ACT INSTALLS — FOR BUILDERS

WiFi Planning Guide

A condensed planning reference for wiring enterprise-grade wireless coverage into a large luxury home before drywall closes it in.

Wireless coverage in a large estate is a wired-infrastructure problem long before it is a wireless one. Once framing is closed and finishes are set, correcting a coverage gap or a mis-routed run means cutting into finished walls — a conversation no builder wants to have with an owner post-occupancy.

This guide condenses the planning principles ACT Installs applies under The Estate Network™ so your team can rough in the right conduit, cable pathways, and access point locations during framing, not after. It is meant as a working reference for the pre-drywall walkthrough — pair it with your Luxury Technology Advisor's site-specific plan for exact placements.

Coverage Planning and Access Point Placement

Estate-scale coverage is not achieved by adding more access points at random — it is achieved by placing the right number of access points in the right locations, driven by a room-by-room signal analysis rather than square footage alone. Dense construction materials common in luxury builds — plaster, stone, low-E glass, radiant floor systems — all attenuate signal differently, which is why a generic 'one access point per so many square feet' rule fails in high-end homes.

Plan access point locations during the framing phase, before insulation and drywall obscure the pathways. Ceiling-mounted, flush access points integrate cleanly with Invisible Technology™ design goals and outperform closet-mounted units for whole-home coverage.

- ☐ Map coverage room-by-room, accounting for stone, plaster, and glass as signal barriers
- ☐ Prioritize ceiling-mounted access points over wall or closet placement for even coverage
- ☐ Plan for outdoor coverage zones — patios, pool decks, and motor courts — as distinct design areas under ACT Outdoor™
- ☐ Reserve a cable pathway and power run to every planned access point location before insulation

Wired Backhaul vs. Mesh

Every access point should be connected by a dedicated wired run back to a central distribution point whenever the construction schedule allows it. Wired backhaul delivers full-capacity, consistent performance to every access point simultaneously, which matters once a home is running multiple video streams, a whole-house audio system, security cameras, and guest devices at once.

Mesh (wireless-to-wireless) backhaul has a place — retrofit projects, outbuildings added after the fact, or detached structures where trenching is impractical — but it should be the fallback, not the default, on new construction. Specify conduit for every access point location even if a given run will initially operate on mesh; it preserves the option to wire it later without opening a wall.

- ☐ Default to dedicated wired runs from each access point to a central network closet or rack
- ☐ Reserve mesh backhaul for retrofit, remote, or hard-to-trench locations only
- ☐ Run conduit to every access point location regardless of initial backhaul method
- ☐ Centralize network equipment in a dedicated, ventilated closet or on The Signature Rack™

Segmentation and Future-Proofing

A properly planned network separates traffic into distinct segments — primary household devices, IoT and automation equipment, and guest access — so that a compromised smart device or a guest's phone cannot reach household systems or degrade performance for the family. This segmentation is foundational to ACT Secure™ and should be designed into the network from day one rather than layered on afterward.

Future-proofing means treating detached structures — guest houses, pool houses, garages, cabanas — as extensions of the primary network rather than afterthoughts. Running conduit and fiber or high-capacity copper to these structures during initial site work avoids a far more disruptive trenching project later.

- ☐ Segment the network into primary, IoT/automation, and guest VLANs at minimum
- ☐ Design segmentation to support One Touch Living™ automation without exposing it to guest traffic
- ☐ Run conduit to detached structures (guest houses, pool houses, garages) during initial sitework
- ☐ Size the core network for anticipated growth — additional structures, cameras, and automation added over time

Questions about rough-in specs or access point counts for a specific project — reach out to ACT Installs, we're glad to help.