

**Drainage Memo
for
Romens Subdivision Filing No. 1A**

April 2025

Prepared For:

Terry & Amy Abernathy
4016 Needles Dr
Colorado Springs, CO 80908

Prepared By:

Whitehead Engineering. LLC

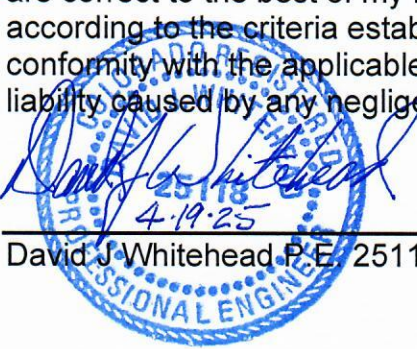
CONSULTING CIVIL ENGINEERS
18 PACIFICA CIR
HOT SPRINGS VILLAGE, AR 71909

Project No. 25001

FILE NO. VR-252

Design Engineer's Statement:

The attached drainage plan and report were prepared under my direction and supervision and are correct to the best of my knowledge and belief. Said drainage report has been prepared according to the criteria established by the County for drainage reports and said report is in conformity with the applicable master plan of the drainage basin. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this report.



David J. Whitehead P.E. 25118

4.19.25
Date

Owner/Developer's Statement:

I, the owner/developer, have read and will comply with all of the requirements specified in this drainage report and plan.

Terry Abernathy

April 19, 2025

Terry Abernathy, Owner
4016 Needles Rd
Colorado Springs, CO 80908

Date

El Paso County:

Filed in accordance with the requirements of the Drainage Criteria Manual, Volumes 1 and 2, El Paso County Engineering Criteria Manual and Land Development Code as amended.

4/29/2025

Joshua Palmer, P.E.
County Engineer / ECM Administrator

Date

Conditions:

Drainage Memo

Purpose:

The purpose of this drainage letter is to facilitate the vacation of lot 1-3 of Romans Subdivision (PCD File No SF2226) into a single lot. The name of the replat is "Romans Subdivision Filing No. 1A". This letter will identify how this vacation will impact the elements of the Drainage Report approved under the above file number. These include Change in runoff, change in imperviousness, water quality and if the approved exemption is still met, appropriateness of the proposed building and driveway location in relation to the drainage easement, and a recommended culvert size for the proposed driveway.

Project Description:

Romans Subdivision Filing No. 1A is located at the Southwest corner of Hopper Rd and Bradshaw Rd. in El Paso County, Colorado. The site is currently vacant range land. The site is by lots 4-8 of Romens Subdivision.

The elements discussed below are in reference to the Drainage Report for Romens Subdivision approved under PCD File No. SF2226. The elements of said drainage report not discussed herein remain unchanged.

Imperviousness:

The approved drainage report discusses increase in runoff due to a change (increase) in imperviousness due to residential development in Large Lot (Single Family – 5 acre lots). The report's Low Impact Development (LID) Calculator indicates 7% imperviousness. The vacation will combine 3 lots into one lot of approximately 14.2 acres. This results in a Total Site Imperviousness of the single lot of 2.4%.

Runoff:

This site makes up basins A and E as identified in the approved drainage report.

The existing runoff presented in the report is

$Q_5 = 1.3$ cfs and $Q_{100} = 7.7$ cfs for Basin A, and $Q_5 = 3.1$ cfs and $Q_{100} = 17.3$ cfs for Basin E.

The developed runoff presented in the report is

$Q_5 = 1.4$ cfs and $Q_{100} = 7.9$ cfs for Basin A, and $Q_5 = 3.3$ cfs and $Q_{100} = 17.6$ cfs for Basin E.

The increase in the runoff for the two basins is $Q_5 = 0.3$ cfs and $Q_{100} = 0.5$ cfs.

This replat creates a single lot, covered by the two basins reducing the residential impervious area from 1.0 acre, per the approved report, to 0.22 acres (2.4% of 14.21 acres).

The proposed single residence will be located near the eastern boundary of Basin A of the approved report. The proposed runoff for Basin A with there for remain $Q_5 = 1.4$ cfs and $Q_{100} = 7.9$ cfs. As presented in the approved report. The runoff from Basin E will remain at historic levels $Q_5 = 3.1$ cfs and $Q_{100} = 17.3$ cfs.

The increase in the runoff for the two basins is as a result of this replat is $Q_5 = 0.1$ cfs and $Q_{100} = 0.2$ cfs.

Water Quality / 4-Step Process:

The 4 steps discussed in the approved drainage report remain relevant and appropriate. The IRF contained in the report indicates a site effective imperviousness of 2.3% for the 100-Year event. With the reduction in the number of buildable lots resulting from this vacation the IRF number would be reduced. The exemption criteria are still met.

Building and Driveway:

The proposed driveway to the property is off Hopper Rd. bounding the North side of the property and will be constructed in the location approved in the deviation. The drainage easement for West Bijou Creek runs along the southern boundary of the single lot. The proposed building and driveway will not impinge on the easement.

Driveway Culvert:

The driveway, when constructed with the required permit, will necessitate the installation of a culvert. In accordance with ECM 3.3.1.C the minimum pipe size shall be 18 inches. The discussion for basins A & E in the approved drainage report states that the basins include the south half of Hopper Rd. and will sheet flow to the south to West Bijou Creek. Based on this statement the 18 inch culver will be adequate for the driveway.