ShotSpotter®
Detect · Protect · Connect

Price Proposal for Subscription-Based
Gunshot Detection, Location, and Forensic Analysis Service
for the City of Pompano Beach, Florida
September 23, 2020
Proposal ID: POMPFL092320

Submitted by: **Ron "Jake" Jacobs, Director – Southeast Region**
510.468.8934 mobile
650.887.2106 fax
rjacobs@shotspotter.com

ShotSpotter, Inc.
7979 Gateway Boulevard, Suite 210
Newark, California 94560
888.274.6877
www.shotspotter.com

Table of Contents

Executive Summary

Introduction

ShotSpotter is pleased to present this proposal in response to the City of Pompano Beach's request. The proposed ShotSpotter Flex solution is designed to identify, locate, and track active gunfire, and will support the Broward County Sheriff's Office efforts to more effectively respond to and investigate gunfire incidents. The proposed solution is deployed across the country, serving agencies of all sizes that are committed to leveraging our real-time gunfire intelligence to reduce gun violence and build community trust.

The ShotSpotter gunshot detection, alert, and analysis services provide what would be otherwise unobtainable, critical real-time gunfire intelligence. The core capabilities of the ShotSpotter solution are:

- **DETECT** – ShotSpotter detects and locates gunfire incidents enabling a fast, precise response to over 90% of shooting incidents within the targeted areas. This has a powerful deterrent effect and disrupts the gun violence cycle.

- **PROTECT** – ShotSpotter helps to protect officers by providing them with comprehensive data on the actual amount of gunfire activity that occurs in the neighborhoods they patrol and provides critical situational awareness when responding to specific incidents.

- **CONNECT** – By applying community policing-oriented best practices, ShotSpotter provides a unique opportunity for law enforcement agencies to connect with vulnerable communities. Rapid response to gunfire incidents in communities that have been most impacted by gun violence builds positive attitudes towards law enforcement and leads to more constructive engagements and cooperation.

ShotSpotter has become an indispensable crime-fighting tool for these agencies, in light of the community dynamics that fuel gun violence and the well-documented challenges of relying solely on 9-1-1 calls for service:

- **Under-reporting of persistent gunfire:** Nationwide, on average, less than 20% of gunfire incidents are reported to 9-1-1. Why don't residents call? The answer is complex, but typically involves the following concerns:
    - Recognition: "Was that gunfire, fireworks, or something else?"
    - Retaliation: "If they find out I called, will they come after me?"
    - Resignation: "No one came the last time I called…"

Without ShotSpotter, most law enforcement agencies are working with an 80% to 90% deficiency in their gun violence-related intelligence.

- **Late and inaccurate information:** When a citizen reports a gunfire incident, the 9-1-1 call typically comes several minutes after the event has occurred, and, based on analysis, the location provided is usually mislocated by 750 feet (on average). As a result, valuable time and resources are wasted trying to locate the incident, greatly diminishing the opportunity to identify suspects and witnesses, recover evidence, and, most important, render life-saving aid to victims.

The ability to receive near real-time gunfire intelligence data provides law enforcement agencies with a critical advantage in their efforts to reduce and prevent gun violence and improve officer safety. Specific results include:

- Officers can more quickly and more accurately go directly to the scene of the shooting
- Situational awareness is vastly improved over what is available when relying solely on the 9-1-1 system
- Law enforcement has a better chance of arriving before the shooter has left the scene
- Officers are much more likely to find evidence in the form of shell casings (which, in conjunction with NIBIN/IBIS, provide valuable investigative leads) and/or other ground truth that can aid in the investigation
- Officers are more likely to find witnesses who may have information that can aid in the investigation
- Community engagement is heightened, which often translates into more information from the community (e.g., tip lines, field interviews, etc.)
- Targeted enforcement (precision policing) is enhanced
- More court-admissible and scientifically sound forensic evidence is available to strengthen prosecutions of the worst offenders

How it Works

Based on an analysis of known gunfire-related crimes, the ShotSpotter team designs and deploys networked sensors within the targeted coverage area. These acoustic arrays detect and locate gunshot activity within the coverage area and report that information to ShotSpotter's Incident Review Center (IRC) which is staffed 24/7/365 by highly trained acoustic experts. ShotSpotter uses a two-factor incident review process to minimize false alerts. The first tier is performed by sophisticated AI software. Once the software has performed an initial review and filtered out any incidents that are determined not to be gunfire (e.g., helicopter noise, fireworks, etc.), the data is received at our IRC.

The IRC review process is performed by a team of highly trained acoustic experts. In addition to examination of the incident audio, the review process involves examination of visual characteristics of the detected pulses and the incident, such as the number of participating sensors, the wave form, pulse alignment, and the direction of sound. The IRC review results in publishing (Gunshot or Probable Gunshot) or dismissal (Non-Gunshot) of the incident with a high level of precision. If the reviewer classifies the incident as a gunshot, the reviewer sends an alert, including location information and an audio snippet, to law enforcement agencies via a password-protected application on a mobile phone, in-car laptop, or computer. In addition to the dot on the map and audio, ShotSpotter provides details such as number of shots fired, whether multiple shooters are involved, and whether high-capacity and/or fully automatic weapons are being used. This entire process (i.e., recording the impulsive sound, two-factor review, and publishing alerts to authorized users) is designed to take 60 seconds (but is often completed within 25 to 30 seconds).

ShotSpotter customers receive a contextually rich, detailed gunfire alert that enables a fast, precise, and safer response to gunfire incidents. In addition, ShotSpotter alerts can also trigger other technology platforms such as cameras that can pan and zoom in the direction of an event. ShotSpotter has also successfully integrated with a wide range of third-party applications such as CAD, RMS, License Plate Readers, drones, and other applications.

We appreciate your consideration of our proposal. ShotSpotter is committed to your success and we look forward to partnering with you to make ShotSpotter a key component of your efforts to reduce gun crime in the City of Pompano Beach.

Company History

ShotSpotter was founded in 1995 and has been providing gunshot detection solutions since its inception. ShotSpotter is the world leader in gunshot detection, with nearly 750 square miles operational; more than 14 million incidents reviewed; and 34 issued patents. ShotSpotter is a publicly traded corporation (NASDAQ: SSTI) with approximately 100 full-time employees and is headquartered in Newark, California.

ShotSpotter provides precision-policing solutions for law enforcement to help deter gun violence and make cities, campuses, and facilities safer. Our flagship product, ShotSpotter Flex, is the leading gunshot detection, location, and forensic analysis system, and is trusted by 100 cities. Other product offerings include:

- ShotSpotter SecureCampus®, designed to provide outdoor gunfire coverage at university and school campuses
- ShotSpotter SiteSecure™ for critical infrastructure designed to detect gunfire attacks on commercial and federal buildings, electrical substations, airports, and large outdoor structures
- ShotSpotter Missions™ (formerly HunchLab), which uses artificial intelligence-driven analysis to help strategically plan patrol missions and tactics for maximum crime deterrence
- ShotSpotter Labs, which focuses on innovative applications of ShotSpotter to help protect wildlife and the environment; currently helping combat rhino poaching in South Africa and will soon launch other applications for global wildlife protection, such as combatting illegal blast fishing in Malaysia with underwater sensors.

Proposed Coverage Area

ShotSpotter systems are deployed to provide coverage for a specified area, bounded by a specific coverage area perimeter. ShotSpotter has designed the coverage area based upon the City's and Sheriff's Office requirements and based upon analysis of historical crime data. The area to be covered is shown in the map image below, delineated by a red boundary. Please note, the area outlined in the image is a rough estimate of the recommended coverage area. The precise size of the area (i.e., in square miles) can only be verified with actual acoustic propagation information; therefore, the final coverage area may vary. ShotSpotter will perform this verification during the installation process.

Figure 1: Proposed ShotSpotter Coverage Area = 5 square miles

ShotSpotter will collaborate with the City and Sheriff's Office stakeholders to determine the final coverage boundaries and any resulting adjustments to the proposal to address the City's and Sheriff's needs and priorities.

Solution Overview

ShotSpotter helps law enforcement agencies by directing resources to the precise location of more than 90% of gunfire incidents. ShotSpotter rapidly notifies first responders of shootings via dispatch centers, in-vehicle computers, and smart phones. Instant alerts enable first responders to aid victims, collect evidence, and identify witnesses. ShotSpotter's actionable intelligence can then be used to prevent future crimes by positioning law enforcement when and where crime is likely to occur. ShotSpotter gunshot detection and location services are delivered as an easily implemented Software as a Service (SaaS) solution, with no requirement for customer investment in or maintenance of expensive hardware or software. ShotSpotter hosts, secures, monitors, and maintains the ShotSpotter infrastructure. Contracts are based on an affordable one-year or multi-year subscription agreement, and the subscription includes unlimited licenses for the proposed ShotSpotter applications.

ShotSpotter Dispatch™ and ShotSpotter Respond™

The ShotSpotter Dispatch and ShotSpotter Respond applications are used by Call Takers, Dispatchers, and Patrol Officers in the field. Real-time notifications of gunfire incidents are delivered to these apps and include the following data:

- Incident location (dot on the map)
- Type of gunfire (single round, multiple round)
- Unique identification number
- Date and time of the muzzle blast (trigger time)
- Nearest address of the gunfire location
- Number of shots
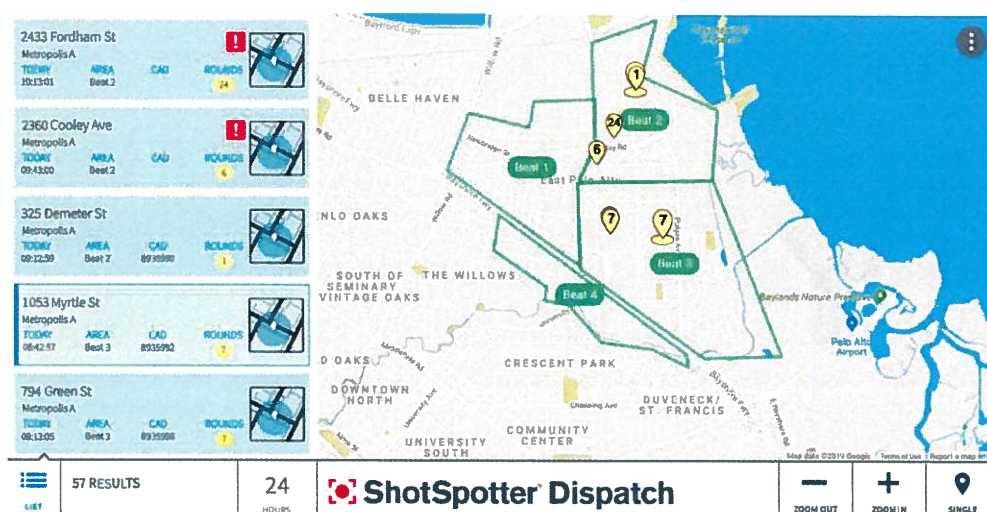- District identification
- Beat identification

Figure 2: ShotSpotter Dispatch App

A ShotSpotter analyst may add other contextual information such as the possibility of multiple shooters, high capacity weapons, full-automatic weapons, and the shooter's location related to a building (front yard, back yard, street, etc.). The report also includes an audit trail of the time the alert was published, acknowledged, and closed at the customer facility. All notes entered by Call Takers and Dispatchers added to the alert are time- and date-stamped with the operator's ID. For Patrol Officers, the alert includes an audio snippet of the incident.

Figure 3: ShotSpotter Respond App

Investigator Portal

The ShotSpotter Investigator Portal enables users to view, search, sort, and filter all historical incident data in the ShotSpotter Flex database. Users can generate reports for single incidents and groups of incidents and apply parameters and filter settings to group incidents into a single report. Predefined reports can be viewed on a monitor, printed, or exported to standard CSV format.

End-users can also easily create custom reports and perform data analysis using standard off-the-shelf products such as Microsoft SQL Server Report Builder, Crystal Reports, ArcGIS (including Spatial Analyst), and any other Structured Query Language or SQL Server-compatible tools. The Investigator Portal also supports the ability to save any audio snippet as a standard MP3 file to any recordable media.

![ShotSpotter logo] **ShotSpotter®**
Detect · Protect · Connect

Mobile Alerts

Real-time gunfire alert data can be delivered to smart phones and smart watches via the ShotSpotter® Respond™ smartphone application, available for use on iPhones and Android platforms. The gunfire location is displayed as a dot on a map, and the data also includes the number of rounds fired and access to the incident audio.

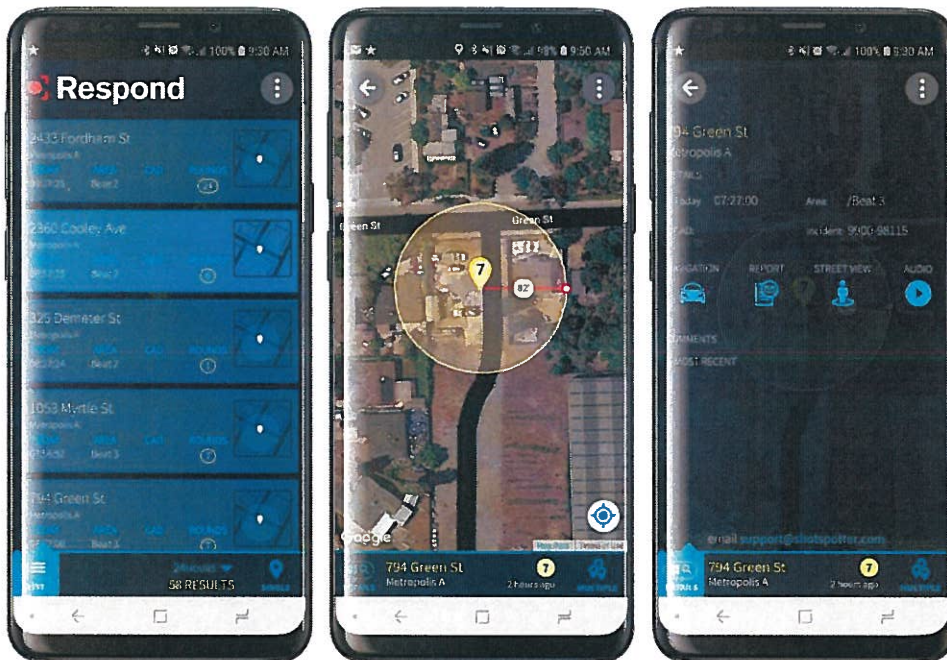**Figure 4: Smart Watch Notification**

Figure 5: ShotSpotter Respond Smart Phone Notification

Notifications API (Optional)

The ShotSpotter Notifications API (available as a separately priced option) allows client applications to receive accurate, timely details about ShotSpotter gunfire alerts, including precise latitude and longitude (geolocation), GPS-synchronized timestamps, incident audio, and situational context provided by the 24x7x365 ShotSpotter Incident Review Center. Typical integrations include:

- Video Management Systems (VMS)
- Computer-Aided Dispatch (CAD) systems
- Records Management Systems (RMS)
- Automated License Plate Readers (ALPRs)
- Crime analysis and statistics packages (including COMPSTAT software)

Each Notifications API license pack is available for an annual subscription fee that includes:

- Up to three (3) interfaces
- Establishing an instance of the API for the Department on ShotSpotter-hosted servers
- Consulting with the Department and third parties to ensure the API operates according to the API specifications
- 24x7 alerts to up to three third-party interfaces
- Supporting the third party and Department as systems are upgraded

Additional API licenses can be purchased in packs of three interfaces.

Investigative Lead Summary

ShotSpotter recently introduced a new, on-demand report available through the ShotSpotter Respond Application. The Investigative Lead Summary (ILS) provides useful details about the location, timing, and sequence of each shot fired during an incident. The ILS is very valuable on scene, helping law enforcement find shell casings, confirm witness accounts, and identify suspects. ILS reports are available immediately after an incident occurs through a single click of a button within the mobile, web, or desktop ShotSpotter Respond application.

The ILS will fulfill the majority of law enforcement agency needs, particularly in situations where a report is not intended for presentation to court (since the ILS report is electronically produced, it is not court admissible).


Figure 6: ShotSpotter Investigative Lead Summary (ILS)

Detailed Forensic Reports and Expert Witness Testimony

In nearly all the criminal proceedings in which our experts have been called to testify, ShotSpotter has produced detailed, round-by-round analysis of the timing and location of the shots fired by one or more weapons. To the best of our knowledge, no other acoustic-based gunshot detection system has been accepted in a court of law as providing this kind of forensic evidence.
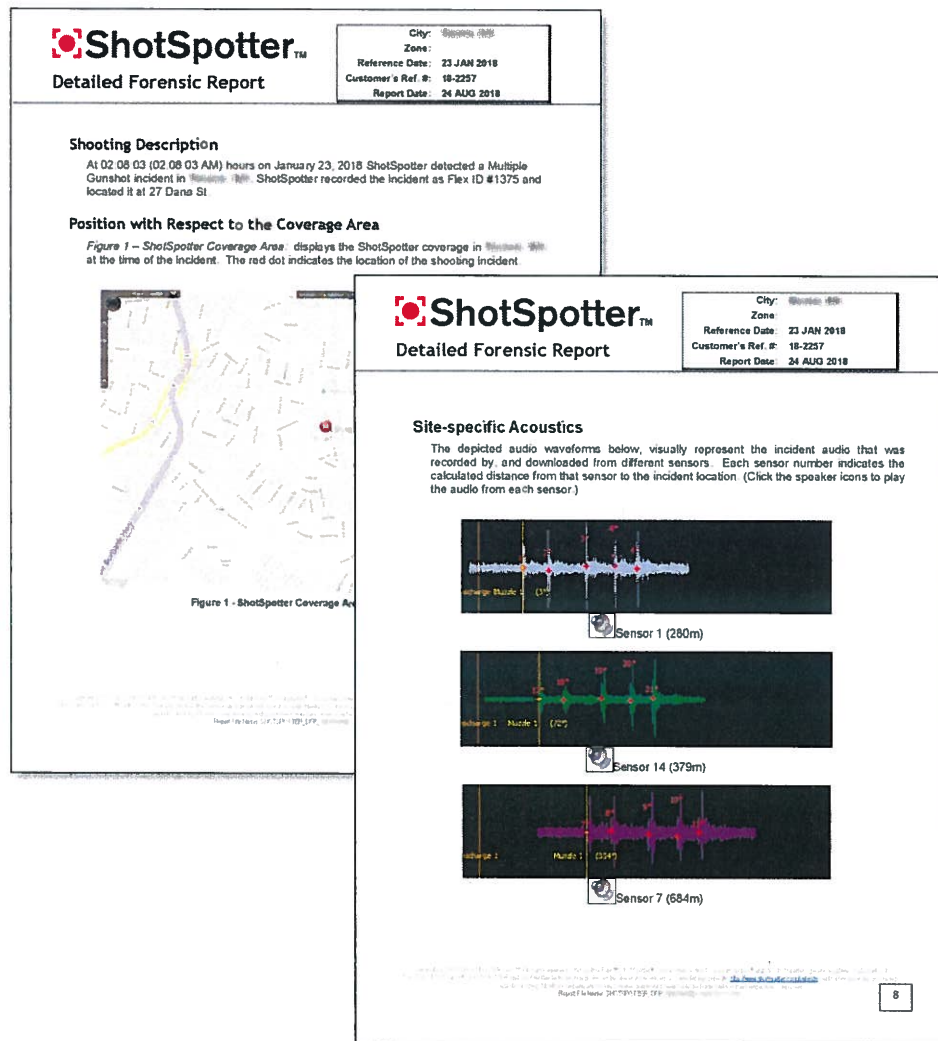
Figure 7: ShotSpotter Detailed Forensic Report (DFR)

ShotSpotter Flex data supports detailed forensic analysis of gunfire incidents, including:

- Weapon type (e.g., automatic vs. semi-automatic)
- Number of rounds fired
- Possibility of multiple shooters

Unlike the ILS, the DFR is a court-admissible document prepared by our forensic engineers. The DFR is intended to be used by attorneys as part of a court case for the exact, verified timing, sequence and location of each shot fired. Secondarily, DFRs are available for use by law enforcement to obtain search warrants or to investigate Officer Involved Shootings. DFRs are available upon written request, and, our goal is to deliver all DFRs within ten business days of the request.

To support prosecutions, audio snippets provide powerful demonstrative evidence to prosecutors and allow jurors to gain a deeper understanding of the victims' experience of the incident. For prosecutors who wish to have a ShotSpotter expert witness testify regarding a DFR, to help interpret and clarify crime scene activity derived from ShotSpotter data, or provide other forensic consultation services, these services are available for an hourly fee.

In 17 states and in the District of Columbia, ShotSpotter evidence and ShotSpotter expert witness testimony have been successfully admitted in over 100 court cases. ShotSpotter forensic evidence has prevailed in nine Frye challenges, including four in California, and five Daubert challenges throughout the United States.

Onboarding Services

Concurrent with the sensor design and deployment activities, ShotSpotter will provide a series of onboarding services to prepare the Police Department to maximize the value of the ShotSpotter service. These standard onboarding steps will be refined to best serve the Department team and ShotSpotter users. ShotSpotter onboarding services are designed to:

- Ensure successful ShotSpotter activation (go-live)
- Ensure full utilization of the features and functions available with the ShotSpotter service
- Ensure that the Department's Best Practices are refined, as needed, to respond most effectively to the gun crime intelligence data being delivered for the coverage area
- Track and monitor the efficacy of the ShotSpotter service

ShotSpotter has assembled a Customer Success Team of professionals with more than 100 years of combined law enforcement experience. The mission of this team of Consultants, Trainers, and Analysts is to maximize customer success with the ShotSpotter service. This team is available to our customers both pre- and post-production to advise, train, and guide them on the most effective use of the tools and services available with the ShotSpotter solution. The following provides a high-level overview of ShotSpotter's standard Customer Onboarding Services, which will be tailored to support the Department:

Getting Started

Prior to contract execution, a ShotSpotter Customer Success Director will work with the Department's project team to plan the onboarding process, beginning with an onsite Customer Kick-Off Meeting with all stakeholders. The teams will review the program objectives, lay out the key implementation steps, agree on a targeted activation date (go-live), and establish a protocol for ongoing communication throughout the onboarding process. ShotSpotter will schedule biweekly status calls with the Department's Program Manager and other project leaders to maintain regular communication throughout the implementation process.

Best Practices

Early in the Customer Onboarding Process, ShotSpotter's Customer Success team, led by the assigned Customer Success Director, will work with the Department's Program Manager and other project leaders to schedule and conduct a series of Best Practices sessions. These sessions will assist the Department in establishing response protocols and procedures to manage the gunshot alerts and gun crime intelligence data that will be provided upon activation of the ShotSpotter service. ShotSpotter will customize and conduct these sessions for each of the following groups of users involved in the gun violence reduction program in the targeted coverage area:

- Program Management
- Dispatch/Communications
- Field Operations/Patrol
- Investigations
- Prosecution
- Intelligence & Crime Analysis

User Training

ShotSpotter will assign a Customer Success Director to the Department to ensure that we deliver consistent, quality training based on the Department's needs. In preparation for the planned cutovers, ShotSpotter will train each group of users on the ShotSpotter applications, including ShotSpotter Respond, ShotSpotter Dispatch, and the Investigator Portal. Using a combination of instructor-led, train-the-trainer, and on-line computer-based training, ShotSpotter's Customer Success Team will work with the Department to tailor a training program that addresses the unique needs and/or scheduling constraints of the Department users.

Agency Metrics/KPIs (Key Performance Indicators)

ShotSpotter Customer Success team members, led by the assigned Customer Success Director, will work with the Department's Program Manager and Command staff to review, define, and adopt a set of agency metrics, or Key Performance Indicators (KPIs), to establish and monitor the efficacy of the ShotSpotter service and related agency Best Practices. It is important to ensure that the agency and all stakeholders have visibility (and routines in place) to track the program metrics or KPIs needed to monitor the status of the program and to make informed decisions regarding resources, response protocols, and the best practices to drive success.

Onsite Support During Service Activation (Go-Live)

On the day of ShotSpotter service activation to a live production status, ShotSpotter's Customer Success Director will be on site to ensure that the transition is smooth, that the established best practices are being implemented as planned, and that user questions are answered quickly. Following system activation, the Customer Success Director will facilitate a series of Weekly Status Calls with the Department to review the status and results being achieved by each group of users involved in the gun violence reduction program.

Ongoing Customer Support

ShotSpotter standard customer support includes 24/7 assistance with user accounts, software interface, tools, features, incident (re)classification, and review. Tier 1 Support is provided by our Incident Review Center (IRC). IRC staff have extensive experience with ShotSpotter applications and provide real-time support of basic issues, and first level of support for information gathering and triage for advanced troubleshooting by Tier 2 Support. The Tier 2 Support Team comprises technically advanced, experienced Customer Support professionals who are responsible for advanced levels of troubleshooting and analysis, IT Support, mapping issues, etc.

Support Level	Tier 1 Support (IRC)	Tier 2 Support (Customer Support)
Features	- Login support - Report a misclassification - Report a missed incident - Report a mislocated incident - Basic audio request - General/application questions - Request for ILS	Normal Support: - Analysis of missed gunshots - Detailed audio search - Performance analysis - Integration issues Critical Support: - System outage
Hours of Operation	24x7x365	Normal Support: 8 am–5 pm (weekdays) Pacific Time Zone Critical Support: 24x7x365

ShotSpotter has 100 customers covering more than 750 square miles. ShotSpotter is the leader in the development and deployment of wide area acoustic gunshot detection and location systems. Today, ShotSpotter provides gunshot detection and location services to law enforcement agencies across the country. Among these are:

- New York
- Chicago
- Milwaukee
- Minneapolis
- Boston

- Miami
- San Francisco
- Omaha
- Fresno
- Washington DC

Pricing

5.0 mi² Coverage Area

Item	Quantity	Unit Price	One-Year Subtotal	Discount*	Three-Year Total
Service Initiation	5.0 mi²	$10,000	$50,000	($50,000)	$ 0
Onboarding	1	$10,000	$10,000		$10,000
Annual Subscription Fee	4.0 mi²	$65,000	$260,000		$780,000
Annual Subscription Additional Square Mile*	1.0 mi²	$65,000			$ 0
GRAND TOTAL	**5.0 mi²**				**$790,000**

*See Pricing Assumptions below for details.

This proposal has been prepared in alignment with an agreement with Broward County for any municipality within Broward County to contract with ShotSpotter (directly, or as an amendment expanding the Coverage Area under the ShotSpotter/Broward County Flex Services Agreement) for additional ShotSpotter coverage under the following terms:

- Annual ShotSpotter Flex Subscription fees of $65,000 per square mile; and

- Annual ShotSpotter Flex Subscription Fees will be waived for one square mile in exchange for the City of Pompano Beach funding a three-year term agreement for a minimum 4 square miles of new coverage.

- The pricing above is available for the term of the applicable Agreement or contract Amendment up to a maximum of three (3) years.

- The pricing above is available for any Agreement or Contract Amendment that is executed no later than March 31, 2021 with funding to support the Agreement available by no later than December 31, 2021. ShotSpotter shall be under no obligation to begin implementation of services prior to notification from the Customer or applicable contracting agency that funding has been appropriated.

Forensic Consultation Services

Forensic Consultation Service Fee (Expert Witness Services) $350/hour
Expert Witness Testimony Services are available upon request and billed separately at the above rate.

Optional Additional Services

Notifications API License Pack $9,500/year

- Recurring annual subscription fee
- Includes up to three interfaces
- Does not include costs required from other vendors to implement or support the planned interfaces

Payment Terms

Payment for the service initiation, onboarding, and subscription (excluding optional interface license), shall be as follows:

- 50% of Year 1 fees due upon execution of agreement ($135,000)
- 50% of Year 1 fees due upon ShotSpotter activation (live) status ($135,000)
- 100% of Year 2 fees due prior to 1st anniversary of ShotSpotter live status ($260,000)
- 100% of Year 3 fees due prior to 2nd anniversary of ShotSpotter live status ($260,000)

Expert Witness Testimony Services are available upon request and billed separately at the above rate.

Pricing Assumptions

This pricing is submitted based on the following assumptions:

- This pricing assumes that the services will be delivered under the terms the Standard ShotSpotter Flex Services Agreement with the City of Pompano Beach to which this Proposal will be attached as Exhibit A.

- This pricing does not include any state or local taxes; if taxes are applicable, we will be happy to provide an amended price quotation upon request.

- This pricing remains valid through March 31, 2021.

- The Multi-Year Term Commitment discount will be applied to the one-time fees and is contingent upon ShotSpotter receiving a three-year term commitment allowing us to invoice automatically for each annual subscription term over the three years of the agreement, without any requirement for obtaining additional approvals, or notifications, except as otherwise provided in the Agreement.

- The pricing assumes that the City of Pompano Beach and/or the Broward County Sheriff's Office will provision network access to meet ShotSpotter minimum specifications and requirements for all computers (PCs and MDCs) that will access the ShotSpotter service.

17