CHECKLIST: VILLA DESIGN (DESIGN-ONLY EDITION)

Bali Property Design Checklist

Design milestones, architectural, structural, MEP and interior · July 2026 edition · Drawings and specifications only. Climate-tested for Bali.

> PURE DESIGN, EVERY DECISION THAT GETS DRAWN, ENGINEERED, OR SPECIFIED
>
> This is the design-only edition. No tender, no procurement logistics, no permits, no construction supervision. What's left is the design itself, architectural intent, structural logic, MEP engineering, interior spec. Every item below either ends up on a drawing or in a specification, and every consideration is filtered for what a premium Bali villa actually needs to survive: salt air, monsoon, 80% humidity, intense UV, and an active insect and termite ecology.

01 Site analysis: design inputs

- [ ] Sun-path study mapped on site for every facade
  Drives orientation, overhang depth, glazing strategy and shading-device placement
- [ ] Prevailing wind direction in monsoon and dry season, an input to opening positions and stack design
- [ ] Rainfall intensity at Bali figures (2,000 to 3,000 mm/year)
  Sizes overhangs, gutters, downpipes, drainage, and the ground-level setting
- [ ] Surface water and flood paths mapped, informs the ground-floor level, retaining walls, planter heights
- [ ] Existing trees surveyed and located on plan, shade strategy and floor-plate alignment
- [ ] Soil and geotechnical report received, foundation type and depth set from data, not assumed
- [ ] View corridors and privacy lines documented, drives window placement and screening
- [ ] Distance to the ocean confirmed, the material palette responds to the salt zone (within ~2 km of the coast)
- [ ] Asta Kosala Kosali kaja–kelod axis (mountain–sea) respected in the plan orientation

02 Architectural concept & schematic design

MILESTONE · CONCEPT DESIGN

- [ ] Room programme finalised with GIA per zone (sleeping, living, service, ceremonial)
- [ ] Massing tested in 3D against the site, not just floor plans
- [ ] Single-storey vs two-storey resolved against view, flood and canopy constraints
- [ ] Natah / ceremonial courtyard designed in from concept, not added later
- [ ] Indoor–outdoor transition zones defined: bale bengong, covered terraces, semi-outdoor living

MILESTONE · SCHEMATIC DESIGN

- [ ] Floor plans, site plan, roof plan and two sections issued at 1:100
- [ ] Pool position resolved against the sun path **and** the prevailing wind, not just the visual axis
- [ ] Circulation routes (guest, family, service, staff) mapped and non-overlapping
- [ ] Ceiling heights minimum 3.2 m in living areas; higher where stack ventilation is designed in
  Standard 2.7 m ceilings feel oppressive in Bali humidity and undermine cross-ventilation

03 Architectural DD: passive & tropical design principles

MILESTONE · DESIGN DEVELOPMENT

- [ ] Roof overhangs minimum 1.2 m on sun-exposed facades; 1.5 to 2 m on west faces
- [ ] Cross-ventilation proven with opposing openings in every habitable room, not just a window
  A room with openings on one wall only will overheat by 10am in any season
- [ ] Operable louvres, jalousies or clerestories drawn on every elevation that needs passive flow
- [ ] Roof pitch matched to the monsoon: minimum 30° for tile; gutter and downpipe geometry calculated
- [ ] Roof insulation and a reflective membrane drawn into the roof build-up
- [ ] Glazing: low-E coatings drawn on west and east elevations; SHGC calculated per opening
  Solar gain on unshaded west glazing is the single biggest cooling load in a Bali villa
- [ ] Thermal mass managed: an insulated build-up over any concrete roof slab
- [ ] Mosquito mitigation designed in: screens, sealed thresholds, no stagnant water features
- [ ] Rainwater drainage strategy drawn on the roof plan, not left to site
- [ ] Termite barrier drawn into the foundation detail, chemical and physical layers

04 Structural design

- [ ] Structural strategy aligned with the architectural intent, no late-stage downstands cutting through ceilings
- [ ] Foundation design responds to the soil report and flood line, pile, raft or strip selected from data
- [ ] Lateral system designed to SNI 1726:2019, Bali is a high-seismicity region, and the design category comes from the site's own seismic data
  Seismic detailing is non-negotiable; modelled by a certified structural engineer (SKK Konstruksi)
- [ ] Column grid coordinated with the architectural plan and ceiling design, no rogue columns in vistas
- [ ] Concrete cover specified for tropical exposure, minimum 40 mm on exposed faces
- [ ] Reinforcement spec resists corrosion, epoxy-coated rebar where coastal exposure demands it
- [ ] Cantilevers, slab thicknesses and beam depths drawn and dimensioned, not noted
  Bali contractors will improvise structure unless every member is dimensioned on paper
- [ ] Roof structure designed for monsoon point loads (water ponding, debris) plus wind uplift
- [ ] Pool shell structural design including waterproofing layers and movement joints
- [ ] Retaining walls designed with a drainage cavity to relieve hydrostatic pressure in the wet season
- [ ] Structural drawings signed and stamped by an Indonesian engineer holding a valid competence certificate (SKK Konstruksi); confirm what your regency's permit review asks for

05 Engineering design: electrical

- [ ] Single-line diagram and load schedule produced, not a power-points-only plan
- [ ] PLN supply capacity confirmed; backup generator and UPS sized to the actual design load
- [ ] Earthing and lightning protection designed, Bali has serious tropical electrical storms
  Lightning damage to electronics is one of the most common villa insurance claims in Bali
- [ ] Surge protection designed at the main board and at sensitive outlets
- [ ] Solar PV / battery integration drawn at concept stage if part of the brief
- [ ] Switch, socket, data and reading-light layout walked through room by room
- [ ] Dimming and scene-control infrastructure drawn into the electrical design, not retrofitted

- [ ] Cable runs and tray sizing drawn for low-voltage and AV, separate from power
- [ ] Pool, garden and feature lighting circuits designed on dedicated RCBOs

06 Engineering design: plumbing & mechanical

- [ ] Water source identified and pressure-tested, mains, well, or hybrid, with a pressurised system designed
- [ ] Hot-water generation strategy: heat pump, solar-thermal or instantaneous, sized per fixture demand
- [ ] Greywater and rainwater reuse designed at concept if part of the brief
- [ ] Septic, grease trap and drainage field sized to SNI standards, located above the flood line
- [ ] Plumbing routes drawn on coordinated drawings, not left to plumber discretion
- [ ] Bathroom and laundry waterproofing detailed in section, not noted
  A noted "WP membrane" gets installed differently by every trade; draw the layers
- [ ] AC zoning designed around the passive strategy, AC as backup, not primary cooling
- [ ] Indoor and outdoor unit positions coordinated with the elevations, no condensers on the entry facade
- [ ] Refrigerant pipe routes and condensate drainage drawn on coordinated MEP plans
- [ ] Ceiling fans designed into every bedroom and living zone, on dedicated circuits
- [ ] Kitchen extraction ducted to the outside, never recirculating in a tropical kitchen
- [ ] Bathroom mechanical ventilation designed for humidity (minimum 25 L/s per WC)

07 Building envelope & material spec

- [ ] External timber spec: tropical hardwood (ulin, merbau, bengkirai) or properly treated teak
- [ ] Exterior metals in 316 stainless or marine-grade aluminium within 2 km of the coast
  Standard 304 stainless streaks red within one wet season near the sea
- [ ] Render mix specified for a humid climate, breathable, not a sealed moisture trap
- [ ] Glazing system: low-E, framing thermally broken in AC zones, hardware in stainless
- [ ] External paint system: fade-resistant, mould-resistant, manufacturer spec sheet on file
- [ ] Waterproofing detailed at every wet area, roof junction and planter, drawn, not noted
  Layer-by-layer detail on paper; otherwise it gets misread on every job
- [ ] Pool tile, coping and waterline spec'd for the chosen water-treatment chemistry
- [ ] Timber decks designed with a ventilation gap below and stainless fixings throughout
- [ ] Full materials palette presented physically to the client, samples in hand, not PDFs

08 Architectural documentation

- [ ] Full drawing set at 1:50: plans, sections, elevations, RCPs and key details
- [ ] Window and door schedule with type, size, hardware, finish, glazing
- [ ] Finishes schedule per room: floor, walls, ceiling, skirting
- [ ] Tile and stone setting-out drawings for every wet area
- [ ] Joinery shop drawings cross-checked against the architectural intent before issue
- [ ] External works drawings: levels, drainage, hardscape, planting layout
- [ ] Detail drawings at every critical junction: roof eave, parapet, sill, threshold, expansion joint
  Generic eave and parapet details fail under monsoon, Bali needs project-specific detailing
- [ ] All drawings cross-referenced with consistent naming and live revision control

- [ ] The drawing set issued at IFC (Issued For Construction) quality, not a recycled concept set

09 Interior design: concept, space planning & documentation

MILESTONE · INTERIOR CONCEPT (PARALLEL WITH ARCHITECTURAL DD)

- [ ] Lifestyle brief captured: family use, rental, peak guest count, ceremonial use
- [ ] Moodboards per room with material, colour and texture direction approved by the client
- [ ] Space plans at 1:50 drawn to real furniture dimensions, not symbols
- [ ] Sightlines from bed, sofa, pool and entry modelled, what does the guest actually see?
- [ ] Storage audit per room: luggage, linen, cleaning, bar, sports kit, ceremony items

MILESTONE · INTERIOR DESIGN DEVELOPMENT

- [ ] RCP coordinated with the architectural RCP, lighting, fans, AC grilles on one plan
- [ ] Switch, reading-light and socket layouts walked through by a human, not defaulted
  Defaulted layouts always fail the first guest who plugs in a phone beside the bed
- [ ] Bathroom elevations drawn with tile layout, niche dimensions and fixture centrelines
- [ ] Kitchen elevations include appliance specs, the extractor route and socket heights
- [ ] Wardrobe and storage joinery drawn with the internal layout, not just the box

10 Interior: materials, finishes, lighting & FF&E

- [ ] No MDF, chipboard or particleboard anywhere, solid timber or marine ply only
  Particleboard swells and collapses inside one or two Bali wet seasons
- [ ] Upholstery: mould-resistant, UV-stable, removable covers on outdoor-exposed seating
- [ ] Natural fibres (rattan, rope, jute) only in covered or indoor-only positions
- [ ] Leather avoided in unconditioned rooms, it develops mould inside one wet season
- [ ] Rugs synthetic or washable, wool and silk grow mould at 80% humidity
- [ ] Curtains UV-stable with proper lining; rollers and tracks in stainless hardware
- [ ] Paint spec: an anti-mould additive or a dedicated tropical interior paint system
- [ ] Stone sealing schedule designed in, the initial seal plus a re-seal interval written into the spec
- [ ] Bathroom fixtures in solid brass or 316 stainless, chrome-plated zinc fails inside 2 years
- [ ] Lighting designed as a layered discipline: ambient, task, accent, decorative per room
- [ ] Lighting IP rating: IP44 minimum in bathrooms; IP65 for outdoor and semi-outdoor fittings
- [ ] Outdoor lighting designed for the tropical insect ecology, warm CCT (2200 to 2700K), shielded
  Cool-white outdoor lighting attracts insects en masse; guests notice within minutes
- [ ] FF&E schedule with SKU, design intent and install location, every piece spec'd for tropical performance
- [ ] Bespoke joinery drawn at 1:20 with material, finish and hardware spec
- [ ] Outdoor furniture: powder-coated aluminium frames, rope or sling fabric, no untreated steel

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