



ADDIS ABABA BEAUTIFICATION



WILLOW HEAVY CIVIL

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**MAY
2025**

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INTRODUCTION

Willow Heavy Civil Ltd., a Canadian leader in trenchless infrastructure solutions, presents this proposal to support the City of Addis Ababa's urgent need for modern, non-disruptive underground utility installation. Headquartered in Vancouver, British Columbia, Willow is a trusted and well-established name in one of Canada's most dynamic urban infrastructure markets.

With over 15 years of experience, Willow offers a technology-first, safety-driven approach that aligns with the city's bold beautification and modernization goals. Through advanced directional drilling and micro tunnel boring, Willow eliminates the need for open trenching, ensuring uninterrupted urban life, faster project timelines, and significant environmental and safety benefits. Our solutions are precise, efficient, and proven in dense, high-traffic urban environments worldwide.

What sets Willow apart is not only our method but also our mission. We are deeply committed to long-term collaboration through local workforce training, knowledge transfer, and shared infrastructure success. This proposal is not simply about engineering; it is about building sustainable, resilient cities by empowering local teams with globally tested technology.

As Addis Ababa continues its rapid transformation, Willow stands ready to contribute as a reliable, experienced partner, bringing innovation, capacity building, and real-world results.



BACKGROUND AND PROBLEM

Addis Ababa is undergoing rapid urban transformation, with major investments in beautification, transit expansion, and public infrastructure upgrades. As these efforts progress, the need to install or relocate underground utilities has become increasingly urgent and complex. Traditional open-cut methods used for laying water, power, communication, and transit lines present significant challenges in a dense urban environment.

These conventional approaches often require prolonged road closures, traffic detours, environmental disturbance, and safety risks to both the public and workers. In high-traffic zones or sensitive urban areas, the disruption caused by excavation can delay broader city development goals and reduce public support for essential projects.

To meet the demands of modern infrastructure while preserving surface-level continuity, Addis Ababa requires advanced underground installation techniques that are minimally invasive, highly accurate, and proven effective in similar urban environments.

OUR APPROACH

HORIZONTAL
DIRECTIONAL
DRILLING

MICRO TUNNEL
BORING

REAL-TIME
MONITORING AND
SURFACE-PRESERVING
DEPLOYMENT

Willow Heavy Civil proposes a three-part solution to modernize underground utility installation in Addis Ababa while minimizing surface disruption and public impact. This integrated approach combines cutting-edge equipment, adaptive techniques, and real-time monitoring to ensure safe, precise, and efficient project execution in complex urban environments.

1. Horizontal Directional Drilling (HDD) for Flexible Underground Routing

Horizontal directional drilling allows for the installation of pipelines and conduits along curved or angled paths beneath roads, railways, and urban structures. This method is ideal for areas where underground obstacles must be avoided or surface excavation is not possible. HDD offers flexibility in route planning and enables infrastructure installation without interrupting daily traffic or surface operations.

2. Micro Tunnel Boring for High-Precision Linear Installations

Micro tunnel boring machines are used to create straight, shallow tunnels with exceptional precision. These machines are particularly well suited for busy road intersections, utility-dense corridors, and sensitive urban zones that demand minimal ground disturbance. The method ensures structural accuracy and safety while operating entirely below the surface.

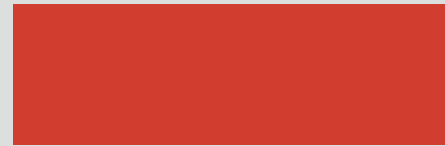
3. Real-Time Monitoring and Surface-Preserving Deployment

All equipment used by Willow is equipped with advanced monitoring systems that provide real-time data on drilling conditions, alignment, and progress. This ensures immediate response to any ground instability or subsurface conflict. The technology operates from compact, self-contained launch points, eliminating the need for open trenching or extensive surface access. This deployment model is essential for projects located in high-traffic or culturally significant areas.





PROJECT BENEFITS



→ Minimal Surface Disruption

Trenchless methods eliminate road closures, demolition, and surface restoration. Roads, railways, green zones, and walkways remain intact, allowing city life to continue without interruption.

→ Faster Project Timelines

Directional drilling and micro tunnel boring can reduce installation time by 30 to 50 percent. This enables faster utility activation and supports rapid development targets.

→ Cost Efficiency & Lifecycle Savings

Avoiding surface restoration and traffic rerouting lowers both initial and long-term costs. Indirect economic disruptions are also minimized.

→ Enhanced Public Safety

No open trenches means fewer risks to pedestrians, drivers, and workers. Operations are conducted from secured zones with minimal public exposure.

→ Local Workforce Training & Knowledge Transfer

Willow is committed to long-term capacity-building through training programs for Ethiopian engineers and operators, ensuring lasting expertise within the country.

→ Environmental and Aesthetic Preservation

These solutions preserve city appearance during and after construction. Parks, heritage sites, and green areas remain undisturbed, supporting sustainable urban growth.

PROJECT TIMELINE

PHASE 1

- ◆ Site Identification and Feasibility
 - Joint site walkthroughs with local stakeholders
 - Assess soil, access points, and utilities
 - Select pilot project location

PHASE 2

- ◆ Local Coordination and Mobilization
 - Finalize collaboration with city teams
 - Import and position drilling equipment
 - Begin local workforce onboarding

PHASE 3

- ◆ Pilot Project Execution
 - Launch trenchless utility installation
 - Monitor ground conditions in real-time
 - Document process for review

PHASE 4

- ◆ Evaluation and Expansion
 - Analyze pilot results with stakeholders
 - Identify next priority corridors
 - Continue training and technology transfer



WHY WILLOW HEAVY CIVIL

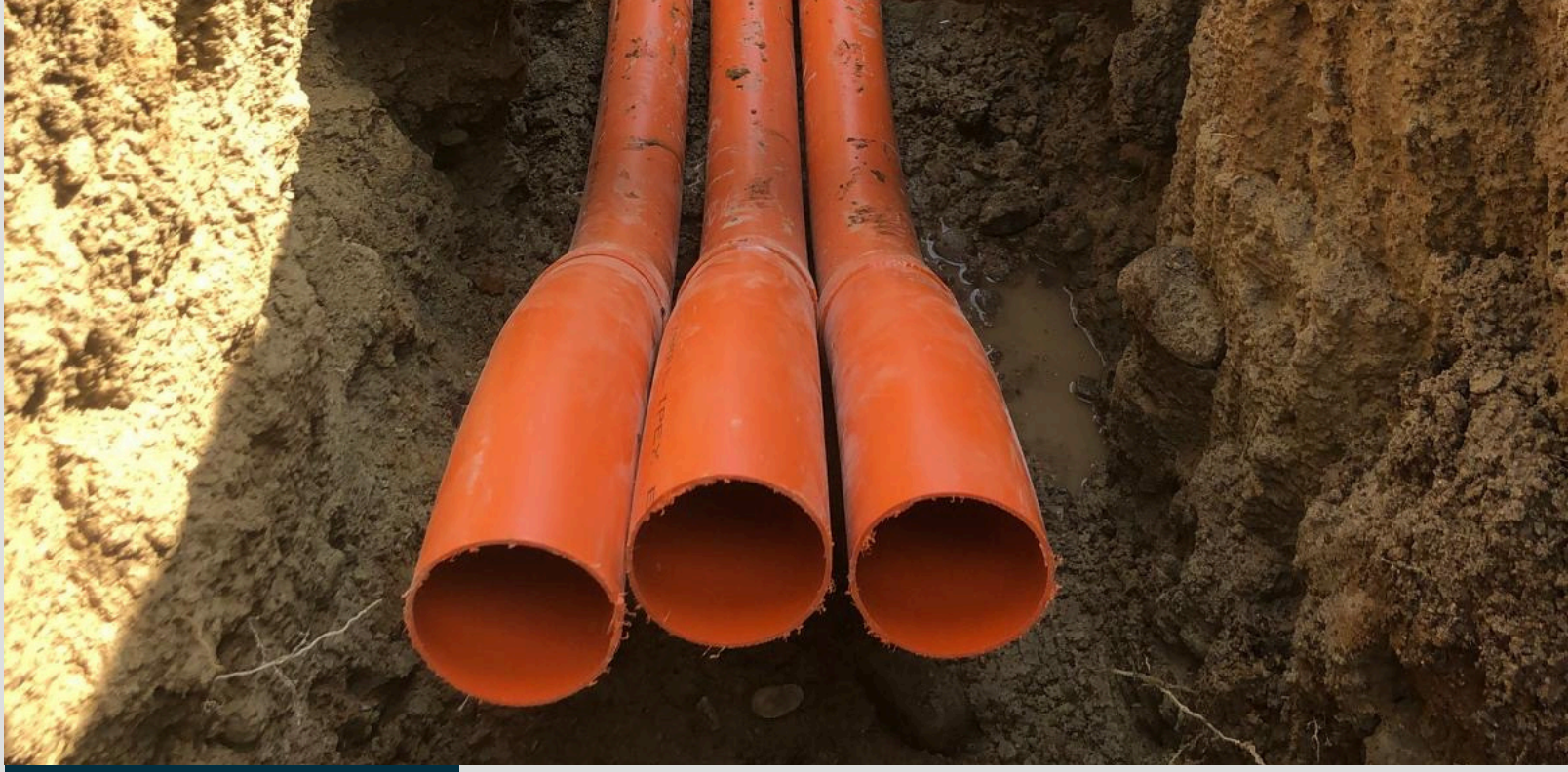
Why Willow is the Right Partner

Willow Heavy Civil offers more than advanced trenchless technology. We bring the trust, adaptability, and long-term vision essential for meaningful infrastructure partnerships.

With extensive experience in complex urban environments, our team understands how to deliver noninvasive, safety-first utility solutions while life above ground continues uninterrupted. Our approach is precise, data-driven, and proven across projects that demand minimal disruption and maximum accountability.

Beyond the technical solution, this project represents something deeply important to Willow. Our leadership holds a personal connection to Ethiopia's future and a deep respect for its people, culture, and development ambitions. We see this as more than a contract. It is a shared opportunity to support the transformation of Addis Ababa into a more connected, resilient, and beautiful city.

Willow enters Ethiopia as a partner. We are ready to collaborate with those who share this vision, to train and empower local professionals, and to contribute to lasting impact through innovation, trust, and shared responsibility.



LET'S WORK TOGETHER

We welcome the opportunity to meet with your team to explore how Willow Heavy Civil can contribute to Addis Ababa's infrastructure and beautification goals. Our team is prepared to begin with a joint site assessment and pilot planning session in alignment with the city's priorities.

We are fully committed to working in partnership to deliver a safe, efficient, and noninvasive solution that supports the broader vision for a modern, connected, and resilient city.

Thank you for considering this opportunity to collaborate.



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