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Date: May 29, 2026

To: Jason Chavez, Chair, Public Health, Safety & Equity Committee (PHSE)
PHSE Committee Members

Cc: City Council Members
Toddrick Barnette, Commissioner, Office of Community Safety
Jared Jeffries, Deputy Commissioner, Office of Community Safety

From: Robert Timmerman, City Auditor

Robert Timmerman
Digitally signed by Robert Timmerman
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Re: 2026 ShotSpotter Audit

This memo provides an update on the Office of City Auditor's review of the City's ShotSpotter program. This audit is currently in the fieldwork phase, which is when we test key risk controls. Because this work is in progress, we are not positioned to issue formal findings or recommendations. The observations in this memo summarize elements of the ShotSpotter program. We provide this information for your consideration during the contract amendment hearings underway.

Background

Legislative actions 2024A-0631 (Palmisano) and 2024A-0630 (Wonsley and Ellison) similarly requested an assessment of the City's ShotSpotter program for effectiveness. Effectiveness appears in these requests as:

1) The value of the City's financial investment; and
2) ShotSpotter technology utilization in policing.

During fieldwork, we observed reports provided by the City that indicate the ShotSpotter program's return on investment (ROI) is not measured accurately. However, traditional ROI calculations are not well suited to systems influenced by human behavior or dynamic operational environments. Instead, optimization is a more appropriate analytical lens. We have observed that the City uses ShotSpotter to support short-term operational decision making and to optimize certain deployment resources.

Optimization

ShotSpotter is a detection service that includes location reports, which optimize evidence recovery efforts by responding officers and investigative units alike.[1] Gun and evidence recovery is a reliable metric, as observation of any evidence recovered connected to a ShotSpotter report verifies its use.

Also, evidence recovery connected to ShotSpotter location reports demonstrates the use of technology in the larger law enforcement system. MPD enters evidence data for gun crimes to the National Integrated Ballistic Information Network (NIBIN), a federal program maintained by the Bureau of Alcohol, Tobacco, Firearms and Explosives. With each data entry, the City helps make the NIBIN data set large enough to provide useful trend reports and, in turn, accurate gun and ballistic tracking helps optimize MPD's investigative efforts.

Investment Results

We have observed data analysis methodologies from the City that are too narrow to accurately measure ShotSpotter's influence on notifications to the public safety system and police response. For example, we have reviewed City analysis that does not incorporate other variables that influence gun crime dynamics, such as population changes.[2] Without accounting for these factors, the City's analysis cannot isolate the extent of ShotSpotter's effect. Even with more sophisticated models, measurement challenges remain due to the size of the City's data sets. An accurate assessment of dynamic environments typically requires large, long-term datasets that allow key variables to be averaged over time, similar to NIBIN.

Some of these analytical limitations may be partially addressed in the City's short-term strategic planning processes. During weekly MSTAT meetings, the City reviews ShotSpotter information alongside multiple other datasets. These meetings inform weekly deployment strategies and may include adjusting patrol levels or prioritizing investigative resources based on ShotSpotter data that is contextualized.

Some interviewees from the City have emphasized the use of ShotSpotter as a tool for dispatchers and officers alike given current staffing and resource constraints. We are testing risk controls related to how sensor zones are established and over-policing. Previously, historical disinvestment led the City to rely on

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[1] The Office of City Auditor cannot report on utilization levels conclusively because MPD Policy and Procedure Manual; 7-323.02, "ShotSpotter Calls (SPOTS)," directs precinct commanders to allocate follow up investigations by initial responding units. We have not reviewed any report from the City that collects data on the frequency of precinct commanders approving follow up investigations, or the conditions for those decisions. ShotSpotter Calls (SPOTS) | Policies | Active MPD Policies and Procedures | Minneapolis Police | Policy and Resource Hub. Further, it would be out of the scope of this audit to assess whether higher utilization would better optimize evidence collection, analysis that is complicated by models like the Deming Principle.

[2] The Department of Justice has published extensively on the effect of population totals on gun crime; for example: Trends and Patterns in Firearm Violence, 1993–2023.

probabilistic methods that produced inequitable outcomes. Now, simply by using any data-informed strategy, the City avoids the pattern of inequitable over-policing that occurred before.

Oversight

Without comprehensive summary analysis, the City cannot effectively oversee the ShotSpotter contract. While SoundThinking provides summary performance reports, the City would need to independently verify their accuracy to rely on the reports submitted by SoundThinking. Additionally, we have observed collaborative case level interactions between the City and the vendor—for example, the City requesting retrospective ShotSpotter reports when a gunshot victim is located without an associated alert. These interactions are operationally useful but occur on an individual basis and we have not identified Citywide tracking of such requests. Without tracking, the City cannot evaluate ShotSpotter's performance isolated from City collaboration.

Contract oversight should also include planning for potential decommissioning. We have not yet seen clear terms governing end-of-contract conditions. The City could face future risk, including potential misuse of the physical sensor network.

Conclusion

Any lack of investment effectiveness analysis may be an observation about the wrong question. Even if the City had perfect statistical analysis, the responsibility of funding decisions is greater than algorithmic decisions.

The Office of City Auditor continues its work to report findings and make recommendations useful as an audit product, but programs are ultimately funded based on the City's values. We believe that a contract extension creates the least immediate risk to the city. The contract is currently extended through early 2026, with a waiver running through 2027. The City should consider using the time of any additional extension to consider risks associated with maintaining, expanding, or decommissioning the ShotSpotter program.