

April 11, 2024

Flying Horse North, LLC
2138 Flying Horse Club Drive
Colorado Springs, CO 80921



ENTECH
ENGINEERING, INC.

505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599

Attn: Drew Balsick

Re: Response to Review Comments
Flying Horse North Filing No. 3
El Paso, Colorado
Entech Job No. 231192
PCD No. SF2326

Ref: Entech Engineering, Inc., revised date March 5, 2024. *Soil and Geology Study, Flying Horse North Filing No. 3, El Paso County, Colorado.* Entech Job No. 231192.

Entech Engineering, Inc., revised date April 3, 2024. *Wastewater Study, Flying Horse North Filing No. 3, El Paso County, Colorado.* Entech Job No. 231192.

Dear Mr. Balsick:

This letter is written in response to the Colorado Geological Survey (CGS) review comments dated March 3, 2024, concerning the on-site wastewater treatment systems OWTS evaluations and geologic constraints. The comments are addressed below. The report has also been revised to address the items discussed in this letter.

EL PASO COUNTY AND CGS COMMENTS AND ENTECH ENGINEERING, INC. RESPONSES

Comment: *“Update the file number, date of the report and indicate which lots are impacted by which constraints. These areas also need to be depicted on the plat and designated as no-build as necessary.” – El Paso County*

1. Note 27 on the final plat should be updated to reference Entech’s March 5, 2024 report and the geologic hazards listed. Lots located within areas of geologic hazards/constraints should be indicated on the plat. Downslope creep is a geologic constraint not currently listed on the final plat. – CGS

Entech Response: The following lots will be impacted by drainages that have been identified as Potentially Seasonal Shallow Groundwater and Seasonally Wet Areas: Lot Nos. 8, 9, 11 – 23, 28, 33 – 36, and 40 – 43. Areas within the lots are not suitable for construction or on-site wastewater treatment systems (OWTS).

The following lots will be impacted by Downslope Creep: Lot Nos. 4, 12, 13, 17, 18, 22, 28 – 31, 34 – 36, and 40 – 43. Lots affected by this constraint are acceptable as building sites, however, we would anticipate accelerated lateral and vertical movement of the near surface soils in the downslope direction. The design of foundations in these areas should account for the additional pressure on the uphill side of the structure due to the creep potential if structures are located in the downslope creep area. The lateral pressure distribution for sloping conditions in downslope creep area is presented in Figure 11 of the report. Additional recommendations are discussed in the report.

The lots that have the above conditions still have suitable building sites. Designs for the structures should be based on each individual case.

Comment: *2. “Table B-1 of Entech’s wastewater study indicates that groundwater was encountered in Test Pit 3 at a depth of 4 feet, however, in other areas in the report, Entech states that groundwater was not encountered. Even so, groundwater levels tend to fluctuate, and perched water is likely to collect above clayey, less permeable soil layers on top of the bedrock*



surface. If basements are being considered, CGS recommends the county require groundwater monitoring/observation to obtain groundwater data to verify that proposed floor levels are at least three feet (preferably 5 feet) above maximum anticipated groundwater levels and maintained year-round. To be effective, however, this monitoring should include measurements/observations through fall, winter, and spring and not merely during site-specific building investigations.”

Entech Response: Groundwater was not encountered in Test Pit No. 3. Signs of seasonally water/high moistures were noted in Test Pit No. 3. Test borings on the property have been dry to 20 feet. Entech has been involved in investigations on the property over several years. Based on our past studies the lots have suitable building and OWTS areas. Individual lot investigations will be required to provide recommendations on each lot.

Comment: 3. “CGS agrees with Entech (page 9), “In areas where high subsurface moisture conditions are anticipated periodically, subsurface perimeter drains are recommended to help prevent the intrusion of water into areas below grade.” Individual foundation perimeter drains are intended to handle small amounts of intermittent, perched water and may NOT be used to mitigate persistent shallow groundwater conditions.”

Entech Response: Redoximorphic features were observed in Test Pit No. 3 at the transition from sandy clay soil to formational sandstone and not free water. Buildings should maintain a minimum separation of 3 feet between the lowest foundation grade and the maximum anticipated groundwater level. Shallow groundwater areas can be mitigated with the installation of drains, typical drain details have been provided in the Soils and Geology Study. Lot specific investigation for the building sites will be required prior to construction. At that time final drainage recommendations will be provided.

Comment: 4. “Erosional setbacks should be established near drainages and noted in the plans.

Entech Response: Entech agrees that setbacks should be provided on the plans. It is our understanding that the drainages align with the “psw” and “sw” areas mapped by Entech. Individual lot investigations should also discuss setbacks. The individual lot investigations should be based on site plans with house location and any site grading to be completed.

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

Respectfully Submitted,

ENTECH ENGINEERING, INC.

A handwritten signature in blue ink, appearing to read "Logan L. Langford".

Logan L. Langford, P.G.
Sr. Geologist

Reviewed by:



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

LLL:JCG

Encl.

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