

December 21, 2017

Tech Contractors  
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**ENTECH**  
ENGINEERING, INC.

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COLORADO SPRINGS, CO 80907  
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Attn: Raul Guzman

Re: Detention Pond  
Windingwalk Filings 1 and 2 and  
Stonebridge The Enclave Filings 4 and 5  
El Paso County, Colorado

Dear Mr. Guzman:

The detention pond referenced above will be constructed within the Windingwalk Subdivision, Filings 1 and 2 at the southeastern corner of the proposed subdivision, northeast of the intersection of Stapleton Drive and Eastonville Road. A Subsurface Soil Investigation was conducted on this property and the findings and development recommendations are reported under a separate cover. This letter should be used in conjunction with our Subsurface Soil Investigation and provides recommendations for constructing a detention pond based on our investigation, laboratory testing, and requirements specified in the El Paso County Engineering Criteria Manual and the El Paso County Drainage Criteria Manual.

The soils in the vicinity of the pond were recovered from Test Boring No. 31. The location of the test boring and the test boring log is included in the soils report. The soils recovered were determined to consist of a one foot layer of silty sand overlying slightly silty to silty sandstone with groundwater encountered at 12.5 feet below the existing ground surface. Six feet of cut is proposed in this area based on the grading plans which will expose the sandstone. Laboratory testing on a sample of sandstone obtained from Test Boring No. 31 at a depth of 10 feet determined the soil to contain 11.8 percent of the materials passing a No. 200 sieve (SM-SW), a Liquid Limit of no value and a Plastic Index of non-plastic, and negligible soluble sulfate attack on buried concrete structures in contact with site soils.

The detention pond design parameters and geometry shall conform to the requirements specified in the El Paso County Engineering Criteria Manual and the El Paso County Drainage Criteria Manual. Sandstone will likely be exposed based on our soil boring, with a soil bearing capacity of 3,500 psf, and soil mitigation will likely not be required. The embankment foundation shall be fully exposed and observed by personnel of Entech to determine mitigation requirements, if any, prior to constructing the embankment. Groundwater is not expected at the proposed excavated depth. The embankment soils shall be compacted to the requirements specified in Section 6.3 in our soils report, 95 percent of the soils maximum dry density as determined by ASTM D-1557 at  $\pm 2$  percent of the soils optimum moisture content. Based on the suggested compaction efforts for the embankment soils and the expected foundation soils, it is likely that embankment settlement will be less than 3 percent of the embankment height. Seepage through the embankment should be minimal due to the limited 3 day detention time and the ability to release the stored waters in 19 hours.

We trust this letter has provided you with the information required to construct the proposed detention pond. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully Submitted,

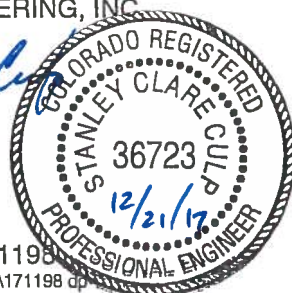
ENTECH ENGINEERING, INC

  
Stan C. Culp, P.E.  
Senior Engineer

SCC/scc

Entech Job No. 171198

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Reviewed By:

  
Joseph C. Goode, Jr., P.E.  
President