POST TENSIONING & STRUCTURAL SOLUTIONS

DATA SHEET

Contract Number:
B25-035

BlackBrick Umhlanga

10-Storey Development

PROJECT OVERVIEW

- **Client:** AVOCA Developments (Pty) Ltd
- **Main Contractor:** Construction ID (Pty) Ltd
- **Project Engineers:** Sutherland Engineers
- **Specialist Subcontractor:** Post Tensioning & Structural Solutions (PTS-S)

BlackBrick Umhlanga is a boutique Apartment Hotel that combines residential ownership with professionally managed hospitality services in the heart of Umhlanga Village within walking distance of the beach, promenade, restaurants, cafés, and retail amenities, offering an attractive lifestyle and investment opportunity.

The development comprises a nine-storey reinforced concrete structure utilizing post-tensioned flat slabs to enhance structural efficiency, optimize column spacing, and achieve economical span-todepth ratios.

PTS-S SCOPE

Supply and installation of a bonded mono-strand post-tensioning (PT) system for the 5 014 m^2 of post-tensioned flat slabs in the development.

The bonded mono-strand PT system are grouted after stressing and therefore fully bonded along it's length, offering individual corrosion protection, enhanced durability, and improved structural redundancy by transferring loads through bond rather than relying solely on end anchorages. The system also provides superior crack control and post-cracking performance, enabling slimmer slabs, longer spans, reduced column density, and lower concrete and reinforcement quantities, resulting in a more efficient and cost-effective structural solution.

PROJECT OUTCOME

PTS-S successfully completed the PT works that met the projects quality requirements within the required program, delivering a high-quality prestressing solution that demonstrates PTS-S's capability to provide specialist PT solutions for any structure.

Project Timeline

- Duration : 11 Weeks
- Construction Start: January 2026
- Slab Turnaround Time: 2- Weeks

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