



Project Number: 05321770
August 8, 2019

Professional Service Industries, Inc.
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Hummel Investments, LLC
8117 Preston Road, Suite 120
Dallas, TX 75225

Attention: Mr. Steve Meier

**Subject The Falcon Marketplace
 PSI Project No. 05321368**

Dear Mr. Meier:

As requested, PSI, an Intertek Company, is providing this response to address the planned detention ponds to Drexel, Barrell & Co from the El Paso County Department of Planning and Community Development.

PSI has been asked to sign off on the storm sewer and site grading plan as it regards the detention ponds. An additional pond has been added in the southeast corner of the site since PSI originally provided pond recommendations on July 23, 2017. PSI has reviewed the above stated storm sewer plans from Drexel, Barrel & Co. and as they regard to the detention ponds, PSI is in agreement with the information provided. PSI has also provided the following information:

- Key-in and compaction requirements
- Liner design specifications and details

Project Information

Hummel Investments, LLC is planning the construction of a new retail center to be located near the northwest corner of East Woodmen Road and Meridian Road in Falcon, Colorado. Currently, the proposed subject site is a vacant parcel of land covered with sparse vegetation. The new development will have retail lots with associated access roads. Two detention ponds are planned on the site, one in the northwest corner and the second on the southeast corner of the property.

It is PSI's understanding that El Paso County has requested additional information regarding the detention basins. PSI has been provided the following documents for review by Mr. Meier via email on March 23, 2017:

- Preliminary Geotechnical Report by Ground Engineering, titled "Preliminary Subsurface Exploration Program Woodmen and Meridian Development Colorado Springs, Colorado" Job Number 15-3622 dated August 25, 2015
- Preliminary Grading Plan, titled "Preliminary Plan – Grading" by Drexel, Barrell & Co., dated January 17, 2017
- Storm sewer and detention pond site and grading plans, titled "Falcon Marketplace" by Drexel, Barrell & Co., dated July 19, 2019

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- El Paso County Letter explaining their requirements dated February 10, 2017
- A portion of the El Paso County Land Development Code related to the requirements laid out in previously stated letter

Key-in and Compaction requirements

Design specifications are provided in the Colorado Department of Natural Resources – Lined Pit Guide, dated September 2000. These guidelines are general, and final acceptance of material shall be approved prior to use.

Excavations shall be graded and properly maintained to provide adequate drainage at all times. Work shall be suspended when the site is overly wet, muddy, or otherwise unsuitable for proper maintenance. In excavations where soil liner fill is to be placed on slopes steeper than 3H:1V, horizontal benches shall be excavated into the slope to allow fill to be placed in horizontal lifts and to eliminate potential weak interfaces between the fill and native ground. Embankment material shall be continuously benched and keyed into the existing material a minimum of 2 feet.

Compact the soils, including the liner material to at least 95 percent of the maximum dry density as determined by the Standard Proctor density test (ASTM D 698) at a moisture content between +1 to +3 percent above the optimum moisture content.

Liner Design Specifications

PSI recommends the use of an impervious clay liner on the detention ponds to resolve the potential for vertical groundwater seepage. The liner should be designed and constructed to prevent seepage of groundwater into the detention pond and will allow the run off to be diverted in a controlled and desired manner. Liner specifications should be based on the Colorado Department of Natural Resources. Soil liner fill shall be placed and compacted to achieve a coefficient of permeability of less and 1×10^{-7} cm/sec.

PSI appreciates the opportunity to submit this letter and look forward to working with you on this project. If you have any questions concerning our proposal, please contact our office.

Respectfully Submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Beau Pearl, E.I.
Staff Engineer

Kyle R. Duitsman, P.E.
Site Manager

Reviewed by: Lloyd Lasher, P.E.
Principal Consultant