

**WIRE-IT**

STRUCTURED CABLING

# The 2026 Guide to Low Voltage Wiring

Everything you need to know about structured cabling,  
Cat6A, PoE, and smart building infrastructure.

A free resource from Wire-It | Omaha, NE

## What Is Low Voltage Wiring?

Low voltage wiring in 2026 is the backbone of modern buildings, powering everything that isn't traditional electrical—data networks, security systems, surveillance cameras, access control, Wi-Fi, and smart building technology. It's no longer just cabling—it's the infrastructure that connects and enables how businesses operate, communicate, and stay secure. Done right, it's clean, scalable, and built to handle growing demands; done wrong, it becomes a hidden bottleneck that limits performance and reliability across your entire operation.

### Key Systems That Depend on Low Voltage

- 1. Enterprise LAN and Wi-Fi 7 access points
- 2. IP CCTV with edge analytics and cloud backup
- 3. VoIP phone systems and unified comms
- 4. Building management and smart lighting
- 5. Access control, intercoms, and alarm panels
- 6. Audio/visual distribution and digital signage
- 7. PoE-powered devices (cameras, APs, sensors)

### Cable Selection Guide for 2026

Cable Type	Speed	PoE Support	Best For
Cat6A	10 Gbps	PoE++ (90W)	2026 baseline for all runs
Cat6	1 Gbps	PoE+ (60W)	Budget-conscious short runs
Single-mode Fiber	100+ Gbps	N/A	Campus backbone, long runs
Multi-mode Fiber	10-40 Gbps	N/A	Building risers, data centers

### Your Low Voltage Readiness Checklist

- 1. All copper runs use Cat6A or better
- 2. Fiber backbone connects floors/buildings
- 3. Cable pathways labeled and documented
- 4. PoE budget calculated for all devices
- 5. Wi-Fi heat map completed for AP placement
- 6. VLAN segmentation for IoT/cameras planned
- 7. Cable pathways have 30% growth room
- 8. Plenum cable used where required by code
- 9. Grounding/bonding meets TIA-607 standards
- 10. Racks have adequate power and cooling

*Wire-It Tip: Choosing the wrong cable today guarantees a rip-and-replace project within 5 years. Cat6A is the minimum standard.*

[Read the full article: wire-it-inc.com/blog](https://www.wire-it-inc.com/blog)

**If your structured cabling needs updating, take the Next Step!**

Book a free commercial cabling audit with Wire-It today.

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