.50	3D Scene Software and license
$436.90	Battery Power Block
$775.78	Carbon Fiber Tripod

$4,832.98	Advanced FARO Zone 3D including 1 year of maintenance
$200.00	Single User Hard Lock (USB Dongle) FARO 3D software
$3,208.89	VR Ready Notebook (laptop)
$2,548.00	3 year FARO Zone 3D Advanced Maintenance (discounted 30%)
$1,939.44	3 year FARO Scene Maintenance and license (discounted 30%)
$6,600.00	Basic Care Service Plan-parts and labor (additional 3 year warranty)

Budget Forecast – Optional Maintenance

The only maintenance for the FARO Scanning unit would be the optional warranty or optional yearly updates. After the initial 4 years of the purchase the below options can be used to update the 3D software and scene software. The maximum expense would be $5,298 every 3 years.

SMA0900-1Y-R	SCENE Maintenance - 1 Year	Maintenance for SCENE software. Duration: one (1) year. Scope of service according to the conditions of the SCENE maintenance contract.	$1,175.00
SMA0900-3Y-R	SCENE Maintenance - 3 Year	Maintenance for SCENE software. Duration: 3 years. Scope of service according to the conditions of the SCENE maintenance contract.	$2,750.00
SMA51002-R	FARO Zone 3D Advanced Maintenance - 1 Year	FARO Zone 3D Advanced annual maintenance renewal includes product updates and upgrades (as available), including top tier technical support for one (1) year. Customer must be on the most current software release to purchase this plan.	$1,089.00
SMA51002-3Y-R	FARO Zone 3D Advanced Maintenance - 3 Year	FARO Zone 3D Advanced annual maintenance renewal includes product updates and upgrades (as available), including top tier technical support for three (3) years. Customer must be on the most current software release to purchase this plan.	$2,548.00

On February 11, 2020 the Darien Foundation Board voted unanimously to approve the two grant requests for a sum total of $109,901.