

CODE IS THE FLOOR. STANDARD IS THE CEILING.

Scope: Decorative wall-panel coordination for luxury residential — stone, wood, and metal. Substrate selection behind the panel · back-box depth and geometry · CAD template release before fabrication · cut-line tolerance by panel material · seam and joint avoidance · panel-stage trim-out for keypads, invisible speakers, intercoms, thermostats, touchscreens, HVAC trim and low-voltage outlets · panel-stage QC and spare archive.

§01	OPERATING PRINCIPLES
- The template is the trade. Restrepo's CAD template lands at the stone yard, mill, and metal shop before the panel is cut — never after. - Decorative panels are finish, but the device behind them is structure. Substrate, blocking, and back-box are framed and signed off pre-rock. - Every device break in a panel is a coordination event with a published owner. No device is field-located on a finished panel. - Cut-line tolerance is per panel material — stone holds ±1/16 in., veneer wood ±1/32 in., metal panel ±0.5 mm. Tolerance is a contract, not a guideline. - Devices never land on a panel seam. The seam plan is reviewed before the shop drawing is released for fabrication.	

§02	SUBSTRATE BY PANEL MATERIAL — RESTREPO BASELINE
- Behind stone (slab, tile, thin veneer): cement backerboard or Type X gypsum + waterproof membrane per ANSI A108 — never bare drywall, never wood-based panel. - Behind wood veneer panels: 3/4 in. CDX or moisture-stabilized MDF per AWI ANSI/AWI 0642-2024 — flat, dry, and signed off before veneer. - Behind metal panel (composite, honeycomb, anodized): 18 mm aluminum honeycomb backer or stable substrate per panel manufacturer; substrate flat to ±1.0 mm per StoneSheets 044200 tolerance. - Substrate face plane verified flat across the device opening — Lutron Palladiom App Note #705 calls out wall flatness as the most critical pre-install factor. - Back-blocking present and continuous behind every device cutout, not just at the perimeter — substrate alone does not carry torque. - Specifier-driven alternates (Hardibacker, marine ply, plaster-on-stone) only with written direction on the panel shop drawing.	

§03	WITHOUT WRITTEN DIRECTION — DO NOT DEFAULT
- Field-cut a stone or veneer panel to fit a device. Cuts are CNC or shop-routed against Restrepo's CAD template, not jobsite-trimmed. - Mount a device cutout across a panel seam, miter, or book-match join. Every device lives in the field of one panel. - Specify a back-box deeper than the substrate cavity allows behind a stone or panel build-up. Depth is solved on the section, not on the wall. - Use wood-based substrate (particle, OSB, lauan, softwood ply) as a tile or stone backer — explicitly disallowed in ANSI A108/A118. - Substitute a flush-mount keypad family for the one specified mid-job because a back-box arrived. Devices are mapped to substrate at design, not at trim-out. - Cut a panel without a Restrepo-approved template release. The template is signed; the cut is final. - Drywall-mud or skim-coat over a panel seam adjacent to a Stealth, Sonance Invisible, or Amina speaker — finish discipline per Vol 08 still applies on panel work.	

§04	BACK-BOX GEOMETRY & DEPTH
- Lutron Palladiom: international round (EBB-1-RD), square (EBB-1-SQ), or 3-COL (EBB-1-3COL) per AppNote #705 — minimum wallbox depth 25 mm (1 in.). - Crestron Cameo: drywall spring-clamp (no back-box) or 1-gang with MMK-G1-CBF-T mud ring — mud ring is the preferred mount where panel build-up creates an irregular cutout. - Crestron BB-5000 lectern/wall back-box: pre-drywall mount, fastened to stud — supplied template is the only legitimate cut-line. - Adjustable mud rings (Hubbell HBL869AMR, 1/2 in. – 1-3/8 in.) are the Restrepo standard where panel + substrate stack varies across the wall.	

QC GATE — VERIFY BEFORE CLOSE-IN

☐ Substrate confirmed against panel material spec	☐ Back-blocking continuous behind every device cutout	☐ Back-box depth and mud-ring registered to finished panel face	☐ CAD template signed and released before panel fabrication	☐ Cut-line tolerance held per panel material spec
☐ No device cutouts on panel seams, miters, or book-match centerlines	☐ First-panel inspection signed before run continues	☐ Bezel face flush to panel face within bezel coverage tolerance	☐ 5% spare panels and signed template archive at closeout	☐ Substrate, cutout, and bezel photos filed in project record

§05	TEMPLATE RELEASE & SHOP DRAWING COORDINATION
- Restrepo issues a CAD template package per project — every device cutout, every penetration, every blocking note — released to the panel shop before fabrication. - Panel shop drawing returns to Restrepo with cutouts overlaid on the panel layout. Restrepo signs the drawing or marks revisions; only signed drawings are released to fabrication. - Templates dimensioned from two reference edges per opening, not from a centerline alone — eliminates rotational drift on rectangular cutouts (Crestron BB-5000, Cameo). - Manufacturer template (Crestron BB-5000, MMK-G1-CBF-T, Palladiom EBB-1-3COL) is included as-is on the shop drawing — not photocopied, not redrawn. - Template release log: file name, revision, date, recipient — kept in the project record. Every template change reissues the log entry. - Field-deviations from the released template require written authorization before the cut. Verbal field changes are not authorized cuts.	

§06	CUT-LINE TOLERANCE BY PANEL MATERIAL
- Natural stone slab and large-format tile: ±1/16 in. (1.6 mm) cut-line tolerance per Marble Institute Dimension Stone Design Manual — held at the saw, not at the wall. - Wood veneer panel (sliced veneer over MDF/CDX core) per AWI ANSI/AWI 0642: ±1/32 in. (0.8 mm) on visible cutouts; book-match and slip-match panels held tighter. - Metal composite panel: per StoneSheets/manufacturer spec — width ±1.0 mm, length ±2.0 mm, thickness ±0.2 mm; cut-out tolerance ±0.5 mm at the bezel line. - Plaster, lime-wash, and Venetian-finished surfaces: cut-line is the finished plaster line, not the substrate cut. Hold to ±1/32 in. for invisible speaker registration (per Vol 08). - Adhered thin stone veneer: cut-out per CSI All-Things-Stone Installation Guidelines — corners and openings sized in the layout, not field-trimmed at the wall. - Tolerance stack-up verified before fabrication: bezel + mud-ring + panel cut + substrate cut + back-box opening — sum compared to bezel coverage.	

§07	SEAM, JOINT & SYMMETRY COORDINATION
- Devices land in the field of a panel — never on a vertical seam, horizontal break, or book-match centerline. - Panel layout reviewed against device location: Restrepo's template overlay flags seam conflicts at the shop-drawing review, not at the wall. - Wall niche / hot-spot devices (intercom, thermostat) located on the visually quiet panel — not on the focal book-match or slab feature. - Stone tile field cuts kept ≥ 1 full course off any device cutout perimeter — eliminates sliver-cut grout joints adjacent to bezels. - Multi-device gangs (paired keypads, gang of three Palladiom) sized to a single panel face — never split across a seam, even where geometry permits. - Symmetry rule: if two devices flank a centerline, both land on identically book-matched panel pairs, dimensioned from the centerline outward.	

§08	SPEAKERS & INVISIBLE DEVICES BEHIND PANELS
- Stealth LineaResponse / LineaRadiance behind veneer wood: 1/16 in. mud feather max; veneer per Stealth retrofit guide. - Sonance Invisible behind plaster or Venetian: DISC depth gauge (SKU 93491) loaned to the finish trade; thickness validated before final coats. - Amina Mobius / Edge behind plaster panels: 2-3 mm shim alignment with backbox CV345; perimeter taped per Amina Cavity Wall guide. - Behind stone or solid-surface: invisible speakers are not direct-mount — sound-isolating enclosure or air-gap chamber required.	

§09	HVAC TRIM, SPRINKLER & MECHANICAL PENETRATIONS
- HVAC trim diffusers (linear bar, square diffuser, slot) coordinated on the same panel template package as AV devices — single template owner per panel. - Sprinkler escutcheons centered to panel field, never on a seam; cover plate diameter held on the template, not field-cut to fit. - Smoke / CO detector centerlines pulled to symmetry with adjacent AV devices where ceiling panel run is decorative — coordinated on the reflected ceiling template, not the field. - Penetration through stone for mechanical devices uses cement-board or steel sleeve insert — substrate behind the stone is not the structural carry for the device weight. - Recessed lighting through panel ceilings: trim flange registered to panel face via Vol 07 Flush-Mount discipline; substrate cut sized per fixture, not per trim. - Coordination drawing: AV, HVAC, sprinkler, lighting on one panel template — Restrepo or millwork holds the master.	

§10	SUBSTRATE INSPECTION — BEFORE PANEL INSTALL
- Substrate face plane checked with a 6-ft. straightedge — out-of-plane > 1/8 in. in 6 ft. is rejected and re-skimmed before panel mount. - Back-blocking present, fastened to studs, and continuous around every device cutout perimeter. - Back-box face dimension confirmed against panel build-up: deep stone takes deeper boxes; veneer wood takes shallow. - Class 2 SELV/PELV separation from line-voltage maintained inside any back-box that lands behind a panel — Vol 02 still applies behind the stone. - Substrate moisture content confirmed dry per panel manufacturer (especially veneer wood, AWI 0642 dry-fit window) before adhesive or fastener. - Photographs of every substrate opening captured, dated, and filed — before panel install closes the wall.	

§11	PANEL INSTALL COORDINATION — STONE, WOOD, METAL
- Stone: thin-set bed per ANSI A108.1A/B, full perimeter coverage at every cutout — voids are torque defects. - Wood veneer: adhesive + concealed mechanical per AWI ANSI/AWI 0642 — no nails, no pins, no bondo around cutouts. - Metal composite: rivet pattern per panel maker; rivets stay 25 mm minimum off device perimeter. - First-panel inspection: one panel installed, walked, signed — every project, every panel material. - Damaged cuts replaced from spare archive, not field-patched. Out-of-tolerance bezel cutouts are scrap.	

§12	BEZEL TRIM-OUT & FINAL REGISTRATION
- Bezel registers to the panel face, not the substrate; mud ring or back-box buried below panel face per the bezel coverage tolerance. - Engineered-flush bezels (Vol 07) require panel cut-line within ±1/64 in. of the bezel face dimension. - Skim-coat or plaster touch-up held to the bezel-face line — no compound on bezel face, no panel scuffing. - Flatness check: straightedge across bezel and adjacent panel — gap > 0.5 mm rejected, mud ring re-shimmed. - Capacitive keypads (Basalte, Palladiom) checked for back-of-bezel air-gap maintenance.	

§13	PANEL-STAGE QC, SPARES & CLOSEOUT
Spare panels: ≥5% of each panel material at closeout; one panel from each book-match or slab batch held for warranty.	