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Together for Wildlife

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To	Marissa Madrigal, Chief Operating Officer, Metro
From	Tim McCormack, Director of Facilities, Oregon Zoo
Date	Friday, January 16, 2026
Subject	Washington Park Geotech Assessment Scope and ROM

You asked the team at the zoo what the most pressing technical study would be for any government entity or organization interested in restoring rail operations between the Oregon Zoo and the International Rose Test Garden.

First and foremost, we believe it requires a comprehensive geotechnical assessment beyond visual reconnaissance. This is necessary to understand the risks and requirements for safely restoring rail operations along the corridor. The findings will inform feasibility discussions, capital planning, and potential mitigation strategies, while clearly distinguishing planning-level considerations from detailed design or construction decisions.

The following is what we would consider the minimum scope for such an assessment.

Review existing conditions

Conduct a thorough review of prior studies, landslide records (e.g., DOGAMI), and hazard data to identify what is known, what is outdated, and where data gaps exist.

Update corridor mapping and hazard identification

Develop current topographic and hazard mapping (e.g., LiDAR-based) for the full route to identify slopes, embankments, drainage patterns, landslide features, retaining structures, and seismic exposure using modern datasets.

Conduct subsurface investigation

Perform targeted geotechnical borings and testing at representative and high-risk locations to characterize soils, rock, groundwater, and slope conditions, providing defensible, measurable data.

Perform slope stability and landslide risk analysis

Quantitatively evaluate slope stability under static, seismic, and seasonal groundwater conditions to assess the likelihood and consequences of future slope movement, and to identify areas requiring stabilization or ongoing monitoring.

Evaluate retaining walls and earth structures
Assess existing retaining walls and earth-support structures to determine foundation conditions, apparent capacity, remaining service life, and feasibility of repair or replacement for rail operations.

Assess drainage and groundwater conditions
Evaluate surface and subsurface water conditions affecting slopes and structures, including identification of drainage deficiencies contributing to instability and concept-level improvement needs.

Identify monitoring and risk management needs
Determine where long-term geotechnical monitoring may be required, identify appropriate monitoring systems, and outline likely ongoing inspection and maintenance obligations.

Provide concept-level mitigation guidance
Identify types of stabilization and mitigation measures that may be required (e.g., retaining structures, slope reinforcement, drainage improvements) without advancing to design or drawings.

Provide planning-level cost Inputs
Estimate order-of-magnitude costs for geotechnical mitigation, monitoring, and long-term maintenance sufficient for feasibility discussions and capital planning, clearly distinguishing these from design or construction costs.

The geotechnical assessment is estimated to cost approximately $250,000, based on typical corridor-scale geotechnical effort. Assumptions include roughly 50 hours for document review, 100 hours for LiDAR and topographic mapping, at least 6–8 targeted borings with standard laboratory testing ($3,000–$5,000 per bore), 80 hours for slope stability and retaining structure evaluation, and additional staff time for drainage assessment, concept-level mitigation guidance, and project management/reporting. Hourly rates of $150 per hour reflect local consulting rates for experienced geotechnical and engineering staff. Actual costs may vary depending on site conditions, the number of borings required, and final scope adjustments. This planning-level estimate is intended to support feasibility discussions and capital planning while clearly distinguishing planning-level effort from detailed design or construction.