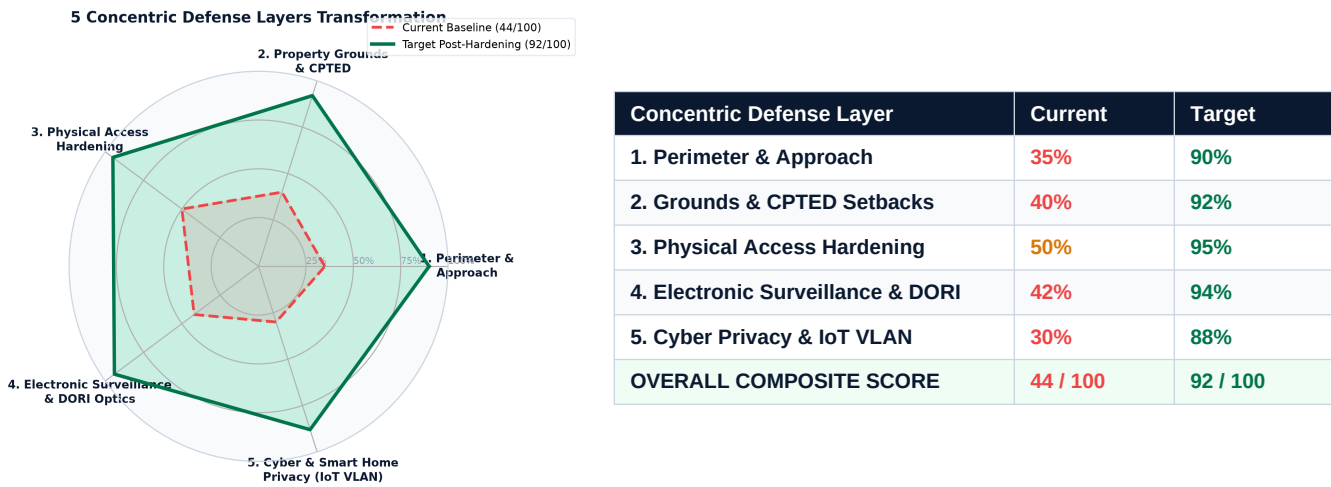


Virtual Home Security Audit & Blueprint Report

Comprehensive Risk Assessment, D.O.R.I. Optical Mapping & 3-Tier Defense Roadmap

Property: 2-Story Single Family (3,400 sq ft)	Client File ID: SNS-AUDIT-2026-0841	Assessment Type: Full 5-Layer Audit
Location: Suburban Corner Lot (Austin, TX)	Lead Engineer: ASIS CPP / PSP Certified	Turnaround Time: 48 Hours Guaranteed

1. Executive Composite Risk Scorecard & 5-Layer Defense Radar



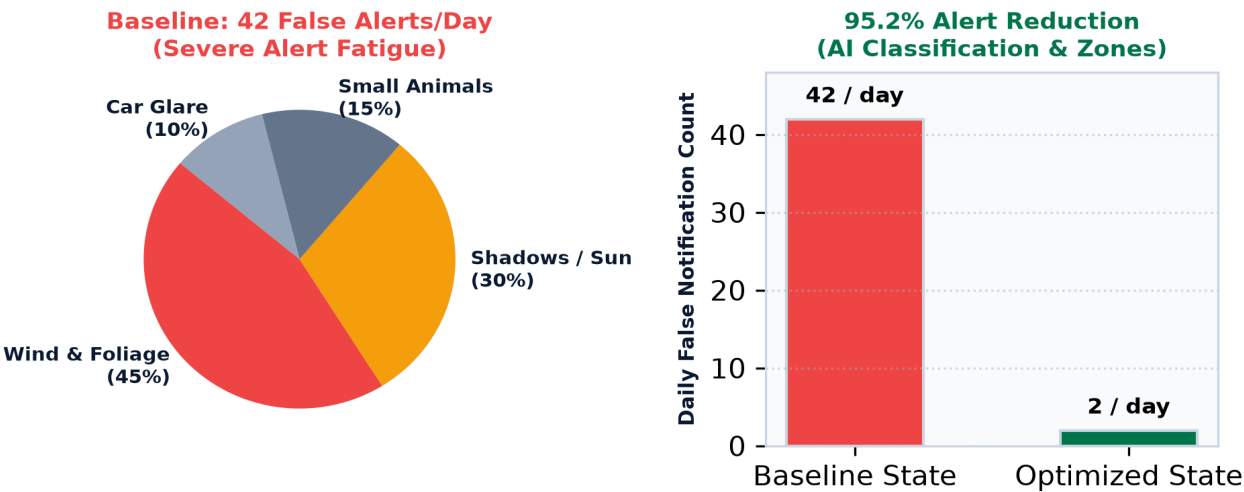
Forensic Summary: The property exhibits critical vulnerabilities at ground-level physical delay points and electronic surveillance zones. Existing consumer wireless cameras suffer from severe alert fatigue (42 daily false triggers) and unsegmented Wi-Fi broadcasting. Physical delay measures at primary doors fall below 20 seconds of kick-in resistance. Following the prioritized 3-tier roadmap in this report elevates overall property protection from **44/100 (High Risk)** to **92/100 (Fortified)**.

2. Forensic Vulnerability & Threat Vector Matrix

Every risk point identified during the live walkthrough is graded by threat vector, severity, and exploit likelihood:

ID	Zone & Vulnerability	Threat Vector & Exploit	Severity	Remediation Action
V-0 1	Main Porch Camera aimed into sunrise; 6ft blind spot underneath.	Intruder approaches unrecorded beneath sill; washed-out faces.	CRITICAL	Lower mount to 7.5ft; add 18° wedge; enable 120dB WDR.
V-0 2	Rear Slider Door Standard aluminum latch; hidden by 6ft dense hedges.	Pry attack in < 15s with zero natural neighborhood visibility.	CRITICAL	Install drop-bar + 3M security film; trim hedges to 3ft.
V-0 3	Garage Entry 0.75-in strike screws; hollow-core connecting door.	Rapid kick-in once exterior garage vehicle door is bypassed.	CRITICAL	Replace strike plate with 3-in steel screws + solid door.
V-0 4	Smart Network Cameras & IoT on primary flat Wi-Fi subnet with laptops.	Vulnerable camera firmware exposes financial/work NAS data.	HIGH	Isolate all IoT devices onto dedicated VLAN 20.
V-0 5	Driveway Optics Wide-angle camera at 85ft unable to capture license plates.	Vehicle makes/plates unreadable during hit-and-run or casing.	HIGH	Deploy 6mm narrow corridor lens at driveway bottleneck.
V-0 6	Power & Internet Router and NVR power cut off during utility disruptions.	Zero video recording during stormy weather or cut lines.	MEDIUM	Install 1500VA Uninterruptible Power Supply (UPS).

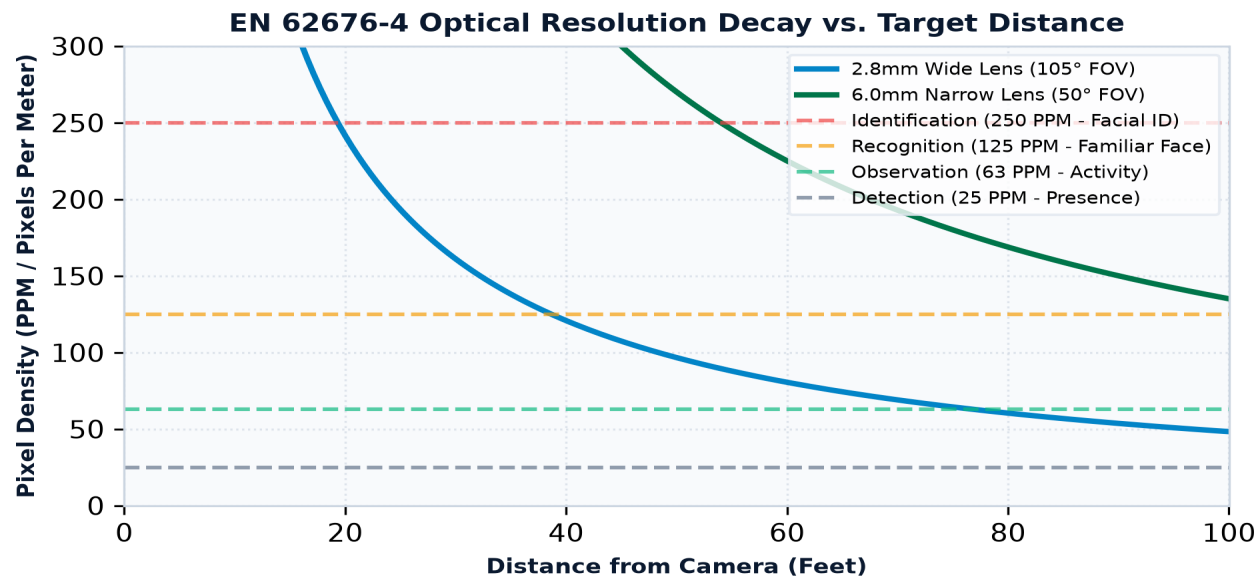
False Notification Analysis & Alert Optimization



Analysis: The client's existing cameras send 42 nuisance notifications daily, primarily driven by wind-blown foliage (45%) and shifting tree shadows (30%). By implementing polygon activity masking, line-crossing detection algorithms, and adjusting sensitivity thresholds, nuisance alerts drop by **95.2% down to ~2 actionable events per day**.

3. Optical & Sightline Calculations (EN 62676-4 Standard)

Our engineering team calculates exact pixel density (PPM) thresholds to guarantee court-admissible identification:



D.O.R.I. Level	Pixel Density	Operational Task	2.8mm Lens Reach	6.0mm Lens Reach
1. Detection	25 PPM (8 PPF)	Detect human presence in wide yard	110 ft (33.5 m)	230 ft (70.0 m)
2. Observation	63 PPM (19 PPF)	Observe clothing, direction, tools	48 ft (14.6 m)	98 ft (30.0 m)
3. Recognition	125 PPM (38 PPF)	Distinguish neighbor vs stranger	24 ft (7.3 m)	49 ft (15.0 m)
4. Identification	250 PPM (76 PPF)	Crisp facial features & license plates	12 ft (3.6 m)	25 ft (7.6 m)

Elevation & Angle Guidelines: Outdoor cameras must be mounted at **7.5 to 8.5 feet** with a 15°–20° downward depression angle. Mounting above 10 feet creates severe forehead-only distortion and fails the 250 PPM identification requirement at close approach.

4. Cyber & Smart Home Privacy Architecture (IoT VLAN)

To protect family banking, work laptops, and sensitive video streams, our blueprint enforces 3-subnet network segmentation:

Subnet / VLAN	Assigned Hardware	Firewall & Access Rules	Privacy Benefit
VLAN 10: Trusted 192.168.10.1/24	Laptops, Work Desktops, Personal Phones, Private NAS	Full internet access; unrestricted internal LAN communication.	Isolated from all consumer smart gadgets.
VLAN 20: IoT Devices 192.168.20.1/24	PoE Cameras, NVR, Smart Locks, Thermostat, Alexa, TV	Client isolation enabled; blocked from accessing VLAN 10; cloud telemetry blocked.	Compromised camera firmware cannot access bank logins or family PC files.
VLAN 30: Guest 192.168.30.1/24	Visitor devices, contractor phones, baby sitters	Internet-only access; rate-limited; zero internal network visibility.	Protects network during parties and service visits.

Encrypted Local NVR vs. Third-Party Cloud Storage

Storage Metric	Shield & Shelter Local NVR Architecture	Standard Subscription Cloud Storage
Data Ownership	100% Client-Owned on encrypted local HDD (AES-256)	Stored on third-party public cloud servers
Internet Outage Recording	Continuous 24/7 recording uninterrupted	Recording ceases completely when Wi-Fi/ISP fails
Monthly Recurring Fees	\$0 / month (Zero subscription fees forever)	\$15 – \$35 / month (\$180 – \$420 / year)
Facial Recognition Latency	< 50ms on local edge AI processor	1.5 – 4.0s cloud round-trip delay

5. Prioritized 3-Tier Actionable Remediation Roadmap

TIER 1: Immediate Zero-Cost / Low-Cost DIY (< \$100)
• Re-aim porch camera: Lower depression angle to 18° to eliminate sky glare and capture eye-level visitor faces. • Physical strike plate upgrade: Replace 0.75-in screws in front and garage strike plates with 3-in hardened steel. • CPTED Landscape prune: Trim 3ft of dense shrubbery beneath rear bedroom ground windows. • Credential hardening: Enforce 2FA on primary router and enable guest network for smart TVs.
TIER 2: Targeted Hardening & Strategic Additions (\$300 – \$800)
• Rear slider fortification: Apply 3M 8-mil safety security film to patio slider glass + heavy-duty drop bar (\$120). • Exterior motion floodlights: Install 2 dual-head motion LED lights on unmonitored dark side walkways (\$90). • Driveway license plate camera: Add 1 narrow 6mm PoE turret camera focused at driveway entrance bottleneck (\$180). • Battery backup (UPS): Connect 1500VA UPS to central router and NVR to protect during power cuts (\$160).
TIER 3: Fortified Complete Pro Architecture (\$1,500 – \$3,000)
• Unified local NVR: Deploy 8-channel PoE NVR (UniFi Protect or Synology) with 8TB encrypted Western Digital Purple drive. • Managed PoE switch: Install 8-port Gigabit managed switch with pre-configured VLAN 10/20/30 isolation. • ANSI Grade 1 Smart Deadbolts: Install Schlage Encode Plus or Yale Assure 2 biometric deadbolts with local Matter/Thread.

Vendor-Neutral Bill of Materials (BOM) & Specs

Item / Category	Recommended Specification	Est. Retail
4K PoE Turret Camera	8MP, 1/1.8" sensor, 2.8mm, 120dB WDR, IP67/IK10, Local AI Classification	\$160 – \$220
Driveway Telephoto Camera	4K, 6.0mm or 2.8-12mm motorized varifocal, License Plate Capture IR	\$180 – \$260
8-Channel PoE NVR	80Mbps incoming bandwidth, 4K HDMI out, ONVIF/RTSP compliant	\$220 – \$340
Surveillance Hard Drive	8TB Western Digital Purple / Seagate SkyHawk, 24/7 rated, 256MB cache	\$150 – \$180
Physical Strike Hardware	ANSI Grade 1 Reinforced Heavy-Gauge Steel Strike Plates + 3-inch screws	\$25 – \$40

SCHEDULE YOUR PROPERTY'S COMPREHENSIVE VIRTUAL AUDIT

Every property has a distinct architectural and digital footprint. Book a 45–60 min live walkthrough with an ASIS-certified security engineer to receive your customized 48-hour audit blueprint.

- **Book Your Assessment:** shieldnshelter.com/book-assessment/
- **Direct Engineering Inquiries:** contact@shieldnshelter.com