



INBERG-MILLER ENGINEERS

Quality Solutions Through Teamwork

June 24, 2020

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**2 PDF PAGES EMAILED: DARCI@SUMMITENGINEERINGWY.COM
THIS CONSTITUTES THE ORIGINAL**

Ms. Darci Hendon, P.E.
Summit Engineering, LLC
5907 Townsend Place
Cheyenne, WY 82009

RE: SUPPLEMENTAL RECOMMENDATIONS FOR FOUNDATIONS
DECEMBER 18, 2019 SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING REPORT
LCCC GREENWAY UNDERPASS
CHEYENNE, WYOMING

Dear Darci:

This letter supplements our December 18, 2019 Subsurface Exploration and Geotechnical Engineering Report (Report) for the above project as requested by Chris Schabron with NCS Structural Engineering.

We were informed by the structural engineer (Chris Schabron with NCS Structural Engineering) that the wingwall foundations are significantly larger than those assumed when the Report was prepared. Based on drawing provided by Mr. Schabron, the footing for the wingwall on both sides of the underpass varies from 7.0 to 15.0 feet wide. The increased footing width does increase the allowable bearing capacity from the values initially given in the Report, however, with an increased footing size, estimated settlement also increases to values in excess of those given in the Report.

Based on Mr. Schabron's calculations, we understand that the actual pressures on the foundation are to be on the order of 1,700 psf or less. Allowable bearing capacity can be increased from 1,000 psf (stated in the original geotechnical report) to 1,700 psf, provided the recommendations of overexcavation and replacement with structural fill or reconditioned native site soils are followed. With actual bearing pressure of 1,700 psf on the foundation, the estimated settlement values for the wingwall foundation increase to approximately 1.3 inches of total settlement, and 0.75 inches per 50 feet differential settlement. If this amount of settlement is unacceptable, ground improvement consisting of Engineered Aggregate Piers (EAP) may be utilized to significantly increase bearing capacity and reduce total and differential settlements. Upon request, additional recommendations for the use of EAP can be provided.

It is noted, as stated in the original geotechnical report, that an adequate dewatering system should be carefully designed and adjusted as necessary to maintain a minimum of 2 feet below the bottom of excavations. The need for an adequate dewatering system is vital to construction below or near static groundwater elevation.

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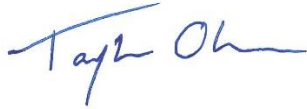
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If you have any questions, please contact our office at 307-635-6827.

Sincerely,

INBERG-MILLER ENGINEERS

Reviewed By:



Taylor K. Olson, P.E.
Geotechnical Engineer



Glen M. Bobnick, P.E.
Vice President/Senior Geotechnical Engineer

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