

WEST END DATA CENTER

801-809 W 4th St, Winston-Salem NC

2ND FLOOR - WHITE SPACE LAYOUT

Air-first - 12 kW air west, GB300 / Vera Rubin liquid east (concept)

LEGEND

- GB300 / Vera Rubin NVL72 rack, 600 x 1200 mm, ≤240 kW
- Air-cooled server rack, 600 x 1200, 12 kW (Hall 1 RDHx to 50)
- Phase tint (key below this panel)
- Air-cooled IT rack 600 x 1200 (network/storage)
- Future Vera Rubin position (Phase IV, ~2030)
- NET - in-row leaf/scale-out switch rack
- In-row CDU, liquid-to-liquid ≈1,800 kW (est. 1.2 x 1.2 m)
- Hot-aisle containment, doors each end
- TCS secondary manifolds (supply / return) in hot aisle
- Facility water (FWS) header, supply / return, overhead
- Overhead busway A / B, 415 V, per half-row
- PDS - 415 V busway distribution switchboard (A or B)
- CW CRAH / fan-wall (air zone needs ≈25-30, not all drawn)
- Adiabatic (ultrasonic) humidifier, RO water
- Overhead fibre backbone tray
- New partition (2-hr where separating electrical)

CAPACITY (IT LOAD)

Area	Racks	IT load
Air 12 kW · Hall 2 · Ph I	224	2.7 MW
Air 12 kW · Hall 1 · Ph I-II	336	4.0 MW
Air 12 kW · Hall 5 · Ph II	208	2.5 MW
Air halls + network (80)	768 + 80	≈10.2 MW
Liquid · Hall 3 · Ph III	64	up to 15.4 MW
Liquid · Hall 4 · Ph IV	64	15.4 MW*

* Power caps Phase II at 9.25 MW, Hall 1 RDHx to 50 kW: ≈17 MW.

DESIGN BASIS

Air halls: 4 rows per 36 ft bay, 12 kW racks, contained 5 ft hot aisles; the 18 in floor is kept, Liquid Halls 3-4: pods of 32 GB300/VR on the slab, in-row CDUs. Boundary on line 8: existing wall, plenum dam, ramp. Hall 1: rear-door (RDHx) ready to 50 kW/rack (Ph III). Vera Rubin: up to 240 kW/rack (Gigabyte OEM sheet), 100% liquid, 600 x 1200 x 2300 mm overall (OEM sheets). Pod = 32 racks (4 x NVL72 SU of 8) + 4 NET racks + 6 in-row CDUs (N+1 at 240 kW/rack). Rows N-S between column lines so every column sits in a cold aisle. Power: 2N. PDS-A / PDS-B per pod in the north gallery feed eight 415 V busways (A+B per half-row, ~3,000 A est.). UPS on P1; MV gear and generators on P1, P2 and Annex. Cooling: air zone on fan walls/CRAHs; FWS up to 45 °C (VR, est.) to CDUs; TCS loop to rack manifolds; CW CRAHs take residual air via hot-aisle containment + ceiling return. Humidity: 20-80% RH non-condensing; keep FWS/TCS supply above room dew point. Leak detection under every pod, CDU and header; VESDA; pre-action sprinkler. Clearances: 4-6 ft air / 23 ft liquid cold aisles, 4 ft front service), 5 ft hot aisle, ≥14 ft end aisles, ≥4 ft PDS working space, 44 in min egress maintained. Structure: GB300/VR ≈2.0-2.2 tons, air racks ≈1 ton (est.). psf on the floor-load sheet. 2nd-floor slab and floor must be verified by a structural engineer before fit-out.

Base: existing 2nd floor CAD (walls, columns, doors, grids). Existing CRAH markings, kW callouts, colours, tile grid and equipment removed. Concept only - not for construction. Figures marked est. are planning assumptions to confirm with NVIDIA / OEM data and the MEP engineer of record.

GRAPHIC SCALE



Issue: concept rev D (12 kW air-first) · 2026-10-27 · Quarry Center

PHASING - 12 kW AIR WEST, LIQUID EAST

- Phase I · Mar 2027 · air · network + Hall 2 + Hall 1 start · 4.05 MW
- Phase II · Sep 2027 · air · rest of Hall 1 + Hall 5 · 9.25 MW
- Phase III · Apr 2028 · liquid Hall 3 and/or Hall 1 RDHx · ≈10-13 MW
- Phase IV · ~2030 · liquid · Hall 4; Halls 2, 5 may convert
- Air | liquid boundary on line 8: wall, plenum dam, ramp

