



**MILLER PACIFIC
ENGINEERING GROUP**

June 18, 2018
File: 779.253O&Tpro.doc

San Rafael City Schools
c/o Cumming Corporation
505 14th Street, Suite 900
Oakland, California 94612

Attn: Ms. Teri Mathers

Re: Construction Observation and Testing Budget Estimate
Utility Trench Backfill and Environmental Testing
Laurel Del Elementary School
San Rafael, California

Introduction

This letter includes our proposed scope of services and budget estimate for the construction phase of the new utility lines for Laurel Del Elementary School in San Rafael, California. We understand the project includes constructing new site utilities that will provide services to the new planned classroom improvements. The purpose of our construction observation and testing services is to form an opinion regarding the Contractor's compliance with the geotechnical portions of the project plans.

Based on our discussions with you and review of the project plans, we judge intermittent site observations and testing is appropriate during construction of the project. We anticipate observing and testing the following items:

- **Laboratory Testing:**
We will collect bulk samples of the soils and baserock utilized on the project to determine the maximum laboratory density and optimum moisture content.
- **Subgrade Preparation Compaction Testing:**
We will perform intermittent site visits to perform field density tests (ASTM D 1557) on the compacted utility trench backfill.
- **Environmental Testing:**
We will collect samples of onsite soils for environmental testing. We anticipate testing will consist of CAM 17, total petroleum hydrocarbons (motor oil, diesel, and gasoline), and semi- and total volatile hydrocarbons.

Napa Office:	■	Napa Valley Business Park	■	T (707) 265-7936	F (707) 265-7982
504 Redwood Blvd., Suite 220	■	Novato, California 94947	■	T (415) 382-3444	F (415) 382-3450

- **Other geotechnical items, as needed.**

We have not budgeted for concrete and/or asphalt sampling and testing. We can provide additional scope and budget to perform concrete and/or asphalt testing upon request. We will also provide a letter report summarizing our observations upon satisfactory completion of the project.

Budget Estimate

We will provide our services on a time and expense basis and the attached budget spreadsheet summarizes our anticipated site visits (number and duration) for the various work items. Based on the plans our discussions with the project team and experiences with similar projects, we estimate our fees will not exceed \$15,000 for the project. We can revise this estimate if provided with a construction schedule. Unknowns, such as contractor efficiency, the need for retesting inadequate work, unanticipated subsurface conditions, weather and other factors have been considered in preparing our budget estimate, but may still impact the final budget. We will prepare regularly scheduled invoices and update you on our budget status as the work progresses.

Please sign and return a copy of this letter when you would like to proceed. Feel free to contact us with any questions or concerns.

Sincerely,
MILLER PACIFIC ENGINEERING GROUP



Benjamin S. Pappas
Geotechnical Engineer No. 2786
(Expires 9/30/18)

Attachment: Budget Estimate Worksheet

Agreed:

Date