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September 28, 2017

Eastside Rock Products, Inc.  
32715 Carmichael Road  
Fall City, Washington 98024

Attention: Ian Mooney, Plant Supervisor

Subject: King County-Recommendation Compliance Memorandum  
Raging River Quarry 32715 Carmichael Road  
Fall City, Washington  
File No. 22534-001-01

GeoEngineers, Inc. (GeoEngineers) is pleased to present this memorandum requested by Eastside Rock Products (ERP) for the Raging River Quarry. The site is located along 32715 Carmichael Road in Fall City, Washington. This letter is provided in accordance with our authorized scope of services dated August 4, 2017 and additional services authorized September 20, 2017 to address ERP's compliance with recommendations provided by GeoEngineers in our evaluation dated August 14, 2017. This memorandum incorporates comments from ERP received on September 28, 2017.

Ian Mooney from Eastside Rock Products provided a written scope of work dated September 18, 2017 describing remedial work completed and scheduled to address the recommendations provided by GeoEngineers. Additionally, verbal communication with ERP on September 26, 2017 confirmed the following efforts are completed or are currently underway to mitigate the following identified issues:

#### **Slope Re-grade**

Excavators have moved most of the borrow pile on the east side of the site and re-graded the slope to a 2H:1V slope as per the provided recommendations. We understand this task will be completed by October 6, 2017. The borrow pile on the north side of the slope consisting of 2 inch-minus material is an active stockpile; however, the east side of this pile will have its slope reduced to a 1H:1V slope to help prevent sloughing into the vegetation. The area will be monitored regularly, and will be monitored during times of precipitation and when actively adding or removing material.

#### **Rockfall Area Cleanup**

ERP indicates they have no practical way to remove the rockfall area that slid below an elevation of 300 feet without significant disturbance of the slope. In addition, the rockfall material has been contained using berms and brush piles. ERP indicates that the rockfall area does not pose a threat for sediment delivery to the Raging River or its 200-foot buffer.

### Re-vegetation

Short term: The eastern slope of the re-graded common borrow pile will be covered with approximately 2 inches of straw mulch. All disturbed areas below 300 feet of elevation, including the rockfall area, will be seeded with a 50/50 mix of DOT erosion control grass and white clover. Straw mulch will be used to cover seeded areas as well.

Long term: Adjacent to the July 2017 rockfall area to the north is an older smaller rockfall area (2015-2016) which naturally recovered with native vegetation (ferns, etc.), so in the long term similar results are expected in the 2017 rockfall area.

### Tree Removal

The two overhanging logs protruding over the approximate area of blast debris were removed in August per discussion with ERP on September 26, 2017.

### Blasting

Methods for rock extraction are now modified for future work, including pulling back rock and material from the slope to help prevent material from sliding down the slope because of blasting. ERP plans to work closely with the blasting contractor to ensure areas are not overshot. Each blast in the region will be stripped completely, evaluated, and individual shot designs will be developed. Evaluating each shot will result in modifications to best mitigate potential hazards associated with each shot.

## CONCLUSIONS

Geoengineers has reviewed the plan set forth in the September 18 memorandum outlining the steps that have been taken and future plans to prevent accidental deposition of material below the 300-foot elevation on the east flank of the quarry. It is our opinion that ERP has substantially complied with our recommendations.

## LIMITATIONS

We have prepared this report for the exclusive use of Eastside Rock Products and their authorized agents for the Raging River Quarry in Fall City, Washington.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted practices for construction observation in this area at the time this report was prepared. The conclusions, recommendations, and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

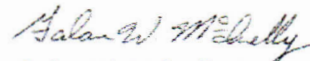
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We trust this letter meets your current needs and provides the necessary information for project acceptance. Please call if you have any question regarding the contents of this letter.

Sincerely,  
GeoEngineers, Inc.



Elson T. Barnett, LG, LEG  
Project Manager



Galan W. McInelly, LG, LHG, LEG  
Principal

ETB:GWM:lw

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