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07 — Assumption Ledger (living)

Project: Kingsford Hotel Bacolod — BMS **Date:** 2026-04-28

This file is the canonical record of every assumption applied during proposal generation. Each assumption has an ID, scope, value, basis, source (where applicable), and impact-if-wrong. Phase 7 consolidates these and authors the customer-facing summary.

A-001 — Project stage is Greenfield (despite cover-letter "Rehabilitation" wording)

- **Basis:** Construction Bulletin Oct/Nov 2025 stamps on TUEC + MAAP drawings; absence of existing-system inventory; cover-letter triangulation rule per `_playbook/phases/02-classify.md`
- **Impact-if-wrong:** ±30% on proposal — rehab adds demolition, after-hours premiums, cable-reuse evaluation
- **Linked RFI:** Q-001
- **Linked decision:** D-002

A-002 — Brand selection: Siemens for BMS, Dell for PCs

- **Basis:** Internal preferred brands per `_playbook/checklists/preferred-brands.md`; Megaworld customer-kb approved-brands.md is STUB (D-003)
- **Impact-if-wrong:** Net-zero effect on scope, but BOQ line descriptions reference these brands; Megaworld may substitute at shop-drawing review
- **Linked RFI:** Q-012
- **Linked decision:** D-003

A-003 — Project schedule assumed 16 weeks (Engineering 4w + Supply 4w + Installation 6w + T&C 2w + Handover concurrent)

- **Basis:** Typical for a 600-point hospitality+casino BMS in Megaworld portfolio; medium-large tier
- **Impact-if-wrong:** Crash schedule adds night-shift premiums + duplicate teams; longer schedule reduces peak manpower
- **Linked RFI:** Q-004

A-004 — Working hours: normal daytime construction hours

- **Basis:** Typical greenfield site; no occupied-building constraint
- **Impact-if-wrong:** After-hours/weekend work adds ~25% labor premium
- **Linked RFI:** Q-013

A-005 — Currency PHP; payment 30-day; warranty 12 months from handover; retention 10%; VAT 12%

- **Basis:** Standard Philippine market terms for Megaworld portfolio projects
- **Impact-if-wrong:** Retention up to 15% reduces working capital; longer warranty raises spare-parts cost
- **Linked RFI:** Q-014

A-006 — Server-room / head-end PC siting at Lower Ground IT/Telecom room (typical placement)

- **Basis:** Lower Ground level co-located with chiller plant; Megaworld typical
- **Impact-if-wrong:** Head-end at 2F adds ~30 m fiber backbone
- **Linked RFI:** Q-006

A-007 — Hotel PMS (Property Management System) integration NOT in base scope; offered as option

- **Basis:** Not stated in inputs; standard practice when not specified
- **Impact-if-wrong:** PMS integration adds ~PHP 800k–1.5M for gateway + per-room mapping
- **Linked RFI:** Q-007

A-008 — Guestroom per-room HVAC controls (FCU thermostats) NOT in BMS contractor scope; under fit-out / equipment-supplier

- **Basis:** Guestroom-floor BMS points list does not enumerate per-room FCU controls; only DOAS / PAHU / corridor exhaust shown
- **Impact-if-wrong:** If in scope, adds ~280 FCU controllers + cabling for 12 guestroom floors × ~24 rooms typical (≈ PHP 8–14M)
- **Linked RFI:** Q-003

A-009 — Casino-floor CO sensors at AHU/DOAS return air: 1 per casino-serving AHU/DOAS, BMS-supplied

- **Basis:** Casino + back-of-house return-air mixing requires CO monitoring per `bms-hospitality-casino` add-on rows; not explicitly enumerated in mechanical points list
- **Impact-if-wrong:** Removing them saves ~PHP 200k; gaming regulator may demand additional sensors
- **Linked RFI:** Q-008

A-010 — Network: isolated BMS LAN with single uplink to customer LAN at server room

- **Basis:** Standard Megaworld topology; no IT-integration spec provided
- **Linked RFI:** (subsumed in scope assumption; not separately RFI'd)

A-011 — Plumbing scope limited to Centralized Hot Water (calorifiers, headers, heat pumps, recirc pumps); domestic-water booster / transfer / sump / sewage pumps assumed NOT in BMS scope unless customer confirms otherwise

- **Basis:** Only Part C hot-water section provided; remainder of plumbing classes not in package
- **Impact-if-wrong:** If domestic-water booster pumps + sump/sewage pumps in scope, adds ~30 DI/DO + 20 cables (PHP 600k–1M)
- **Linked RFI:** Q-002

A-012 — Cable typical-range fallbacks (per Operating Principle #11)

See `05-working-docs/A3-route-lengths.yaml` for the structured per-context typical-ranges table. Headline values: - Plant-room cables (panel in same room): **12 m typical** - Inter-floor risers: **35 m per floor** - Guestroom-corridor field cables: **35 m typical** - BOH device cables (panel on same floor): **22 m typical** - Roofdeck plant-area cables (CT/PAHU): **15 m typical** - **Basis:** Industry standard ranges + RtRx prior projects; calibrated against EE/ECE plan column-grid bays (7.5 m typical)

A-013 — Cooling tower count: 3 (Roofdeck, CT-1 to CT-3) per BMS Points list

A-014 — Chiller count: 3 (Lower Ground 2F level) per BMS Points list

A-015 — Primary CHW pump count: 3

A-016 — Condenser water pump count: 3

A-017 — Calorifier set: 3 LZ + 3 HZ = 6 total (with 6 heat pumps + 6 circulating pumps)

A-018 — Boiler count: 1 set (SB-1 + SB-2 = 1 lead + 1 standby) at Lower Ground

A-019 — DOAS units: 3 total (2 Roofdeck for guestrooms + 1 2nd Level Casino)

A-020 — PAHU units: 7 (per BMS-03 P&ID) — typical-floor ratio

A-021 — Casino AHU count: 2 (AHU-2M.1, AHU-2M.2)

A-022 — Casino ionizer count: 2

A-023 — General Ventilation (toilet + general exhaust) fans: ~68 across all floors per BMS-01 tabulation

- 2nd Level: 6 (TEF-2.1, TEF-2.3, TEF-2B.3, GS.1, GS.2 + 1 general)
- Ground Floor lobby: 9 (TEF-1.1..1.4, EF-1.2A, EF-LPG.1, EF-1MR.1, EF-1STO.1, EF-MRF.1)
- 3rd Amenity Area: 27 (TEF-3A×2, TEF-3B, TEF-3C×2, TEF-3D×20)
- Basement: 16
- Roofdeck: 2 (EF-RD.1, EF-RD.2, EF-1)
- Other floors: balance to 68

A-024 — BMS field-panel count: 1 per floor + 1 chiller plant + 1 roofdeck + 1 head-end = ~14 panels

- Lower Ground (chiller + boiler + LZ plumbing): 1
- Basement: 1
- GF + GFM: 1

- 2F + 2F Mez (Casino + BOH): 1 (high-density panel due to casino MVAC + AHU)
- 3F: 1
- 5F: 1
- 6-9F (typical-floor stack): 1 per floor = 4
- 10-11F: 1 per floor = 2
- 12F: 1
- Roof Deck (PAHU + CT + HZ plumbing): 1
- **Total: ~14 BMS field panels**

A-025 — BMS Network: BACnet/IP backbone (server-room ↔ floor switches via fiber); BACnet/MS-TP at field (panels ↔ unit controllers); Modbus RTU/TCP for power meters and BTU meters

- Per Megaworld DRC-004-2024 standard practice + BMS-01/02 general specifications

A-026 — UPS for head-end + each BMS field panel: 30 minutes runtime

- 1× rack-mount UPS for server room (3 kVA)
- 1× small UPS per field panel (500 VA)

A-027 — BMS panel power feeds: 240V single-phase, 20 A, NEMA-1 — derived from EE Plan panel-tag conventions ("20AT 230V 2P NEMA-1")

A-028 — Conduit-to-cable ratio: 35% (greenfield, BMS-installed conduit in mostly tray-fed environment); per `B4-site-factors.yaml`

- Basis: Megaworld typical hospitality 30–40% range; per Op#11 reasoned per project (note: helper default is 30%)

A-029 — Production rate modifier: 1.0 (greenfield, daytime, single shift); per `B4-site-factors.yaml`

A-030 — Trend-log strategy: 100% AI / 50% DI / 80% HLI (casino regulatory + hospitality energy-management); per `B1-trend-strategy.yaml`

- Basis: Casino + hotel — slightly elevated DI trending vs. plain hotel

A-031 — Overhead 18%, Contingency 8%, VAT 12% (per `06-commercial-rates.yaml`)

- Basis: Greenfield + Megaworld portfolio = mature relationship + standard MEP-coordinated install. Contingency above standard 7.5% to absorb the missing-drawings risk (G-105/G-106/G-111).

A-032 — Spare I/O capacity: 25% spare per AI/AO/DI/DO class; per BMS-01 spec text and standard

A-033 — Training: 5 days operator training + 3 days engineer training + 1 refresher 6 months post-handover

- Basis: Standard hospitality+casino BMS handover

A-034 — FAT location: Manila workshop; 2-day duration; customer witness invited

- Basis: Standard for Megaworld portfolio

A-035 — Submittals: 3-stage (preliminary 30%, intermediate 60%, final 90%) per Megaworld typical