Exhibit B-84: Matthew Miller AESI Resume

Matthew A. Miller, P.E.

Principal Geotechnical Engineer

EDUCATION

B.S., Geotechnical Engineering – Whitworth College, University of Idaho

REGISTRATION/CERTIFICATION

Registered Professional Engineer (P.E.): Washington
Registered Professional Engineer (P.E.): Oregon
Registered Geotechnical Engineer: Oregon
Registered Professional Engineer (P.E.): Hawaii

PROFESSIONAL SUMMARY

Matthew has been performing geotechnical investigations and construction observation in the Puget Sound since 1987. He has completed hundreds of projects requiring field exploration, identification of soil types, determination of soil permeability and infiltration rates, characterization of geologic stratification, documentation of water levels, detailed soil classification, engineering design and report preparation. During this time, he has completed numerous projects in the Seattle area that have focused on the effects of groundwater interaction with slope stability. He has successfully completed multiple projects requiring comprehensive geotechnical analysis, subsurface correlation, and offsite impacts analysis requiring approval by multiple jurisdictions for some of the largest LID projects in Washington State.

He has provided technical education to non-technical audiences and has been an invited guest speaker on the design and analysis of stormwater infiltration facilities and pervious pavements for continuing education courses at Washington State University, University of Washington, Built Green seminars, Washington State Association of Realtors and numerous civil engineering and architectural firms in the Puget Sound Region. Matthew is currently serving on the Advisory Committee for the update of the 2010 LID Technical Guidance Manual for Puget Sound, he is an Advisory Board member for the University of Washington LID Continuing Education Class Series and part of a group of engineering firms under contract by the City of Seattle to analyze and critique the current permeability test methods for biofiltration soils used in LID facilities.

RELEVANT EXPERIENCE

Thornton Creek Water Quality Channel | Seattle, Washington

Matthew worked closely with the project team to successfully complete design for the channel area of the Thornton Creek Water Quality Channel. He directed the geotechnical investigation characterizing the sediment in the channel and the fill overburden that became the embankment leading into the creek channel. Matthew directed the field documentation, identification of soil types, soil permeability, stratification characterization, ground water level determinations, subsurface modeling, laboratory testing, and report preparation. Along the length of the channel the topography required construction of walls ranging in height from 4 to 12 feet. He completed a unique wall design which included encapsulating structural topsoil for a living wall with a planted face. This specific use of the structural topsoil was unprecedented and required special review and approval by the City of Seattle, innovative methods to verify compaction standards, and a field quality control protocol which was devised by Matthew. The overall project was awarded a top design for 2009 in the City of Seattle.

Seattle Public Utility Bio-Retention Soil Study | King County, Washington

Matthew was a leader in the group of local engineering firms and testing laboratories that participated in a study to standardize the testing methods for biorention soils used in LID facilities. Due to the variation in results that were being generated by local industry for permeability using ASTM D2434, it was determined that modifications needed to be made on a local level for consistency. The group split samples and performed permeability tests and

discussed results in roundtable discussions. Based upon the results of the testing alternate methodologies were established and published through the SPU department.

Lakewood Crossing | Marysville, Washington

Matthew directed the geotechnical investigation characterizing the subgrade for foundation support and the potential for infiltration. The Lakewood Crossing project consisted of the development of roughly 47 acres to accommodate one of the largest retail developments in the City of Marysville. Lakewood Crossing was also one of the first large scale uses of permeable asphalt in the Puget Sound. Approximately ¾ of the project site uses permeable asphalt that allows storm water to infiltrate on-site within the parking area, while the remaining on-site paved surfaces use conventional storm-collection systems that also infiltrate within the specially designed asphalt subgrade. The perimeter off-site improvements also implemented low impact development (LID) techniques to allow infiltration on-site to minimize the construction of pond facilities. Matthew was instrumental in the design and the proposal to the city providing design parameters, followed by extensive hydrogeologic modeling in support of the application to reduce the separation to the elevation of ground water. This project has since been a model for the City of Marysville and for several other projects in the vicinity where AESI has provided integrated geotechnical and hydrogeological analysis and design services. The project has also been presented at several conferences sponsored by the WSU Extension and the Puget Sound Partnership as a case study of an example of large-scale permeable surfacing in the Permeable Paving seminar series.

Barton Basin CSO Control – Street-Right-of-Way Green Stormwater Infrastructure | Seattle, Washington

Matthew provided comprehensive subsurface exploration, hydrogeologic mapping, aquifer characterization, and infiltration testing/analysis program to establish allowable design rates for use in GSI retrofit design for King County's Barton Basin CSO control project. The project site encompasses about 200 acres of urban streets located in west Seattle. Pre-design studies completed for the County assumed outwash soils were present at ground surface. AESI's field exploration and testing program revealed the project area is mantled by very low permeability till requiring re-evaluation of pre-design assumptions. AESI evaluated the use of deep Underground Injection Control (UIC) wells to achieve effective CSO control for the basin. AESI's services have included coordination of multiple phases of field exploration, performance testing and analysis to support project design.

100th Street Sidewalk Replacement | Kirkland, Washington

Matthew directed the field documentation, identification of soil types, soil permeability, stratification characterization, subsurface modeling, laboratory testing, and report preparation for the sidewalk replacement project conversion to permeable concrete. We worked with the design team to evaluate the site conditions to locate permeable surfaces and raingardens in locations that were feasible, not only from a site drainage perspective, but also from a geotechnical perspective. Subsurface exploration on the site indicated that specific locations for infiltration would create slope stability hazards and off-site impacts. AESI provided input on the infiltration rates for permeable concrete subgrade, slope stability evaluation and worked with the City of Kirkland providing construction monitoring and construction management services.

Gilligan, Turner, and Mundt Creek - Water Distribution System Emergency Repairs | Skagit County, Washington

Skagit County PUD's water distribution system located in the Gilligan, Turner, and Mundt Creek drainages experienced significant flood damage during a January 2009 rain-on-snow event. As a result of the extreme flood event, all three intake systems were damaged. AESI quickly evaluated the situation and provided recommendations for repair of the landslide and sedimentation issue in order to bring two of the lines back in service within 10 days. The third line was placed on an expedited process for permits with the department of fisheries. A repair plan, a permit, FEMA application, and approval for remediation/stabilization of the area were acquired in three weeks. Our recommendations for the stabilization of the intake structures and pipelines included the construction of a large rock buttress with an innovative tieback cable net system, encasing the buttress to prevent future exposure of the primary water supply pipeline.