November 3, 2017
File: PO17066B

Mr. Johnathan R. Balls
Business Manager
Soda Springs Jt. School District No. 150
250 East 2nd South
Soda Springs, Idaho 83276
Phone: (208) 547-3371
Fax: (208) 547-4878
Email: balljona@sodaschools.org

RE: Geotechnical Addendum Letter
Tigert Middle School Additions
250 East 2nd South
Soda Springs Idaho

Mr. Balls:

STRATA, Inc. (STRATA), has prepared this letter as an addendum to the originally issued geotechnical engineering evaluation dated October 9, 2017 for the Tigert Midlle School Additions to be located at 250 East 2nd South, Soda Springs, Idaho. The intent of this addendum letter is to revise select recommendations, based on documentation that was provided by you on October 24th , 2017.

DOCUMENTATION OF FILL PLACEMENT

We understand the provided documentation originates from the construction of the existing middle school. The provided documents include the following:

- Lombard-Conrad Architects PA OUTLINE SPECIFICATIONS FOR SODA SPRINGS MIDDLE SCHOOL Coverpage (dated July 17, 1992), SECTION 02100 – Site preparation, and SECTION 02200 – Earthwork.
- Huntingdon Report of Field Density Tests of Compacted Fill Material for Soda Springs Middle School Project, Soda Springs, Idaho (Dated October, 29, 1992).
- Huntingdon Report of Field Density Tests of Compacted Fill Material for Soda Springs Middle School Project, Soda Springs, Idaho (Dated November, 24, 1992).

Based on review of this documentation we understand a total of 113 in place nuclear density tests were completed during fill placement for the existing building pad. Deinsity testing was completed based on a minimum in place density of 98% referencing maximum density as determined by ASTM D698. These reports also indicate that up to 111 inches (9.25 feet) of fill was placed which correletates with fill thicknesses observed during exploration. During exploration a majority of the standard penetration test (SPT) blow counts observed at exploration locations B03, B05, B06 and B07 also indicate the condition of the fill to be medium dense to very dense which support the documentation.

Based on this information, a significant portion of soil at the site, previously considered undocumented fill, should now be considerd documented fill. We provide a revised Exploration Location Plan indicating the locations which we now consider to be documented fill.

GEOTECHNICAL OPINIONS AND RECOMMENDATIONS

Unless explicitly superseded in the following sections, all recommendations stated in our original report are applicable and should be thoroughly read, understood, and implemented during design and construction. The following geotechnical opinions and recommendations are provided as a supplement to the original report in consideration provided documentaion.

Earthwork

Site Preparation – Classroom Addition North of Existing Middle School

Soil containing significant organics must be stripped and removed from the site or stockpiled for re-use in landscaping applications. We anticipate stripping of approximately 6 inches will be required, depending on location. However, topsoil thicknesses can vary and additional stripping may be necessary in select locations such as in tree and shrub removal areas. Following topsoil removal we recommend the following:

- Excavate the exposed subgrade to the project design elevations and tolerances. STRATA must observe excavation to confirm conditions are as anticipated.
- Moisture condition and compact the exposed sand (documented fill) to a minimum of 95% referencing ASTM D1557. STRATA must observe compaction efforts in order to confirm firm unyielding conditions and to identify yeilding subgrade.
- Following compaction, a minimum of 2 in place nuclear density tests should be performed at each footing line. Utilizing a T-handled probe, STRATA must check each footing line for unsuitable subgrade support characteristics.
- Where unsuitable conditions are identified, the subgrade should be overexcavted as necessary and backfilled with granular structural fill to improve subgrade support characteristics.
- The site preparation procedures discussed above must be implemented prior to initiating foundation preparations.

Site Preparation – Gymnasium Addition East of Existing Middle School

Only one location (B03) was identified to include documented fill based on our exploration program. Undocumented fill was identified in the other gymnasium exploration locations, and as such, our recommendations regarding undocumented fill is not changed by this addendum. We provide a revised Exploration Location Plan indicating the locations of undocumented vs documented fill. STRATA should observe excavations in order to assist in identifying transitions between documented and undocumented fill. Site preparations or clay subgrades within the original report remain unchanged.

Observation, Testing and Inspection

Based on the variable soil conditions, presence of both documented and undocumented fill, and the differeing subgrade preparation requirements between addition areas, it is critical that STRATA be retained to provide the recommended observation, testing and inspection during construction.

Shallow Foundation Design

General

Based on information provided by Frost Structual Engineering we understand that wall loads up to approximately 12 kips per lineal foot and column loads up to 40 kips are anticipated for the middle school additions.

Bearing Soil and Structural Fill Foundation Support

Foundations for the classroom addition located north of the existing middle school should be supported on the existing documented fill prepared as recommended within this addendum.

Foundations for the gymnasium addition area located east of the existing middle school should bear on structural fill as defined in Table 1 of the original report extending to native lean clay. The native lean clay must be prepared as discussed in the *Subgrade and Site Preparation* section of the origional report. Based on the structural loads provided above, shallow foundations in the gymnasium addition area should be supported by a minimum of 4 feet of structural fill.

Design Criteria

No changes necessary.

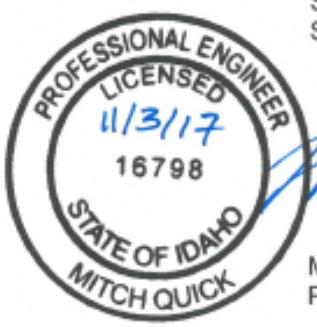
LIMITATIONS

We have compiled this information as an addendum to our originally issued geotechnical engineering evaluation dated October 9, 2017. All limitations of the original evaluation apply to this addendum. Furthermore, unless specifically modified by this addendum, all recommendations in the original report must be adhered to.

CLOSING

We appreciate the opportunity to continue our professional relationship with The Soda Springs Jt. School District No. 150 and the project design team. If you have any questions or comments, please do not hesitate to contact us.

Sincerely,
STRATA



Mitch H. Quick, P.E.
Project Engineer

Rocky V. Benedetti, E.I.T.
Staff Engineer

Dan P. Gado, P.E.
Senior Engineer

Attachments:
Plate 1: Exploration Location Plan

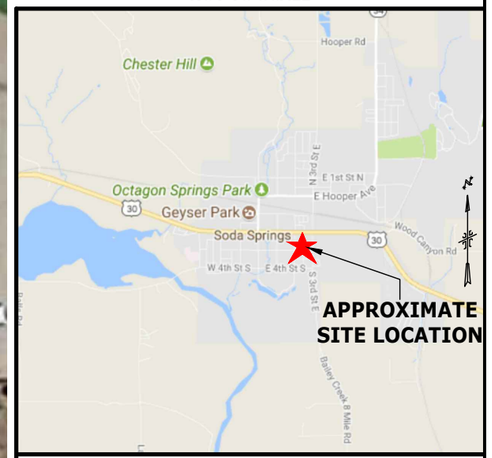
RVB/MHQ/ch

LEGEND

B01-STR-17	Approximate boring location observed by STRATA on August 31, 2017. (Advanced via CME 75 Drill Rig)
(5.0')	Approximate depth, in feet, of undocumented fill observed during exploration.
[5.0']	Approximate depth, in feet, of documented fill observed during exploration.
(15.0')	Approximate depth, in feet, to basalt bedrock observed during exploration.

VICINITY MAP

NOT TO SCALE



EXPLORATION LOCATION PLAN
Tigert Middle School Additions
Addendum Letter
Soda Springs, Idaho

0 25 50 100

SCALE: 1 inch = 50 feet

STRATA
Integrity from the Ground Up

Project Name	Tigert Middle School	Drawing By	R. Benedetti
Project No.	PO17066A	Checked By	M. Quick
Client	School Dist. No. 150	Date	10/30/2017

REFERENCE: Aerial Image Provided by Google Earth dated 06/18/2016.

PLATE 1