



GOVERNMENT OF BERMUDA

Ministry of Public Works

Works and Engineering

Scope of Work

Project No. 90-05-76

Winton Hill Railway Trail Rock Cut Stabilization

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# **Winton Hill Railway Trail**

## **Rock Cut Stabilization**

Bermuda

### **Annex A**

### **Scope of Work**

Date: October 16, 2017

Project No. 90-05-76



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## Part 1 GENERAL

### 1.1 Scope of Work

The Works consists of:

- .1 Securing the site, controlling all pedestrian traffic, providing a safety watch during operations where rock, trees, or other items may fall onto the railway trail.
- .2 Removing and reinstating the existing chain link fencing.
- .3 Removal of vegetation on the top surface of rock cut and on the walls of the rock cut includes felling and removal of trees and bush.
- .4 Supply and application of a locally approved herbicide to the stumps of all cut vegetation on the top surface of rock cut and on the walls.
- .5 Scaling of the rock cut including the removal of loose soil, rock, and overburden from behind the crest of the slope, the slope face, and benches on the slope.
- .6 Remove of large blocks of fractured rock using air bags, wire ropes and chipping tools.
- .7 Remove all loose sand and gravel from the face of the rock slopes using high pressure air hoses and pipes to ensure no small fall hazards are left on the slopes.
- .8 Rock shaping to provide a safer and more stable rock surface.
- .9 Scaling shall be done by hand, working from a fall restraint or work positioning system and using suitable hand tools and powered equipment.
- .10 In view of the restricted working areas and access to the project site, it has been assumed that scaling crews will be working from ropes at heights.
- .11 Each scaling person working from ropes at heights must have a minimum of Level 1 Industrial Rope Access Trade Association (IRATA) training or approved equivalent. In addition, a Level 3 IRATA or approved equivalent supervisor must be onsite at all times.
- .12 Removal and disposal of the talus and debris material arising from the works.
- .13 After the rock scaling has been completed provide assistance to the Ministry of Public Works Engineers to allow them to inspect the rock slopes and provide detailed design information for the completion of the works.
- .14 Continue to secure the site, controlling all pedestrian traffic, and providing a safety watch during operations when items may fall onto the railway trail.
- .15 Installation of rock anchors as directed by the Engineer, including testing.
- .16 Installation of concrete, by grout pump or similar, to fill voids in the rock slope.
- .17 Installation of architecturally rendered shotcrete to areas of scaled rock face.



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## Part 2 Restrictions

- .1 The Contractor shall phase their works to minimize disruption to pedestrian traffic through a safe and effective management methodology. Closing the trail may be required for portions of the works and these times must be advertised so the public is made aware.
- .2 The Contractor is advised that they will be working in close proximity to residential buildings. All due care and attention must be followed to minimize disruption.
- .3 Access to the site is very limited. The Contractor is advised to coordinate access to the top of the slope with the home owners.
- .4 The Contractor shall submit method statements, with the Tender Submission, to demonstrate how they intend to undertake the works.

END OF SCOPE OF WORK