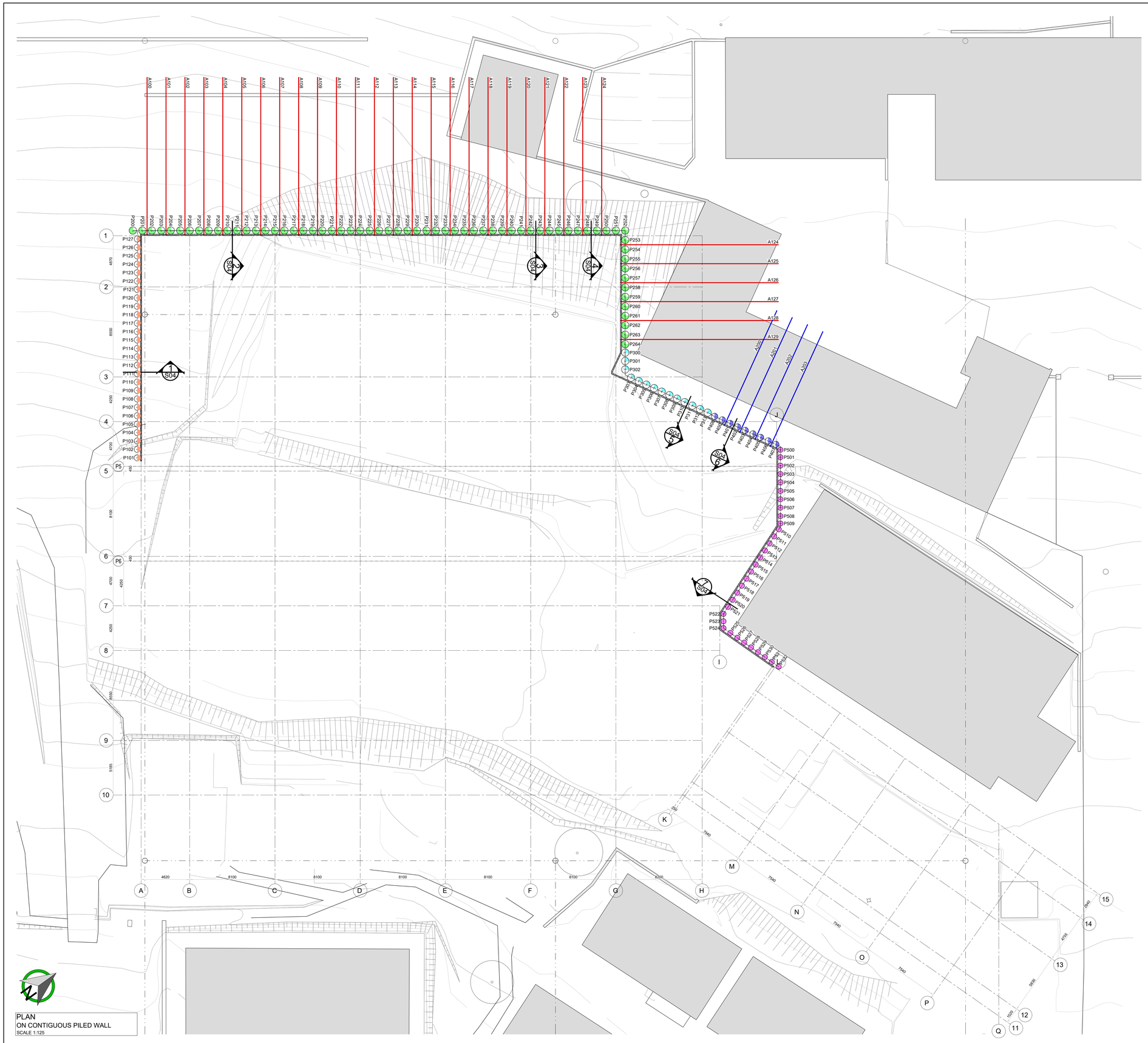

KEY: Retaining Walls

600Ø contiguous piles (Type 1) @ 0.8m c/c
7.5m in length and reinforced with
7Y25 + R8-300. **28No. off.**

700Ø contiguous piles (Type 2) @ 0.9m c/c
17.0m in length and reinforced with
8Y25 + R8-300. **65No. off.**

700Ø contiguous piles (Type 3) @ 0.8m c/c
13.5m in length and reinforced with
8Y25 + R8-300. **14No. off.**

600Ø contiguous piles (Type 4) @ 0.8m c/c
14.5m in length and reinforced with
7Y20 + R8-240. **9No. off.**

500Ø contiguous piles (Type 5) @ 0.8m c/c
9.0m in length and reinforced with
6Y20 + R8-240. **33No. off.**

130Ø soil nails @ 1.8m c/c **15.0m** in length and reinforced with DYWI R32-250. **30No. off.**

130Ø soil nails @ 1.6m c/c **12.0m** in length and reinforced with DYWI R32-210. **4No. off.**

This drawing to be read in conjunction with Drawings No. WIMS 044 044 / S / 02 & 04

This drawing to be plotted / issued in COLOUR ONLY

Revisions:

Rev	Date	Drawn	Description
C0	12-11-2024	S.J.G	CONSTRUCTION

GENERAL NOTES

G1. All Works to be in accordance with the Contract / Specification, the latest issue of SANS 10400 and SANS 1200 unless noted otherwise.
G2. Geotechnical and Structural drawings to be read in conjunction with any relevant Architectural, Civil, Mechanical, Electrical or Other drawings. Any errors or discrepancies are to be reported to the Engineer immediately.
G3. The Contractor to keep a full set of drawings on site. Drawings are not to be scaled; use figured dimensions only. Large scale details to be used, where available.
G4. The Contractor is solely responsible for correctly setting out the site, with particular reference to the site boundaries and building lines.
G5. All setting out to Architect's details.
G6. Piles, pile caps, columns, beams, etc. are central on grid lines unless shown otherwise.
G7. Contractor to check all dimensions and levels prior to commencing work on site, and any errors or discrepancies are to be reported to the Engineer immediately.
G8. Engineer to be given 48hr (minimum) notice to all inspections. No inspections, no Stability / Completion Certificate.

PILE NOTES

P1. Piles to be set out from the building grid. Setting out of the building grid to Architect's details.
P2. Initial setting out of the pile positions and checking thereof after installation shall be carried out by a registered Land Surveyor.
P3. Pile design based on skin friction in accordance with geotechnical information presented in DRENNAN MAUD cc Report Ref. P22649.
P4. All piles to be grout-injected continuous-flight auger (CFA) piles unless indicated otherwise.
P5. Pile capacities to be based on 6MPa of the pile cross-sectional area.
P6. All concrete to have a minimum compressive strength of 30MPa at 28day.
P7. Grout mix design to be submitted to Engineer for approval prior to commencement of piling.
P8. Only Engineer-approved grout mixtures and admixtures to be used.
P9. Piles to be reinforced in accordance with the Specification.
P10. Concrete cover to main reinforcement:
- Pile Ø < 400mm: 50 mm
- Pile Ø > 400mm: 75 mm
P11. Indicated pile lengths to be taken from existing ground level (EGL) and include 1.0m trim to pile trim level.
P12. Details of earthworks to be confirmed prior to commencement of piling. (Where piles are installed in areas of fill the downdrag forces are to be taken into account when calculating final pile lengths.)
P13. Pile design assumes that:
- pile groups are symmetric about both axes.
- individual piles are restrained in both directions.
P14. Tolerances shall be Degree of Accuracy II (SANS 1200F), except that piles shall not be more than 50mm from the designed position.
P15. Deviations of the final from the initial surveyed pile positions are to be reported to the Engineer prior to pile cap construction.
P16. All pile designs are for pricing purposes only and must be re-measurable.
P17. If any pile is damaged during installation such that its usefulness as a pile is impaired, it shall be replaced or strengthened by the installation of a new pile or piles, all as directed by the Engineer. The cost of all remedial measures in this regard shall be borne by the Contractor.
P18. 100% of the piles shall be integrity tested and the pile test reports shall be submitted to the Engineer for approval prior to commencement of construction of the pile caps.
P19. If any pile fails during integrity testing, it shall be replaced or strengthened by the installation of a new pile or piles, all as directed by the Engineer. The cost of all remedial measures in this regard shall be borne by the Contractor.
P20. A detailed record of the piling shall be kept in accordance with SANS 1200.F Clause 5.9.
P21. The Contractor shall produce the specified standards of workmanship necessary to implement the design in the actual conditions encountered so that the piles and pile caps carry the design loads in the specified manner.
P22. In the event of failure of any pile, the Contractor shall make good the same at his own expense and shall indemnify the Employer against any loss or damage to any structure and any injury to any person caused by such failure.

CONSTRUCTION MONITORING NOTES

Y1. Following completion of the capping beam and prior to commencement of excavation of the CPW, a registered Land Surveyor is to set out bench marks at the capping beam at 5.0m c/c.
Y2. During excavation to Ground Floor level, the capping beam bench marks are to be surveyed daily and the cumulative results of the survey are to be forwarded to the Engineer for the purpose of construction monitoring.
Y3. Following completion of installation of the soil nails at Ground Floor level, construction of the Waler Beam, Anchor Testing, and excavation of the CPW to Basement Parking level; the Surveyor is to set out 1 bench mark every 7No. piles at the mid-span of the piles exposed between the Ground Floor and Basement Parking levels.
Y4. During excavation to Foundation Level, the capping beam and pile bench marks are to be surveyed daily and the cumulative results of the survey are to be forwarded to the Engineer for the purpose of construction monitoring.
Y5. Following completion of the Basement Parking level layerworks, the capping beam and pile bench marks are to be surveyed 3No. days weekly.
Y6. Following completion of the Ground Floor Suspended Slab, the capping beam and pile bench marks are to be surveyed weekly.
Y7. Following completion of the First Floor Suspended Slab, surveying may be suspended.
Y8. The system shall be deemed to have failed if horizontal movement at the capping beam exceeds 35mm, or 5mm midspan of the piles exposed between the waler beams and excavation base.
Y9. Any vertical movement is to be reported to the Engineer immediately.
Y10. Any cracks in the capping beam or piles during excavation are to be reported to the Engineer immediately.

EXCAVATION SAFETY NOTES

E1. On-site safety is the responsibility of the Contractor.
E2. Indicated lines of existing services are approximate. All existing services to be located and protected by the Contractor prior to commencement of excavation.
E3. Battering back, shoring, and making safe of the excavations is the sole responsibility of the Contractor.
E4. All excavations exceeding 1.5m in depth are to be suitably shored during construction such that adjacent structures are not undermined and the excavation is safe for access by personnel and equipment.
E5. All excavations to be kept free of water at all times. On-site stormwater management is the responsibility of the Contractor during construction.
E6. Fill to be rolled at the end of each day's work to ensure grade is such that water is not directed to the excavation.

HEALTH DEPARTMENT SIGNATURES

DEPUTY DIRECTOR GENERAL: _____

HEAD OFFICE PROGRAMME / SERVICE: _____

DISTRICT MANAGER: _____

CEO MANAGER OF THE FACILITY: _____

DOH PROJECT MANAGER: _____

IMPLEMENTING AGENT PROJECT MANAGER: _____

PROFESSIONAL SERVICE PROVIDER

Name **S. Gordon (Pr. Eng. 20160768)**

Signature Date

Consultant

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health
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Health
PROVINCE OF KWAZULU-NATAL

KWAZULU-NATAL PROVINCE
PUBLIC WORKS
REPUBLIC OF SOUTH AFRICA

SOUTHERN REGION

Project

DEPARTMENT OF HEALTH
PORT SHEPSTONE HOSPITAL
NEW PSYCHIATRIC WARD

Drawing description

CONTIGUOUS PILED WALL
PILING LAYOUT & DETAILS

Drawn: S.J.G Date Nov2023

Scale/s 1:125

Consultant Drawing number **31319-S01** Rev. C0

Drawing number **WIMS 044 044 / S / 01 / C0**

Stamped by Health Plans Approval Committee