

## Replat Staff Report

**Date:** January 29, 2026  
**To:** Douglas County Board of County Commissioners  
**Through:** Douglas J. DeBord, County Manager  
**From:** Kati Carter, AICP, Director of Community Development *K C*  
**CC:** Eric Pavlinek, Principal Planner  
Jeanette Bare, AICP, Planning Manager  
Steven E. Koster, AICP, Deputy Director of Community Development  
**Subject:** Hemphill Subdivision, 2<sup>nd</sup> Amendment - Replat  
**Project File:** SB2025-013

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**Board of County Commissioners Meeting:**

**February 10, 2026 @ 2:30 p.m.**

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### **I. EXECUTIVE SUMMARY**

The request is for approval of a replat of Lot 2A, a 29.97-acre residential lot, into two residential lots. Hemphill Subdivision is located on the south side of Wolfensberger Road, west of the Town of Castle Rock and east of State Highway 105. The parcel is zoned Large Rural Residential (LRR). This replat would establish two residential lots of 19.97 and 10 acres in size. Uses by right in the LRR zone district apply to lots 9 acres or greater. The site is located in the West Plum Creek Subarea of the Douglas County 2040 Comprehensive Master Plan (CMP).

### **II. APPLICATION INFORMATION**

#### **A. Applicant**

Robert L Hier and Margaret M Hier  
920 W Wolfensberger Road  
Castle Rock, Colorado 80109

#### **B. Applicant's Representative**

Kevin Archer  
David E. Archer & Associates, Inc.  
105 Wilcox Street  
Castle Rock, Colorado 80104

**C. Request**

The applicant requests approval of a replat to divide one 29.97-acre lot into two residential lots, one 19.97 acres (Lot 2A-1) and one 10 acres (Lot 2A-2) in size, in the Hemphill Subdivision. A home currently exists on proposed Lot 2A-1.

**D. Process**

A replat application is processed pursuant to Article 7 of the Douglas County Subdivision Resolution (DCSR). Article 7 states that the intent of the process is “to provide a review process for the replatting of an existing subdivision plat or superblock final plat.”

Section 706.06 of the DCSR states: “The Board shall evaluate the replat request, staff report, referral agency comments, applicant responses, and public comment and testimony, and shall approve, approve with conditions, continue, table for further study, or deny the replat request. The Board’s action shall be based on the evidence presented; compliance with adopted County standards, regulations, and policies; and other guidelines.”

**E. Location**

The site is located south of Wolfensberger Road between S. Perry Park Road and Interstate 25. More specifically, the project site is located approximately ¼ mile southeast of the Wolfensberger Road and Peak View Drive intersection. Vicinity, zoning, and aerial maps are included as attachments to the staff report to highlight site location and existing conditions.

**F. Project Description**

The owners of Lot 2A are requesting to subdivide the 29.97-acre lot into two residential lots. Proposed Lot 2A-1 will be 19.97 acres in size and Lot 2A-2 will be 10 acres in size. Access to the two lots will be from a private road that connects to Wolfensberger Road. A 40-foot-wide utility and access easement is granted as depicted on the replat exhibit.

**III. CONTEXT**

**A. Background**

The final plat for Hemphill Subdivision was approved by the Board of County Commissioners in 1983, creating two residential lots. One of those lots is located north of this site and is not a part of this replat request.

**B. Adjacent Land Uses and Zoning**

The property is surrounded by other parcels zoned Agricultural One (A-1), LRR, and Estate Residential (ER). Castle Mesa, Castle Mesa South, and Twin Oaks subdivisions are located west and south of the site. The following table reflects those zone districts and land uses surrounding the parcel.

### Zoning and Land Use

Direction	Zoning	Land Use
North	A-1 Town of Castle Rock	Agricultural Residential
South	A-1 LRR Town of Castle Rock	Agricultural Residential
East	A-1 Town of Castle Rock	Agricultural Residential
West	LRR RR A-1	Agricultural Residential

## IV. PHYSICAL SITE CHARACTERISTICS

### A. Site Characteristics and Constraints

The site is currently developed with a single-family residence and detached garage constructed in 1994.

### B. Access

Access to the project site is from a private road that connects to Wolfensberger Road. The applicant has executed a shared roadway and maintenance agreement with two adjacent property owners for ongoing maintenance and repairs of this private road. This formal agreement is included as an attachment to the staff report. The applicant will pave portions of this road to ensure that a width of 24-feet is maintained until the project site.

A 40-foot-wide shared private access easement is established with the replat to provide access to Lots 2A-1 and 2A-2. Ownership and maintenance of the shared access easement is the responsibility of the lot owners. Plat note number 3 describes ownership and maintenance responsibilities of the private shared access easement. The easement will run with the land.

### C. Soils and Geology

The Class 3 Hazards and Environmental Constraints map as described within the CMP indicates that there are no known hazard areas within the replat area. The Colorado Geological Survey (CGS) reviewed the replat application and noted no concerns. Standard geotechnical explorations of individual building sites will be required at the time of construction as part of the building permit process.

### D. Drainage and Erosion

Public Works Engineering reviewed the replat submittal and had no comments regarding drainage. Given the scale of the replat and size of lots, stormwater detention and water quality improvements were not required. A Drainage, Erosion,

and Sediment Control (DESC) Plan is required at the time of building permit for new home construction on proposed Lot 2A-2.

**E. Floodplain**

No mapped 100-year floodplain is present on the site.

**V. PROVISION OF SERVICES**

**A. Schools**

Pursuant to Section 1004.05.4 of the DCSR, the minimum cash-in-lieu fee for a replat which creates ten or fewer residential lots is \$500 for each new residential lot. As noted in proposed condition #1, the applicant shall pay \$500 for cash-in-lieu of school land dedication prior to plat recordation.

**B. Fire Protection**

Castle Rock Fire and Rescue Department (CRFD) and Jackson 105 Protection District (Jackson 105) provide fire protection within the area. No response was received from either fire district.

A wildfire hazard assessment has been completed by Douglas County Wildfire Mitigation. Wildfire Mitigation staff noted that the property contains a wildfire hazard. Proposed Lot 2A-2 contains a lower hazard with some breaks between oak clumps. Standard wildfire mitigation will be required with the building permit for residential construction on this lot. Wildfire Mitigation staff further encouraged the applicant to conduct wildfire mitigation efforts on Lot 2A-1 with the existing residence. The applicant has acknowledged the recommendation.

**C. Sheriff Services**

The Douglas County Sheriff's Office (DCSO) provides emergency service to the site. DCSO has no comments or concerns about the replat request. The Office of Emergency Management noted no concerns with the project.

**D. Water**

The source of water for the two lots is provided by individual wells on each lot. An existing well within the Lower Dawson aquifer serves the home currently located on Lot 2A. The water supply for Lot 2A-2 will be provided by an individual groundwater well completed in the nontributary Lower Dawson aquifer. The Colorado Division of Water Resources reviewed the subdivision request and indicated that the proposed water supply is adequate and can be provided without causing injury to decreed water rights, provided well permit number 153256 be re-permitted as a non-exempt well, pursuant to the recently approved water decree. Proposed condition #3 addresses this requirement.

In addition, all of the water in the Denver Basin aquifers beneath the property will be reserved in perpetuity pursuant to a declaration of restrictive covenants. A condition

of approval requires that the declaration be recorded prior to or concurrent with the plat.

**E. Sanitation**

The existing residence is served by an On-site Wastewater Treatment System (OWTS). Any newly constructed OWTS to serve the proposed Lot 2A-2 residence must be permitted, inspected, and approved by Douglas County Health Department.

**F. Utilities**

A referral was sent to utility service providers. AT&T responded that there should be no conflicts with AT&T infrastructure. CenturyLink had no objection to the replat request. CORE Electric Cooperative (CORE) had no comment. Xcel Energy responded and has no apparent conflict with the replat request.

**G. Dedications**

The County will accept a general-purpose utility easement as shown on the replat exhibit. No other public dedications are proposed. The private access easement will be owned and maintained by both lot owners. There are no parks, trails, or open space areas associated with this replat request. In compliance with Article 10, Section 1003.06 of the DCSR, cash-in-lieu of park land dedication in the amount of \$250 will be paid prior to recordation of the replat exhibit. This provision is included as a condition of approval.

**VI. PUBLIC NOTICE AND INPUT**

Courtesy notices of an application in process were mailed to abutting landowners and no comments were received. All referral agency comments are outlined in the Referral Agency Response Report, as well as the Referral Response Letters attached to this staff report. The applicant's response letter to referral responses is included as an attachment to this staff report.

**VII. STAFF ANALYSIS**

Pursuant to Section 704 of the DCSR, a replat may be approved upon the finding by the Board that the following standards have been met:

**704.01: Conforms with all applicable standards and criteria, and the original conditions of approval.**

*Staff Comment: The replat conforms with all standards, criteria, and approvals for the Hemphill Subdivision. In addition, the proposed lots conform with the applicable standards and criteria of the Douglas County Zoning and Subdivision Resolutions.*

**704.02: Does not create nonconforming lots, and in the case of nonconforming lots, does not increase the nonconformity.**

*No nonconforming lots are being created with this replat. Both lots meet and exceed the minimum lot size for uses by right within the LRR zone district.*

**704.03: Complies with this Resolution.**

*The replat is in compliance with all the submittal, process, and approval standards and criteria as set forth in the DCSR.*

**704.04: Conforms with the goals and policies of the Master Plan.**

*The property is located within the West Plum Creek Subarea as identified in Section 3 of the CMP. The applicant believes that the creation of one additional residential lot is low-intensity and the proposed lot sizes are supported by the LRR zoning.*

**704.05: Addresses the design elements established in Article 4, Section 404 of this Resolution.**

*The proposed replat adequately addresses the referenced design elements. Lot sizes are consistent with the surrounding area. Existing structures on proposed Lot 2A-1 will conform to the minimum setbacks per zoning. Residential development on proposed Lot 2A-2 is capable of meeting minimum zone district standards. Geologic hazards and floodplains are avoided, and wildfire mitigation will occur at the time of building permit for residential construction on proposed Lot 2A-2. The applicant shall take care to watch for all historic and cultural resources during construction.*

**704.06: Conforms with Section 18A, Water Supply Overlay District, of the Zoning Resolution.**

*The replat complies with the submittal and approval standards of Section 18A. Water service is currently provided to the existing home through a well. The presumptive water demand per 18A for the two lots is 2.0 acre-feet. The water supply for both lots is from groundwater wells in the nontributary Lower Dawson aquifer subject to a recently-approved water decree.*

*The Douglas County Water Commission reviewed the application on May 19, 2025, and individual comments were provided from two commissioners. Commissioner Smethills questioned if the County should approve the subdivision prior to the groundwater being adjudicated. Commissioner Ela commented on Commissioner Smethills' question by indicating that non-tributary groundwater is tied to property ownership and does not have to be adjudicated.*

**704.07: Provides for a public wastewater collection and treatment system and, if other methods of wastewater collection and treatment are proposed, such systems shall comply with State and local laws and regulations.**

*The existing residence on proposed Lot 2A-1 is served by an OWTS. Sanitation for proposed Lot 2A-2 will be provided by an OWTS. The Douglas County Health Department had no objection to the proposal as long as the OWTS is permitted, constructed, and operated in conformance with DCHD regulations.*

**704.08: Identifies all areas of the proposed subdivision which may involve soil or topographical conditions presenting hazards or requiring special precautions and that the proposed uses of these areas are compatible with such conditions.**

*There are no significant soil or topographic conditions requiring special precautions. At the time of building permit for the residence on proposed Lot 2A-2, site specific analysis and evaluation of soil conditions will be required. CGS reviewed the replat request and noted no concerns. Wildfire mitigation will be further assessed and implemented at the time of building permit. The applicant will watch for any historic, archeological, or paleontological resources and will complete appropriate data management forms in the event of such discovery as noted in proposed condition #6.*

**704.09: Provides adequate drainage improvements.**

*The replat does not impact subdivision drainage. A DESC plan will be developed at the time of building permit request for residential construction on proposed Lot 2A-2.*

**704.10: Provides adequate transportation improvements.**

*This development will use existing access points. No additional private or public roads are needed for this project. A shared access easement owned and maintained by the lot owners will be established with this replat. The applicant will upgrade the existing private road that connects to Wolfensberger Road to ensure that 24-feet in asphalt is maintained as required by Public Works Engineering.*

**704.11: Provides significant cultural, archaeological, natural, and historical resources and unique landforms.**

*There is no evidence of significant cultural, archaeological, natural, historical resources and unique landforms existing on this site.*

**704.12: Has available all necessary services, including fire and police protection, recreation facilities, utility services, streets, and open space to serve the proposed subdivision.**

*All such services are available to the property. Fire protection is provided by CRFD and Jackson 105, and the DCSO provides police protection. Utility services are available to each lot.*

## **VIII. STAFF ASSESSMENT**

Staff has evaluated the replat request in accordance with Article 7 of the DCSR. Should the Board find that the approval standards for the replat are met, the following proposed conditions should be considered for inclusion in the motion:

1. Prior to plat recordation, the applicant shall pay \$500 for cash-in-lieu of school land dedication for the additional residential lot to the Douglas County School District.
2. Prior to plat recordation, the applicant shall pay \$250 for cash-in-lieu of school land dedication for the additional residential lot to Douglas County.

3. Prior to plat recordation, the applicant shall re-permit the existing well as a non-exempt well, pursuant to the water decree as requested by the Colorado Division of Water Resources.
4. Prior to or concurrent with plat recordation, the Declaration of Restrictive Covenants reserving all Denver Basin aquifer water for future uses on the property shall be recorded.
5. Prior to any ground disturbance on Lot 2A-2, a Class II survey will need to be performed to evaluate cultural resources.
6. During construction activity within the development, the applicant, its successors and assigns shall take all reasonable care to watch for historic resources, paleontological resources, and other cultural history resources and shall immediately notify Douglas County and complete appropriate Colorado Office of Archaeology and Historic Preservation data management forms in the event of such discovery.
7. Prior to plat recordation, technical corrections to the replat exhibit shall be made to the satisfaction of Douglas County.
8. All commitments and promises made by the applicant or the applicant's representative during the public meeting and/or agreed to in writing and included in the public record have been relied upon the Board of County Commissioners in approving the application; therefore, such approval is conditioned upon the applicant's full satisfaction of all such commitments and promises.

<b>ATTACHMENTS</b>	<b>PAGE</b>
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**LAND USE APPLICATION**

Please complete, sign, and date this application. Return it with the required items listed on the Submittal Checklist to [planningsubmittals@douglas.co.us](mailto:planningsubmittals@douglas.co.us). Submittals may also be mailed or submitted in person to Planning Services. *NOTE: The Planning Commission or the Board of County Commissioners should not be contacted regarding an open application.*

<b>OFFICE USE ONLY</b>	
PROJECT TITLE:	<b>Hemphill Subdivision, 2nd Amendment</b>
PROJECT NUMBER:	<b>SB2025-013</b>

**PROJECT TYPE:** Replat

**MARKETING NAME:** N/A

**PRESUBMITTAL REVIEW PROJECT NUMBER:** PS2024-0233

**PROJECT SITE:**

Address: 920 West Wolfensberger Road

State Parcel Number(s): 250516001002

Subdivision/Block#/Lot# (if platted): Lot 2A Hemphill Subdivision 1st Amendment

**PROPERTY OWNER(S):**

Name(s): Robert L and Margaret M Hier

Address: 920 West Wolfensberger Road, Castle Rock, CO 80109

Phone: 303-877-4724

Email: hierrl@msn.com

**AUTHORIZED REPRESENTATIVE:** (Notarized Letter of Authorization is required from the property owner, unless the owner is acting as the representative)

Name: David E Archer & Associates, Inc Kevin Archer

Address: 105 Wilcox Street, Castle Rock, CO 80104

Phone: 303-688-4642

Email: karcher@davidearcher.com

To the best of my knowledge, the information contained on this application is true and correct. I have received the County's information sheet regarding the *Preble's Meadow Jumping Mouse*.

  
Applicant Signature

3-25-25

Date



**DAVID E. ARCHER & ASSOCIATES, INC.**  
**PROFESSIONAL LAND SURVEYORS & ENGINEERS**

105 Wilcox Street \* Castle Rock, CO 80104  
PHONE (303) 688-4642 \* FAX (303) 688-4675 \* karcher@davidearcher.com

**PROJECT NARRATIVE**

**For**

**Replat of Hemphill Subdivision, 1<sup>st</sup> Amendment, Lot 2A**

Bob and Molly Hier currently own and live on Lot 2A, Hemphill Subdivision, 1<sup>st</sup> Amendment a 30-acre Lot. They want to divide the property into a 10-acre parcel and a 20 acre parcel. The 20-acre parcel will include the existing residence and outbuildings. They intend to build a new residence on the 10-acre parcel to downsize from the existing home.

Access to the proposed lots will continue to be from the existing driveway and an access easement will be recorded over the existing driveway. The driveway is off of an existing private road from Wolfensberger Road. The existing private road provides access 8 properties, 5 of those properties are past the driveway to the subject property. The private Road is currently paved and about 12 feet wide. The private road will be improved to 24 feet wide from Wolfensberger Road to the existing driveway, a distance of approximately 800 feet. There is an existing maintenance agreement in place for the three properties that access in the first 800 feet.

Jehn Water Consultants have provided a letter indicating that water rights are available to serve the two proposed properties. They do note that the existing Well No. 153256 will require permitting. This will be completed once the project is processed through the County.

The property is located in Section 3-West Plum Creek SUA of the 2040 Douglas County Comprehensive Master Plan. We believe the project complies with the Policies and objectives of the mater pan as follows:

**WEST PLUM CREEK SUBAREA**

Objective 3-3F Ensure Development in the West Plum Creek Subarea is consistent with this Plan

Policy 3-3F.1 Low-intensity rural development is supported in the Plum Creek Subarea

*This project proposes one additional lot on an existing 30 acre parcel. Low-intensity is not defined but this project is only adding on property.*

Policy 3-3F.2 New development in the West Plum Creek Subarea at densities higher than one dwelling unit per 35 acres is not supported by this Plan.

*This property is already zoned LRR witch allows for densities between 1/35 acers and 1/10acres. The project complies with the existing zoning in place. The surrounding area vary in size from 5 acres to 50 acres. The project will be consistent with the general character of the area.*

Policy 3-3F.3 Parcels within, and directly adjacent to, the Perry Park development, that have been rezoned for densities higher than one dwelling unit per 35 acres under the provisions of previous Comprehensive Master Plans may proceed through the subdivision review process.

*This project is not adjacent with Perry Park.*

Policy 3-3F.4 Support the use of Local Improvement Districts to improve internal roads and extend water and sewer infrastructure.

*A local improvement district will not be required for this project.*

Policy 3-3F.5 Support build out of Perry Park to the extent that development can be appropriately served by roads, water, and sewer infrastructure without undue harm to the natural environment.

*Not applicable to this project*

Policy 3-3F.6 Support limited transfer of development credits from platted portions of Perry Park that contain physical and environmental constraints, to more appropriate areas in the County.

*Do not think this is necessary.*

Policy 3-3F.7 New development within the West Plum Creek Subarea should avoid and mitigate impacts to the riparian corridor of East and West Plum Creeks and their sub-drainages.

*This project is well removed from any large drainage ways leading to West Plum Creek. All future construction requires GESC Plans and/or a DESC plan.*

Policy 3-3F.8 Development along major roads in the West Plum Creek Subarea should be carefully sited and designed to minimize visual impacts, particularly to the foothills, Front Range mountain views, and open meadows.

*This project is not located off of a private road and will not impact Front Range views even from the existing house on the property.*

Policy 3-3F.9 Strongly encourage land use and transportation patterns that foster the establishment of visually distinctive communities.

*There are no new roads proposed for this project. About 800 feet of an existing paved driveway will be improved to provide the required 24 foot width.*

Policy 3-3F.10 Support paving shoulders along major roads to provide a safe place for bicyclists and all users.

*There are no Major roads proposed with this project.*

Policy 3-3F.11 Support the development of interconnected regional trail corridors.

*This policy does not apply to this two lot project. There are no regional trails near this site.*

In summary the proposed project fits within surrounding neighborhood of varied lot sizes and meets the goals of the 2024 Comprehensive Master Plan

January 9, 2025

Bob Hier  
823 S. Perry Street, Suite 120  
Castle Rock, CO 80104

Re: Proof of Water Supply  
Job No. 1071.1

Dear Bob:

The purpose of this Letter Report is to provide you with a Water Supply summary for the proposed division of your Douglas County property. The primary purpose of this Letter Report is to summarize the proposed demands and the water available to meet those demands.

Pursuant to your request, we have completed a review of the available ground water in the Denver Basin aquifers underlying the property located in Section 16, Township 8 South, Range 67 West, 6<sup>th</sup> P.M., Douglas County, Colorado (the Property). Your current property is a 30-acre parcel, designated as Lot 2A Hemphill Subdivision, located off of Wolfensberger Road in Castle Rock as shown on Figure 1. The proposal is to divide the property into two parcels: one 20-acre lot and a second 10-acre lot, as shown on the attached Figure 1. This Letter Report provides a preliminary review of the water supply underlying the 30 acres. Please note that we offer no opinion relating to ownership of land or water rights herein.

### **Ground Water**

We completed a document review at the State Engineer's Office to determine if there were any existing wells on the Property. There was one well found within the State's database. Documentation for the well may be found attached to this Memorandum. Permit No. 153256 is a domestic exempt well serving the existing home on the Property. It is permitted as a Lower Dawson aquifer well completed to a total depth of 700 feet below ground surface.

We also completed a pre-213 well search for the Property to determine if any existing water rights impacted the Property. Based on the State Engineer's Office maps, there exists one pre-213 well whose cylinder of appropriation overlaps the Property. The pre-213 well, completed into the Lower Dawson aquifer and permitted under Permit No. 16809-F, is shown by the Division of Water Resources (DWR) well permit database to be located on the Property. Documents filed under Permit 16809-F include a location description that places the well at the location shown on Figure 2, however the documents indicate that the well serves the home on Lot 1 of the Hemphill Subdivision. The well's physical location may be located further to the north near the home constructed on Lot 1, however, we have utilized the DWR's location of the pre-213 well circle to determine the impacts of Well 16809-F to the Property's allocation of ground water in the Lower Dawson aquifer.

There are four Denver Basin aquifers underlying the Property: the Lower Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers. Based on our review, the ground water under the property has not been adjudicated in Water Court. Table 1, attached, includes our estimate of the water available in each aquifer underlying the Parcel as well as pro-rata split of water between the future 20-acre and 10-acre parcels. Due to the limitations of availability in the Lower Dawson aquifer, the amount available was split evenly between the two proposed lots.

Table 1 also indicates the status of each aquifer as being considered not-nontributary or nontributary. The ground water in the Denver aquifer is considered not-nontributary and can be placed to beneficial use by obtaining an approved plan for augmentation from the Division 1 Water Court. The water in the Lower Dawson, Arapahoe and Laramie-Fox Hills aquifers are considered nontributary, and as such, can be placed to beneficial use by obtaining a well permit through the Colorado Division of Water Resources and completing a well into the permitted aquifer.

## **Demands**

In our conversations with you, we understand that you plan to divide the Property into two lots. We have reviewed the Douglas County Zoning of the parcel and the County's water supply requirements. The Property is zoned as Large Rural Residential (LRR),

*Bob Hier*  
*January 9, 2025*  
*Page 3*

and pursuant to Douglas County Zoning Resolution 1805A.02.1, the minimum water demand standard for LRR zoned districts is 1 acre-foot/year/residence. As the division to two lots should not change the County's zoning, each lot will require 1 acre-foot per year (af/yr) of ground water.

The lot sizes being considered are one 20-acre lot and one 10-acre lot, and it is our understanding that the available water volumes in the Lower Dawson aquifer will be equally split between the two newly created lots. As summarized in Table 1, there is sufficient water available in the nontributary Lower Dawson aquifer to meet the demands of both lots. This subdivision of land will require the re-permitting of the existing Well No. 153256 as it will lose its exempt status with the reduction in acreage.

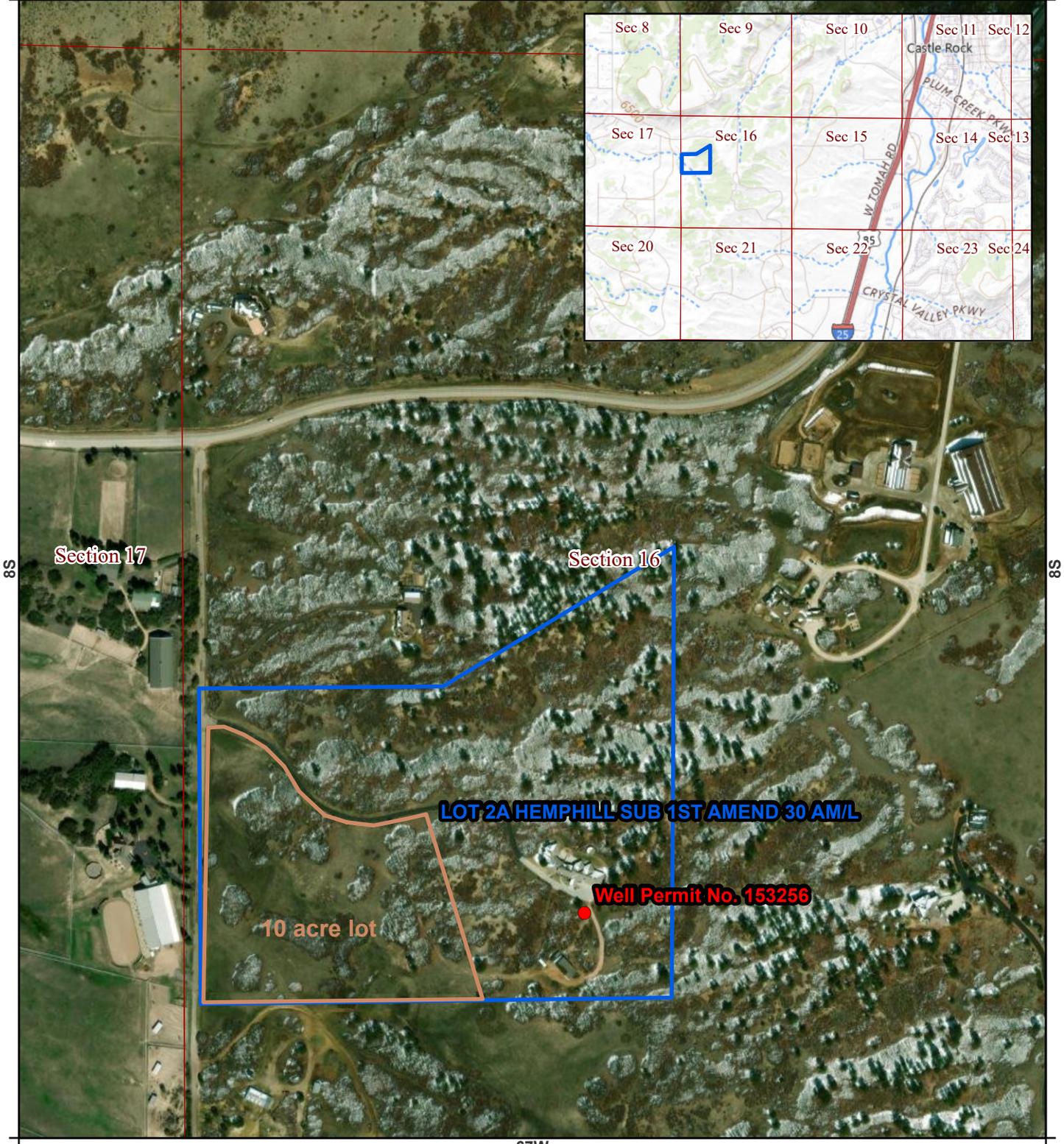
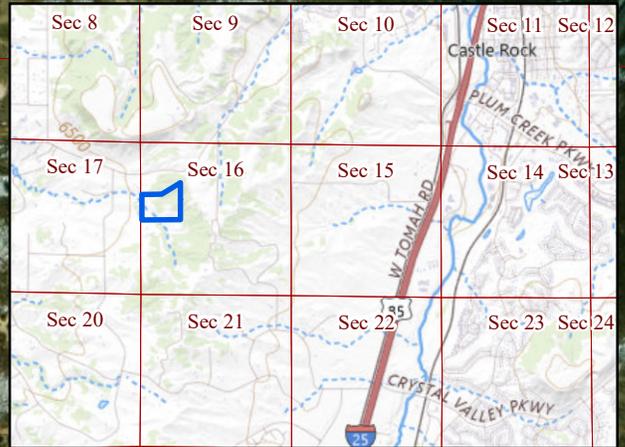
If you have any questions please do not hesitate to call.

Sincerely,  
*JEHN WATER CONSULTANTS, INC.*



Gina L. Burke  
President

67W

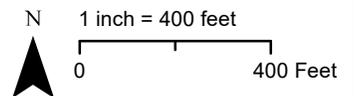


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**Jehn Water Consultants, Inc.**  
 88 Inverness Circle East,  
 Suite K-102  
 Englewood, CO 80112  
 (303) 321-8335  
 www.jehnwater.com

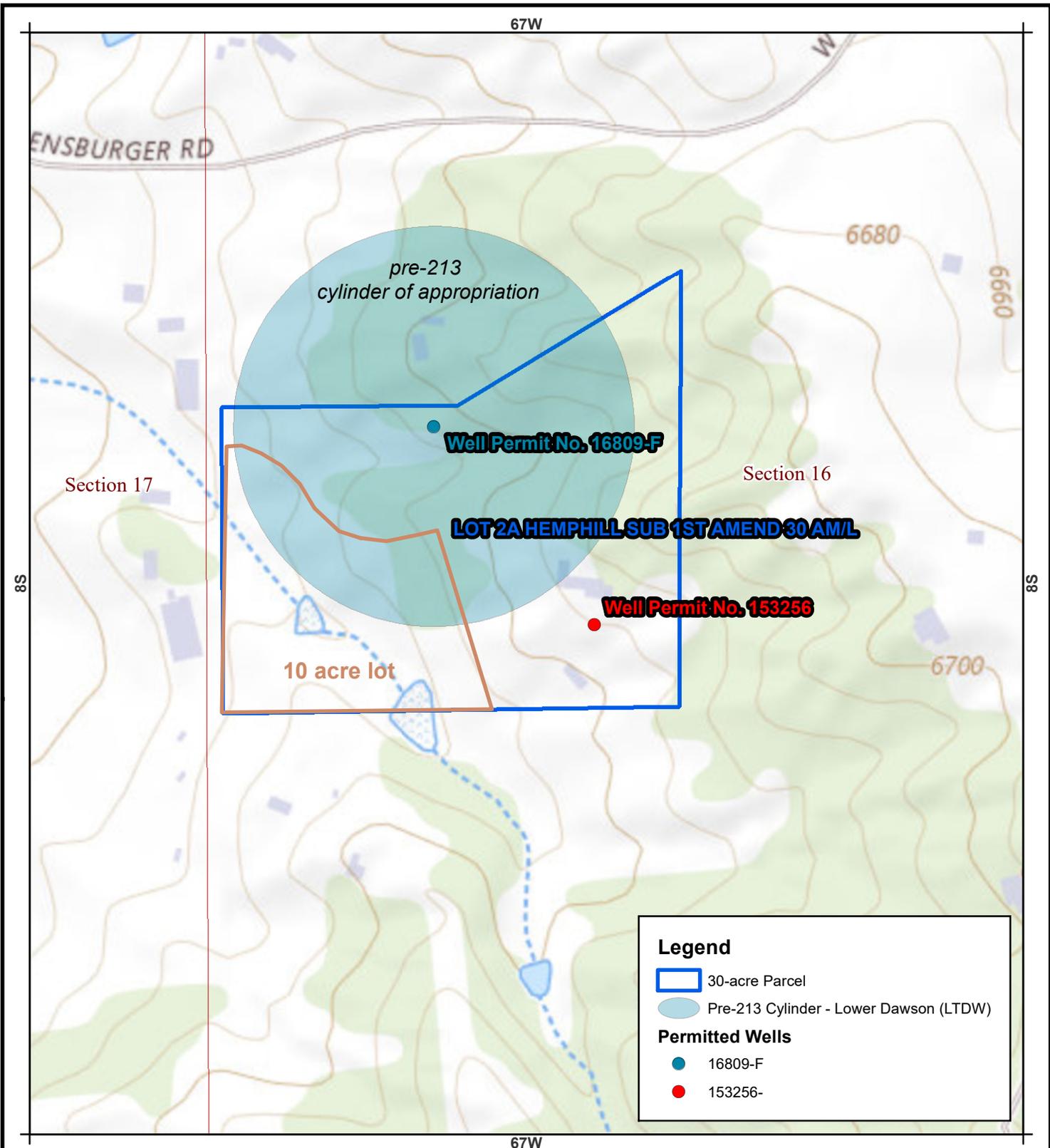
# FIGURE 1

## Douglas County Property General Location



Job No. 1071.1  
 Projection: UTM NAD83  
 Prepared By: HLB 12/13/2024  
 Checked By: GLB 12/13/2024

Sources: Douglas County Parcel Data,  
 CO DWR GIS Data



**Legend**

- 30-acre Parcel
- Pre-213 Cylinder - Lower Dawson (LTDW)

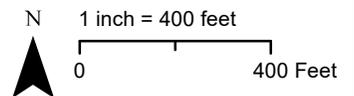
**Permitted Wells**

- 16809-F
- 153256-

**Jehn Water Consultants, Inc.**  
 88 Inverness Circle East,  
 Suite K-102  
 Englewood, CO 80112  
 (303) 321-8335  
[www.jehnwater.com](http://www.jehnwater.com)

## FIGURE 2

### Douglas County Property Pre-213 Cylinder



Job No. 1071.1  
 Projection: UTM NAD83  
 Prepared By: HLB 12/13/2024  
 Checked By: GLB 12/13/2024  
 Sources: Douglas County Parcel Data,  
 CO DWR GIS Data

**TABLE 1**  
**ESTIMATED WATER AVAILABLE**  
*Hier: 30-acre Parcel*

Aquifer	Acreage	Avg. Sat Thick ft	Sy	Total 30- acre Appropriation - 100 yr af/yr	20- acre Appropriation - 100 yr af/yr	10- acre Appropriation - 100 yr af/yr	SEO Status	Notes
Lower Dawson	14.89	110	20%	2.68	1.34	1.34	NT	See Notes below.
Denver	30.00	367	17%	18.69	12.46	6.23	NNT	
Arapahoe	30.00	278	17%	14.18	9.45	4.73	NT	
Laramie-Fox Hills	30.00	175	15%	7.87	5.25	2.62	NT	
TOTALS				43.42	28.50	14.92		

Notes: NNT= Not-Nontributary  
NT= Nontributary

**Lower Dawson:** The acreage has been reduced for the overlapping cylinder of pre-213 Well Permit No. 16809-F. Further reduction in volume of 60 acre-feet for permit No. 153256. The remaining available was split 50/50 between the two lots.

**RECEIVED**  
**MAR 28 '94**  
 WATER RESOURCES  
 STATE ENGINEER  
 C.O.

1. WELL PERMIT NUMBER 153256 153256

2. OWNER NAME(S) ROBERT HIER  
 Mailing Address 513 WILCOX  
 City, St. Zip CASTLE ROCK, CO 80104  
 Phone 688-3105

3. WELL LOCATION AS DRILLED: SW 1/4 NW 1/4, Sec. 16 Twp. 8S, Range 67W  
 DISTANCES FROM SECTION LINES:  
2215 ft. from NORTH Sec. line. and 795 ft. from WEST Sec. line.  
(north or south) (east or west)  
 SUBDIVISION: HEMPHILL LOT 2 BLOCK \_\_\_\_\_ FILING(UNIT) \_\_\_\_\_  
 STREET ADDRESS AT WELL LOCATION: \_\_\_\_\_

4. PUMP DATA: Type SUBMERSIBLE Installation Completed 3/10/94  
 Pump Manufacturer GOULDS Pump Model No. 10EJ30412  
 Design GPM 10 at RPM 3650, HP 3, Volts 230 Full Load Amps 14.00  
 Pump Intake Depth 596 Feet, Drop/Column Pipe Size 1.00 Inches, Kind GALV & PVC  
 ADDITIONAL INFORMATION FOR PUMPS GREATER THAN 50 GPM:  
 TURBINE DRIVER TYPE:  Electric  Engine  Other \_\_\_\_\_  
 Design Head \_\_\_\_\_ feet, Number of Stages \_\_\_\_\_, Shaft Size \_\_\_\_\_ Inches

5. OTHER EQUIPMENT:  
 Airline Installed  Yes  No, Orifice Depth ft. \_\_\_\_\_, Monitor Tube Installed  Yes  No, Depth ft. \_\_\_\_\_  
 Flow Meter Mfg. \_\_\_\_\_ Meter Serial No. \_\_\_\_\_  
 Meter Readout  Gallons,  Thousand Gallons,  Acre feet,  Beginning Reading \_\_\_\_\_

6. TEST DATA:  Check box if Test data is submitted on Supplemental Form.  

Test Well Depth	<u>700</u>	Date	<u>3/10/94</u>
Static Level	<u>450</u>	Time	_____
Date Measured	<u>3/10/94</u>	Rate (GPM)	<u>10</u>
		Pumping Lvl.	<u>495</u>

7. DISINFECTION: Type HTH Amt. Used 2 1/2 CUPS

8. Water Quality analysis available.  Yes  No

9. Remarks \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

10. I have read the statements made herein and know the contents thereof, and that they are true to my knowledge. [Persuant to Section 24-4-104 (13)(a) C.R.S., the making of false statements herein constitutes perjury in the second degree and is punishable as a class 1 misdemeanor.]

CONTRACTOR Norden Pump Service, Inc. Phone (303) 688-3794 Lic. No. 861  
 Mailing Address P.O. Box 268 Castle Rock, CO 80104

Name/Title (Please type or print) <u>Ralph Norden, President</u>	Signature <u>Ralph Norden</u>	Date <u>3/15/94</u>
---	----------------------------------	------------------------



COLORADO DIVISION OF WATER RESOURCES  
818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203

RECEIVED

DEC 20 1988

PERMIT APPLICATION FORM

Application must be complete where applicable. Type or print in BLACK INK. No overstrikes or erasures unless initialed.

RECEIVED

DEC 13 1988

WATER RESOURCES  
STATE ENGINEER  
COLORADO

- A PERMIT TO USE GROUND WATER
- A PERMIT TO CONSTRUCT A WELL
- A PERMIT TO INSTALL A PUMP

12-13-88 2:00 P

032472 60.00

042009 P0011

- REPLACEMENT FOR NO. \_\_\_\_\_
- OTHER reapplication for expired permit # 146191

WATER COURT CASE NO. \_\_\_\_\_ CHEQUE 60.00  
D.C.S. 0.00

(1) APPLICANT - mailing address

NAME Robert L. Hier Co  
 STREET 513 Wilcox St.  
 CITY Castle Rock, Colo. 80104  
(State) (ZIP)  
 TELEPHONE NO. 688-3125 (w)

FOR OFFICE USE ONLY: DO NOT WRITE IN THIS COLUMN

CL-1 945080

Receipt No. 95080

Basin \_\_\_\_\_ Dist. \_\_\_\_\_

CONDITIONS OF APPROVAL

This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

ISSUANCE OF THIS PERMIT DOES NOT CONFER A DECREED WATER RIGHT

(2) LOCATION OF PROPOSED WELL

County Douglas  
SW 1/4 of the NW 1/4, Section 16  
 Twp. 8 S, Rng. 67 W, 6th P.M.  
(N,S) (E,W)

1) APPROVED PURSUANT TO CRS 37-92-602 (3)(b) (II) (A) AS THE ONLY WELL ON A TRACT OF LAND OF 35 ACRES DESCRIBED AS A PORTION OF THE W1/2 OF THE W1/2 OF SECTION 16, T8S, R67W, 6TH P.M., BEING MORE PARTICULARLY DESCRIBED ON THE ATTACHED EXHIBIT "A".

(3) WATER USE AND WELL DATA

Proposed maximum pumping rate (gpm) 15  
 Average annual amount of ground water to be appropriated (acre-feet): 2  
 Number of acres to be irrigated: 1  
 Proposed total depth (feet): 720  
 Aquifer ground water is to be obtained from: Lower Dawson  
 Owner's well designation \_\_\_\_\_

2) PRODUCTION FROM THIS WELL IS RESTRICTED TO THE LOWER DAWSON AQUIFER WHICH CORRESPONDS TO THE INTERVAL BETWEEN 520 FEET AND 710 FEET BELOW GROUND SURFACE. PLAIN (NON-PERFORATED) CASING SHALL BE INSTALLED AND SEALED TO PREVENT PRODUCTION FROM OTHER ZONES.

3) THE USE OF GROUND WATER FROM THIS WELL IS LIMITED TO FIRE PROTECTION, ORDINARY HOUSEHOLD PURPOSES INSIDE ONE SINGLE FAMILY DWELLING, THE IRRIGATION OF NOT MORE THAN ONE ACRE OF HOME GARDENS AND LAWNS, AND THE WATERING OF DOMESTIC ANIMALS.

4) THE RETURN FLOW FROM THE USE OF THE WELL MUST BE THROUGH AN INDIVIDUAL WASTE WATER DISPOSAL SYSTEM OF THE NON-EVAPORATIVE TYPE WHERE THE WATER IS RETURNED TO THE SAME STREAM SYSTEM IN WHICH THE WELL IS LOCATED.

GROUND WATER TO BE USED FOR:

- HOUSEHOLD USE ONLY - no irrigation (0)
- DOMESTIC (1)  INDUSTRIAL (5)
- LIVESTOCK (2)  IRRIGATION (6)
- COMMERCIAL (4)  MUNICIPAL (8)
- OTHER (9)

(NOTE: TO INSURE A MAXIMUM PRODUCTIVE LIFE OF THIS WELL, PERFORATED CASING SHOULD BE SET THROUGH THE ENTIRE PRODUCING INTERVAL OF THE APPROVED ZONE OF AQUIFER INDICATED ABOVE.)  
APPLICATION APPROVED W.B. 1/11/89

DETAIL THE USE ON BACK IN (11)

(4) DRILLER

Name Hier Drilling Co.  
 Street P.O. Box 250  
 City Castle Rock, Colo. 80104  
(State) (ZIP)

MIT NUMBER 153256 153256

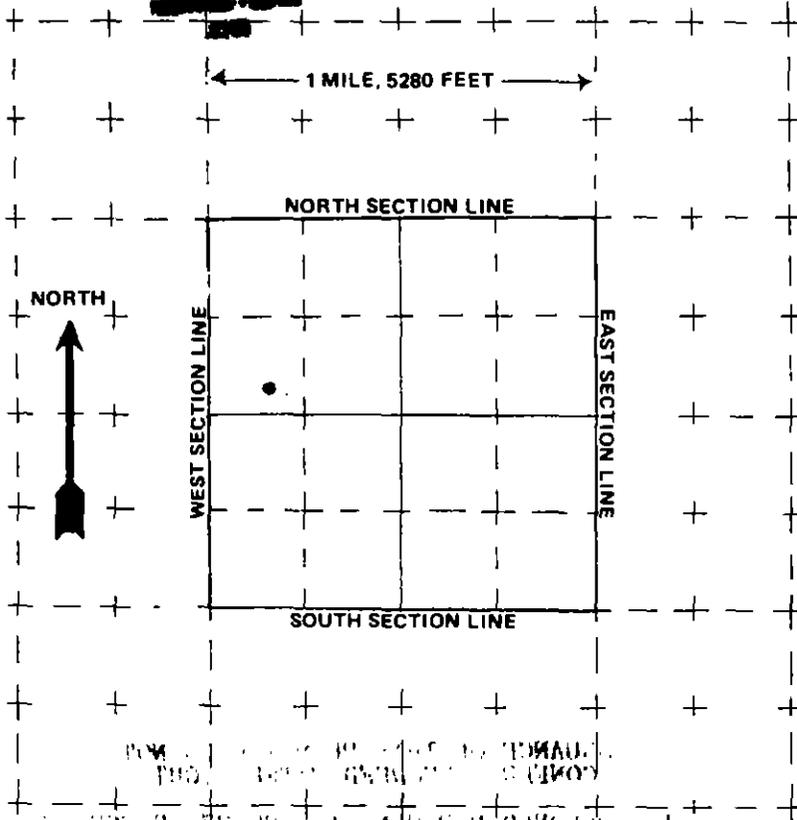
ISSUED JAN 12 1989

EXPIRATION DATE JAN 12 1991

Telephone No. 688-3013  
 Project File: SB2025-013  
 Board of County Commissioners Staff Report - Page 20 of 104

John A. Danielson  
 STATE ENGINEER  
 BY John W. Bilisely  
 I.D. 1-08 COUNTY 18

(5) THE LOCATION OF THE PROPOSED WELL and the area on which the water will be used must be indicated on the diagram below. Use the CENTER SECTION (1 section, 640 acres) for the well location.



The scale of the diagram is 2 inches = 1 mile  
Each small square represents 40 acres.

**WATER EQUIVALENTS TABLE (Rounded Figures)**

An acre-foot covers 1 acre of land 1 foot deep

1 cubic foot per second (cfs) = 449 gallons per minute (gpm)

A family of 5 will require approximately 1 acre-foot of water per year.

1 acre-foot = 43,560 cubic feet = 325,900 gallons

1,000 gpm pumped continuously for one day produces 4.42 acre-feet.

(6) THE WELL MUST BE LOCATED BELOW by distances from section lines.

2215 ft. from North sec. line (north or south)  
795 ft. from West sec. line (east or west)

LOT 2 BLOCK FILING #  
SUBDIVISION Hemphill Subdivision

(7) TRACT ON WHICH WELL WILL BE LOCATED Owner: Hier

No. of acres 35 Will this be the only well on this tract? possible future livestock well

(8) PROPOSED CASING PROGRAM

Plain Casing  
6 in. from 0 ft. to 40 ft.  
4 in. from 20 ft. to 535 ft.  
Perforated casing  
4 in. from 535 ft. to 720 ft.  
in. from ft. to ft.

(9) FOR REPLACEMENT WELLS give distance and direction from old well and plans for plugging it:

n/a

(10) LAND ON WHICH GROUND WATER WILL BE USED:

Owner(s) Robert... No. of acres:  
Legal description:

(11) DETAILED DESCRIPTION of the use of ground water: Household use and domestic wells must indicate type of disposal system to be used.

Domestic use  
Septic tank & Leachfield

(12) OTHER WATER RIGHTS used on this land, including wells. Give Registration and Water Court Case Numbers.

Type of right: none Used for (purpose):  
Description of land on which used:

(13) THE APPLICANT(S) STATE(S) THAT THE INFORMATION SET FORTH HEREON IS TRUE TO THE BEST OF HIS KNOWLEDGE.

SIGNATURE OF APPLICANT(S)  
*[Handwritten Signature]*

EXEMPT WELL DATA SHEET - DENVER BASIN, COLORADO

APPLICANT: ROBERT HIER RECEIPT NO. 295080  
LOCATION: SW1/4 OF NW1/4 OF SEC. 16, T.8S., R.67W. (2215 NSL, 795 WSL)

PROPOSED AQUIFER:  
SURFACE ELEVATION: 6590 NUMBER OF ACRES IN TRACT: 35

IS PROPERTY WITHIN SERVICE BOUNDARIES OF MUNICIPALITY S.B.5 CONSENT MAPS? NO  YES  
IF SUBDIVISION IS UNDER AUGMENTATION PLAN, CASE NO. IS \_\_\_\_\_, DIV. \_\_\_\_\_  
IF SUBDIVISION WAS RECOMMENDED FOR APPROVAL BY THE WATER MANAGEMENT BRANCH, DATE OF LETTER IS \_\_\_\_\_  
INFORMATION ON SUBDIVISION OR TRACT OF LAND/SPECIAL RESTRICTIONS:

loc-ok

evaluated by JWB on JANUARY 10, 1989

AQUIFER	ELEVATION		NET SAND	DEPTH TO		ANNUAL APPROP A-F	STATUS
	BOT.	TOP		BOT.	TOP		
UPPER DAWSON							
LOWER DAWSON	5903	6069	110	687	521	7.700	NT
DENVER	5175	5895	364	1415	695	21.599	NNT
UPPER ARAPAHOE	4576	5142	277	2014	1448	16.482	NT
LOWER ARAPAHOE							
LARAMIE-FOX HILLS	3858	4127	175	2732	2463	9.188	NT

note: E indicates location is at aquifer boundary and values may be more approximate.  
\* indicates the proposed aquifer.

All values are interpolated from the S.B.5 data base assembled in November of 1986.

C.O.A.

- 1) 35 ac. + W1/2, W1/2, sec. 16, T8S, R67W, being more part. des. on attached Ely. "A".
- 2) production
- 3) dom. (1 fam.)
- 4) Mf

NOTE:

NOTE: THIS COPY WAS  
FROM ORIGINAL  
WELL FILE # 1461  
JOB. 1/10/89

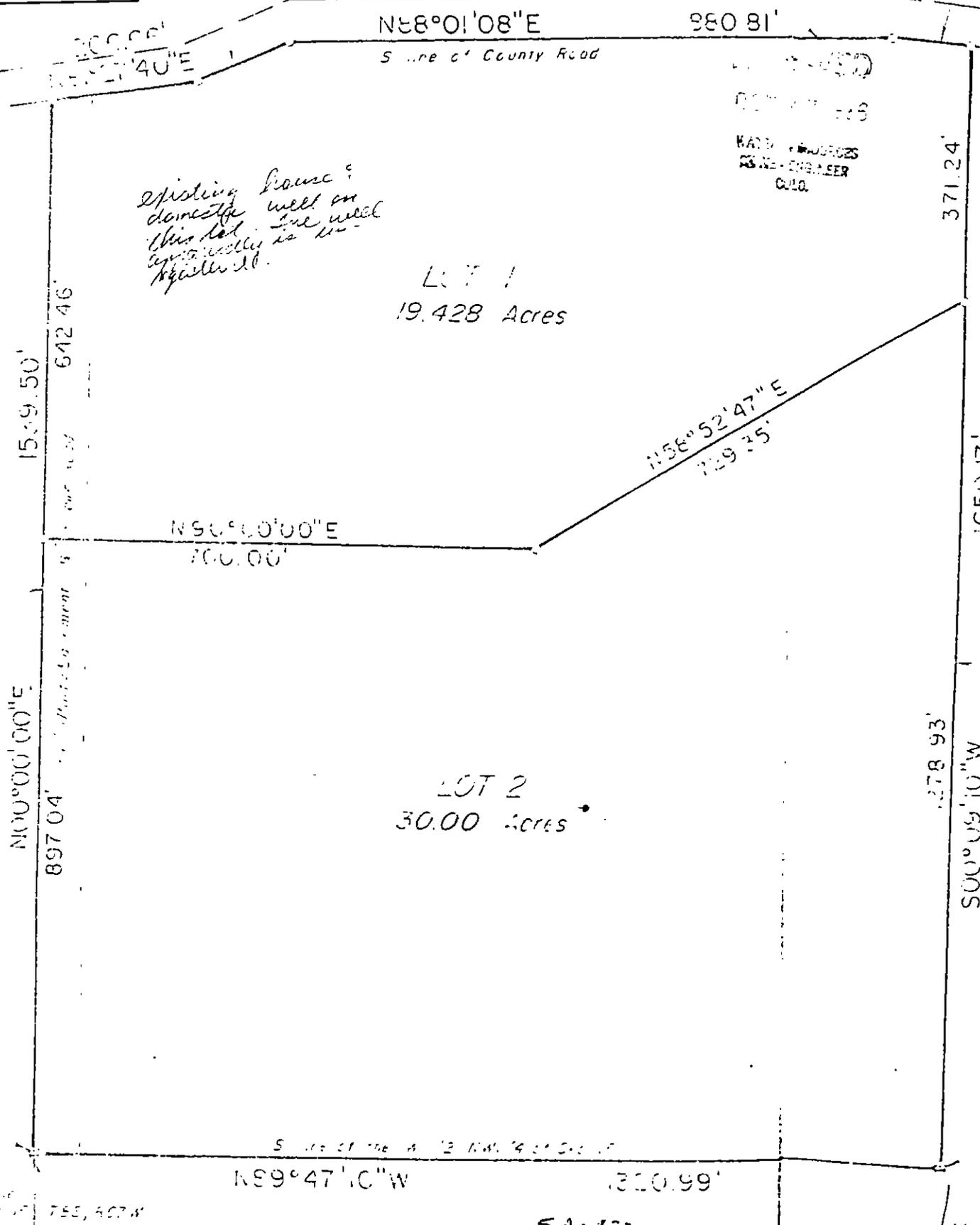
~~APPROVED BY~~ ~~REPLAT L. HALL~~  
~~NO. 2 1988~~  
~~REPLAT~~  
~~NO. 1 1988~~

N66°45'40"E  
141.95'

S83°55'15"E  
110.29'

Best Copy Available

COUNTY ROAD



existing house &  
domestic well on  
this lot. The well  
approximately is 110'  
N of the lot.

LOT 1  
19.428 Acres

LOT 2  
30.00 Acres

WATER RESOURCES  
ENGINEER  
C.O.

1/2 Sec 14  
1/2 Sec 15

corner of Sec 14  
NW 1/4 of Sec 14  
755, 407 W

1320'

5 ACRES

165'

APPLICANT: ROBERT L. HIER

REC. # 95080

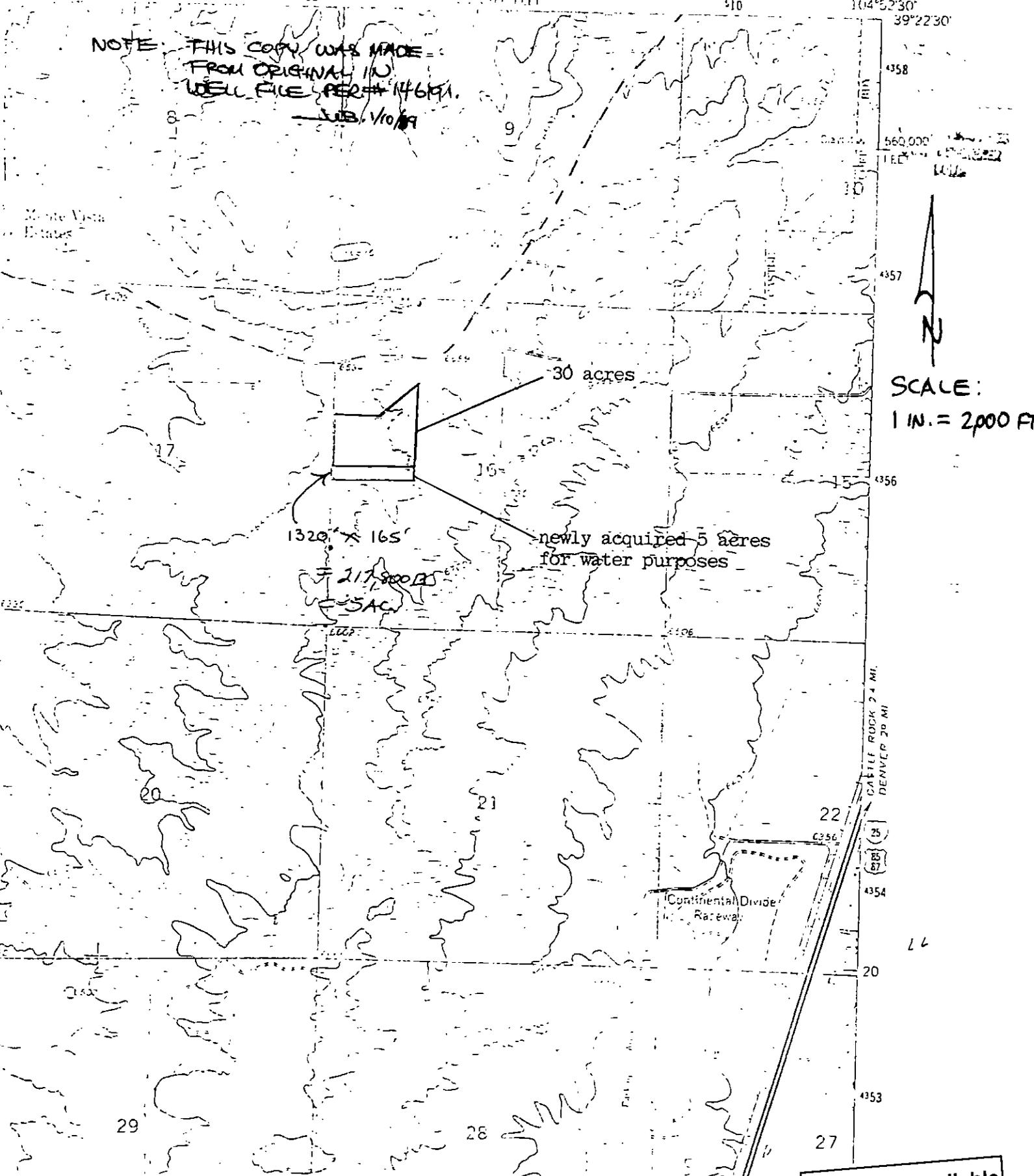
EXHIBIT "A"

PAGE 2 OF 2

FROM TOPO SHEET  
DAWSON BUTTE QUADRANGLE  
COLORADO-DOUGLAS CO  
7.5 MINUTE SERIES (TOPOGRAPHIC)

SECTION 25  
T104N  
R104E  
CASTLE ROCK  
NORTH

NOTE: THIS COPY WAS MADE FROM ORIGINAL IN WELL FILE PER # 146191. J.B. 1/10/81



SCALE:  
1 IN. = 2,000 FT.

Best Copy Available

STATE OF COLORADO  
OFFICE OF THE STATE ENGINEER  
DIVISION OF WATER RESOURCES



1313 Sherman St. - Room 823  
Denver, Colorado 80203  
(303) 866-3581

TO: WELL PERMIT APPLICANT  
RE: APPLICATION RECEIPT NO. 95080

Your application for a permit to construct a well is being returned for the reasons indicated below. The corrections and/or information we are requesting is required for evaluation of the application. The application, including all corrections, must be typed or neatly printed in BLACK INK. Please initial and date in the margin adjoining any changes or additions to the application. Do not alter or change any questions on the application. Please return the application with the requested corrections and/or information.

*The application must be signed in item 13 on the back by the applicant.*

FROM: John Bilisoly

DATE: 12/16/88

<b>DISTRICT COURT, WATER DIVISION 1, COLORADO</b> Weld County Courthouse P.O. Box 2038 Greeley, CO 80632	DATE FILED December 19, 2025 9:48 AM CASE NUMBER: 2025CW3086  <b>▲ COURT USE ONLY ▲</b>
<b>CONCERNING THE APPLICATION OF THE MANATT HIER REVOCABLE TRUST, Applicant,</b>  IN DOUGLAS COUNTY	Case Number: 2025CW3086
<b>FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE, AND JUDGMENT AND DECREE</b>	

A claim for underground water rights was filed in this case on June 30, 2025. All matters contained in the application having been reviewed, such testimony having been taken and evidence presented as was necessary, and being otherwise fully advised in the premises, it is hereby the Findings of Fact, Conclusions of Law, Ruling of the Referee, and Judgment and Decree, as follows:

**FINDINGS OF FACT**

1. Name and address of Applicant:  
  
Manatt Hier Revocable Trust  
920 W. Wolfensberger Road  
Castle Rock, CO 80109
  
2. Statements of Opposition: No statements of opposition were filed. The time for filing such statements has expired.
  
3. Subject Matter Jurisdiction: Timely and adequate notice of the application was published as required by statute, and the Court has jurisdiction over the subject matter of this proceeding and over the parties affected hereby, whether they have appeared or not.
  
4. Consultation: The Water Referee consulted with the Division Engineer, as required by C.R.S. § 37-92-302(4), on September 9, 2025, and the Division Engineer filed their summary of consultation on September 30, 2025. The amounts herein are consistent with and conform to the values and amounts referenced in the State Engineer's Determinations of Facts dated October 13, 2025.

**GROUNDWATER RIGHTS**

5. Aquifers and Location of Groundwater: Applicant is granted a decree for rights to groundwater in the not-nontributary Denver Aquifer and the nontributary Lower Dawson, Arapahoe, and Laramie-Fox Hills aquifers underlying a parcel totaling 30 acres located in the SW1/4 of the NW1/4 of Section 16, Township 8 South, Range 67 West of the 6th P.M., Lot 2A, Hemphill Subdivision, 1st Amendment, also known as 920 W. Wolfensberger Road, Castle Rock, CO, 80109, Douglas County, State of Colorado, as shown on **Exhibit A** (“Subject Property”).
  
6. Well Locations, Pumping Rates, and Annual Amounts: The groundwater may be withdrawn at rates of flow necessary to withdraw the amounts decreed herein. The groundwater will be withdrawn through any number of wells necessary, to be located at any location on the Subject Property. Applicant waives any 600-foot spacing rule for wells located on the Subject Property and on adjacent properties owned by the Applicant, but must satisfy C.R.S. § 37-90-137(4), for wells owned by others on adjacent properties. The following average annual amounts are available for withdrawal subject to the Court's retained jurisdiction in this matter and are based on a 100-year withdrawal period.

Aquifer	Average Specific Yield (%)	Saturated Thickness (feet)	Annual Amount 100 Years (acre-feet)	Total Amount (acre-Feet)
Lower Dawson (NT)*	20	140	3.78	378
Denver (NNT 4%)	17	320	16.30	1,630
Arapahoe (NT)	17	275	14.00	1,400
Laramie-Fox Hills (NT)	15	175	7.88	788

\*The volume has been reduced for the overlapping pre-213 cylinder of Well 16809-F. Applicant desires to leave no additional groundwater unadjudicated and no additional groundwater is reserved for future exempt purposes.

7. Well Permit No. 153256: There is one existing Lower Dawson Aquifer domestic exempt well on the Subject Property under Well Permit Number 153256 (“**Well 153256**”), which will be re-permitted under the decree in this case once it is issued by the Court. Additional well permits will be applied for prior to construction of additional wells.
  
8. Decreed Uses: Groundwater withdrawn from the not-nontributary and nontributary aquifers underlying the subject parcel will be used, reused, and successively used to extinction for all allowable beneficial uses, including but not limited to domestic, industrial, commercial, irrigation, livestock watering, fire protection, recreational, fish and wildlife, augmentation, replacement, and exchange. The water may be immediately used or stored for subsequent use, used for exchange purposes, for direct replacement of depletions, and for other augmentation purposes, including taking credit for all return flows resulting from the use of such water for augmentation of, or as an offset against,

any out-of-priority depletions. The water may be leased, sold, or otherwise disposed of for all the above uses, both on and off the Subject Property.

9. Estimated Average Pumping Rate and Well Depths: Wells will withdraw the subject groundwater at rates of flow necessary to withdraw the entire decreed annual amounts of groundwater. The well depths will conform to the locations of the subject aquifers as referenced in the State Engineer's Determination of Facts for each aquifer or actual aquifer characteristics.
  
10. Final Average Annual Amounts of Withdrawal:
  - 10.1 Final determination of the applicable average saturated sand thicknesses and resulting average annual amounts available to Applicant will be made pursuant to the retained jurisdiction of this Court, as described in Paragraph 21 below. In the event this decree is not reopened for a further quantitative determination, the findings herein are final and controlling. The Court shall use the acre-foot amounts in Paragraph 6 until a final determination of water rights is made.
  
  - 10.2 The allowed annual amount of groundwater which may be withdrawn through the wells specified above and any additional wells, pursuant to C.R.S. § 37-90-137(10), may exceed the average annual amount of withdrawal, as long as the total volume of water withdrawn through such wells and any additional wells therefor subsequent to the date of this decree does not exceed the product of the number of years since the date of the issuance of any well permits or the date of this decree, whichever is earliest in time, multiplied by the average annual amount of withdrawal, as specified above or as determined pursuant to the retained jurisdiction of the Court. However, amounts set forth in well permits will not be exceeded.
  
11. Source of Groundwater and Limitations on Consumption:
  - 11.1 The groundwater to be withdrawn from the Lower Dawson, Arapahoe, and Laramie-Fox Hills aquifers is "nontributary groundwater" as defined in C.R.S. § 37-90-103(10.5), and in the Denver Basin Rules, the withdrawal of which will not, within 100 years of continuous withdrawal, deplete the flow of a natural stream, including a natural stream as defined in C.R.S. §§ 37-82-101(2) and 37-92-102(1)(b), at an annual rate greater than 1/10 of 1% of the annual rate of withdrawal.
  
  - 11.2 The groundwater to be withdrawn from the Denver Aquifer is "not-nontributary groundwater" as defined in C.R.S. § 37-90-103(10.7), and in the Denver Basin Rules, the withdrawal of which will, within 100 years of continuous withdrawal, deplete the flow of a natural stream, including a natural stream as defined in C.R.S. §§ 37-82-101(2) and 37-92-102(1)(b), at an annual rate greater than 1/10 of 1% of the annual rate of withdrawal. The Denver Aquifer groundwater cannot

be withdrawn until an augmentation plan is approved by the Water Court, or the groundwater is approved for exempt uses by the State Engineer.

- 11.3 Applicant may not consume more than 98% of the annual quantity of water withdrawn from the nontributary aquifers. The relinquishment of 2% of the annual amount of water withdrawn to the stream system, as required by the Denver Basin Rules effective January 1, 1986, may be satisfied by any method selected by the Applicant and satisfactory to the State Engineer, so long as Applicant can demonstrate that an amount equal to 2% of such withdrawals (by volume) has been relinquished to the stream system.
- 11.4 There is unappropriated groundwater available for withdrawal from the subject aquifers beneath the Subject Property, and the vested water rights of others will not be materially injured by such withdrawals as described herein. Withdrawals hereunder are allowed on the basis of an aquifer life of 100 years, assuming no substantial artificial recharge within 100 years. No material injury to vested water rights of others will result from the issuance of permits for the subject wells or the exercise of the rights and limitations specified in this decree.

12. Additional Wells and Well Fields:

- 12.1 Applicant may construct additional and replacement wells in order to maintain levels of production, to meet water supply demands or to recover the entire amount of groundwater in the subject aquifers underlying the Subject Property, as described herein. As additional wells are planned, applications shall be filed in accordance with C.R.S. § 37-90-137(10).
- 12.2 Two or more wells constructed into the aquifer shall be considered a well field. In effecting production of water from such well field, Applicant may produce the entire amount which may be produced hereunder through any combination of wells within the well field.
- 12.3 In considering applications for permits and for additional wells to withdraw the groundwater, which is the subject of this decree, the State Engineer shall be bound by this decree and shall issue said permits in accordance with provisions of C.R.S. § 37-90-137(4) and (10).
- 12.4 In the event that the allowed average annual amounts decreed herein are adjusted pursuant to the retained jurisdiction of the Court, Applicant shall obtain permits to reflect such adjusted average annual amounts prior to withdrawing the adjusted amounts. Subsequent permits for any wells herein shall likewise reflect any such adjustment of the average annual amounts decreed herein.

13. Conditions for Well Operation and Construction:

Manatt Hier Revocable Trust  
Ruling and Decree  
25CW3086  
Page 4 of 8

For each well that is constructed pursuant to this decree, Applicant shall comply with the following conditions:

- 13.1 A totalizing flow meter shall be installed on the well discharge pipe prior to withdrawing any water therefrom and shall be maintained and operational at all times for the life of the well. Applicant shall keep accurate records of all withdrawals by the well, make any calculations necessary, and submit such records to the Water Division 1 Engineer upon request.
  - 13.2 The entire length of the open bore hole shall be geophysically surveyed prior to casing and copies of the geophysical log submitted to the Division of Water Resources. Applicant may provide a geophysical log from an adjacent well or test hole, pursuant to Rule 9A of the Statewide Rules and acceptable to the State Engineer, which fully penetrates the aquifer, in satisfaction of the above requirement.
  - 13.3 Groundwater production shall be limited to the specific identified aquifer. Plain, unperforated casing must be installed and properly grouted to prevent withdrawal from or intermingling of water from zones other than those for which the well was designed.
  - 13.4 Each well shall be permanently identified by its permit number, this Water Court Case Number, and the name of the producing aquifer on the above-ground portion of the well casing or on the pump house.
14. Failure of Applicant or successors in interest to comply with the terms of the decree may result in an order of the Division Engineer's office to curtail or eliminate pumping of the well. This decree shall be recorded in the real property records of Douglas County so that a title examination of the property, or any part thereof, shall reveal to all future purchasers the existence of this decree.

### **CONCLUSIONS OF LAW**

15. Full and adequate notice of the application was given, and the Court has jurisdiction over the subject matter and over the parties whether they have appeared or not.
16. The application for a decree confirming Applicant's right to withdraw and use all unappropriated groundwater from the nontributary aquifers beneath the Subject Property as described herein pursuant to C.R.S. § 37-90-137(4), should be granted, subject to the provisions of this decree.
17. The Water Court has jurisdiction over this proceeding pursuant to C.R.S. § 37-90-137(6). This Court concludes as a matter of law that the application herein is one contemplated by law pursuant to C.R.S. § 37-90-137(4). The application for a decree confirming Applicant's right to withdraw and use all unappropriated groundwater from the

Manatt Hier Revocable Trust  
Ruling and Decree  
25CW3086  
Page 5 of 8

nontributary aquifers beneath the Subject Property as described herein pursuant to C.R.S. § 37-90-137(4), should be granted, subject to the provisions of this decree. The determination of groundwater rights herein need not include a date of initiation of the withdrawal project. C.R.S. § 37-92-305(11).

### **JUDGMENT AND DECREE**

18. The Findings of Fact and Conclusions of Law set forth above are hereby incorporated into the terms of this Ruling and Decree as if the same were fully set forth herein.
19. Applicant and/or successors may withdraw the subject groundwater herein through wells to be permitted by the State Engineer's Office located anywhere on the Subject Property in the average annual amounts and at the estimated average rates of flow specified herein, subject to the limitations herein and the retained jurisdiction by this Court.
20. The groundwater rights described in the Findings of Fact are hereby approved, confirmed, and adjudicated, including and subject to the terms and conditions specified herein. No owners of or persons entitled to use water under a vested water right or decreed conditional water right will be injured or injuriously affected by the pumping of Applicant's groundwater resources as decreed herein.
21. Retained Jurisdiction:
  - 21.1 The Court retains jurisdiction as necessary to adjust the average annual amounts of groundwater available under the Subject Property to conform to actual local aquifer characteristics as determined from adequate information obtained from wells, pursuant to C.R.S. § 37-92-305(11). Within 60 days after completion of any well decreed herein or any test hole(s), Applicant, or any successor in interest to these water rights shall serve copies of such log(s) upon the State Engineer.
  - 21.2 At such time as adequate data is available, any person, including the State Engineer, may invoke the Court's retained jurisdiction to make a Final Determination of Water Right. Within four months of notice that the retained jurisdiction for such purpose has been invoked, the State Engineer shall use the information available to him to make a final determination of water rights findings. The State Engineer shall submit such finding to the Water Court and the Applicant.
  - 21.3 If no protest to such finding is made within 60 days, the Final Determination of Water Rights shall be incorporated into the decree by the Water Court. In the event of a protest, or in the event the State Engineer makes no determination within four months, such final determination shall be made by the Water Court after notice and hearing.

Manatt Hier Revocable Trust  
Ruling and Decree  
25CW3086  
Page 6 of 8

22. The groundwater rights decreed herein are vested property rights appurtenant to the Subject Property and shall remain appurtenant unless expressly severed by conveyance to someone other than the property owner. If any deed for the Subject Property is silent to the conveyance of the water rights decreed herein, it is assumed that the water rights have been conveyed as an appurtenance to the Subject Property, unless all or part of the water rights have been previously severed.

Date: November 19, 2025



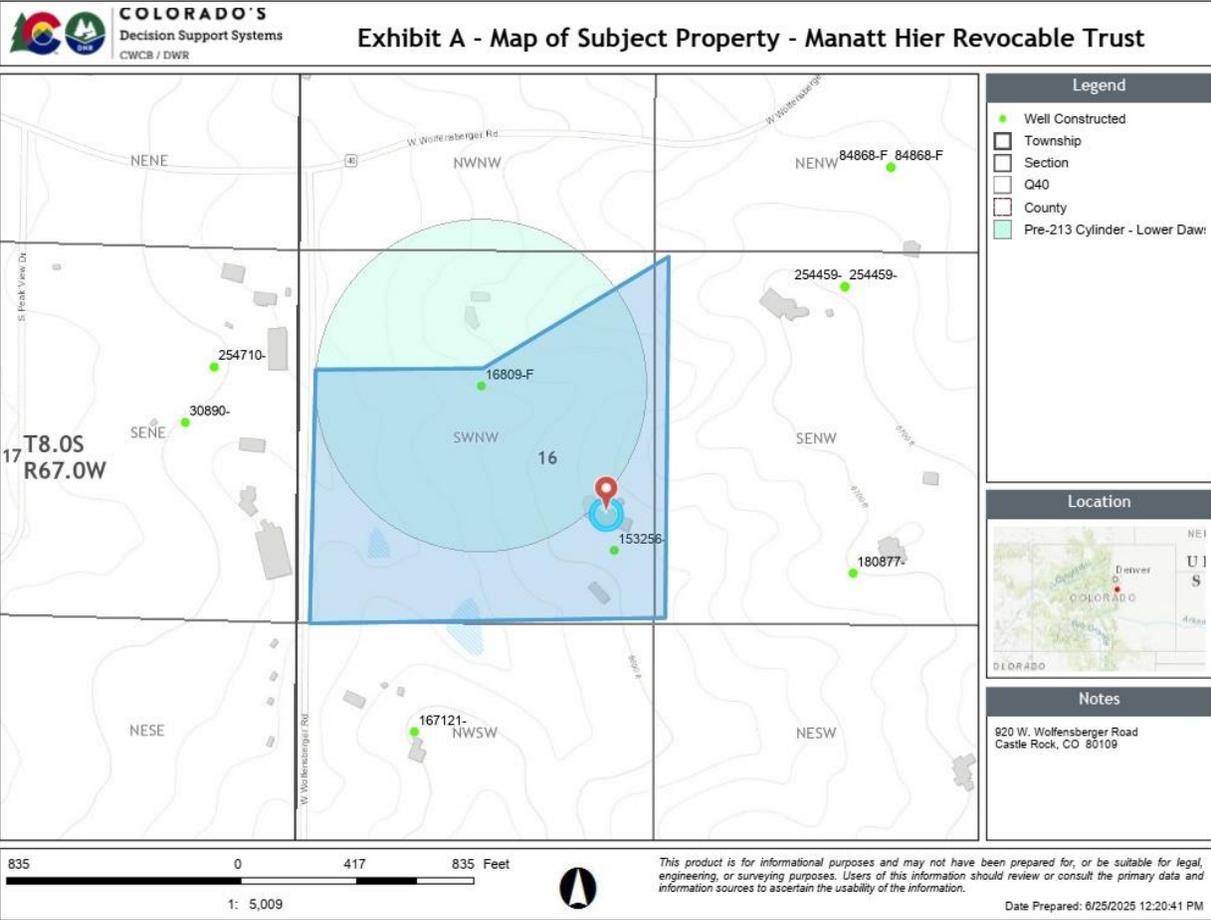
John S. Cowan  
Water Referee  
Water Division One

The Court finds that no protest was filed in this matter. The foregoing is confirmed and is made the judgment and decree of this Court.

Date: December 19, 2025



Todd L. Taylor  
Water Judge  
Water Division One



Manatt Hier Revocable Trust  
25CW3086

Hemphill Subdivision, 2nd Amendment - Replat  
Project File: SB2025-013  
Board of County Commissioners Staff Report - Page 33 of 104

EXHIBIT A

# Shared Roadway and Maintenance Agreement

This Shared Roadway and Maintenance Agreement (“Agreement”) is dated this \_\_\_\_ day of March, 2025, by Robert L. Hier and Margaret M. Hier, Mary A. Wild, John U. Hansen and Heidi W. Hansen (collectively referred to as “Users”).

## Background of Agreement

Users are owners of adjacent properties in Douglas County, Colorado. Robert L. Hier and Margaret M. Hier are the owners of 920 W. Wolfensberger Road, Castle Rock, CO 80109.

Mary A. Wild is the owner of 918 W. Wolfensberger Road, Castle Rock, CO 80109

John U. Hansen and Heidi W. Hansen are the owners of 974 W. Wolfensberger Road, Castle Rock, CO 80109

The Users own properties that abut each other and have access from Wolfensberger Road. There is a private road (“Private Road”) that serves the three properties. The Users have determined that it is in their mutual interest to have executed and recorded an agreement for sharing the costs of maintenance and repair of the Private Road. The purpose of this Agreement is to place in writing the mutual rights and obligations of the Users of the jointly used Private Road.

## AGREEMENT

NOW THEREFORE, in consideration of their mutual promises and intending to be legally bound, the Users agree as follows:

1. **Grant of Easement.** Each User grants to the other Users a permanent easement over and across their respective properties via the Private Road for the purposes of ingress and egress to their adjoining properties.

**2. Sharing of Costs and Expenses.** The Users shall share the costs and expenses of maintenance and repair of the Private Road as follows: Each User shall be responsible for one-third of the cost of ongoing maintenance and repair of the Private Road from Wolfensberger Road to the existing Hier driveway.

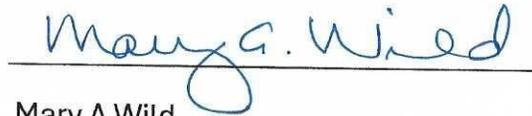
This Shared Roadway and Maintenance Agreement shall not be modified except in writing signed by all parties, their successors or assigns. This Agreement and its obligations and benefits shall run with the land and shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns.



Robert L. Hier



Margaret M. Hier



Mary A Wild



John U. Hansen



Heidi W. Hansen

**Notary Acknowledgement**

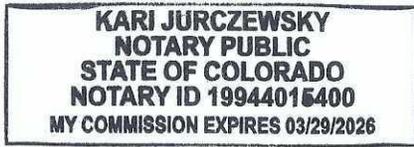
State of Colorado )  
 )ss  
County of Douglas )

The foregoing instrument was acknowledged before me on this day of 3/15/25 by Robert L. Hier and Margaret m. Hier

\_\_\_\_\_  
Kari Jurczewsky

Notary Public

My Commission expires 3/29/26





**Notary Acknowledgement**

State of Colorado            )  
  )ss  
County of Douglas            )

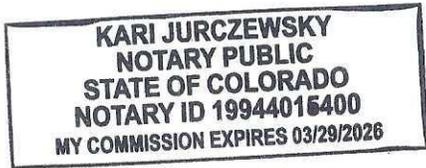
The foregoing instrument was acknowledged before me on this day of 3/15/25 by

Mary A. Wild

K Jurczewsky

Notary Public

My Commission expires 3/29/26



# Comprehensive Master Plan Land Use Reference Map

## Comprehensive Master Plan Areas

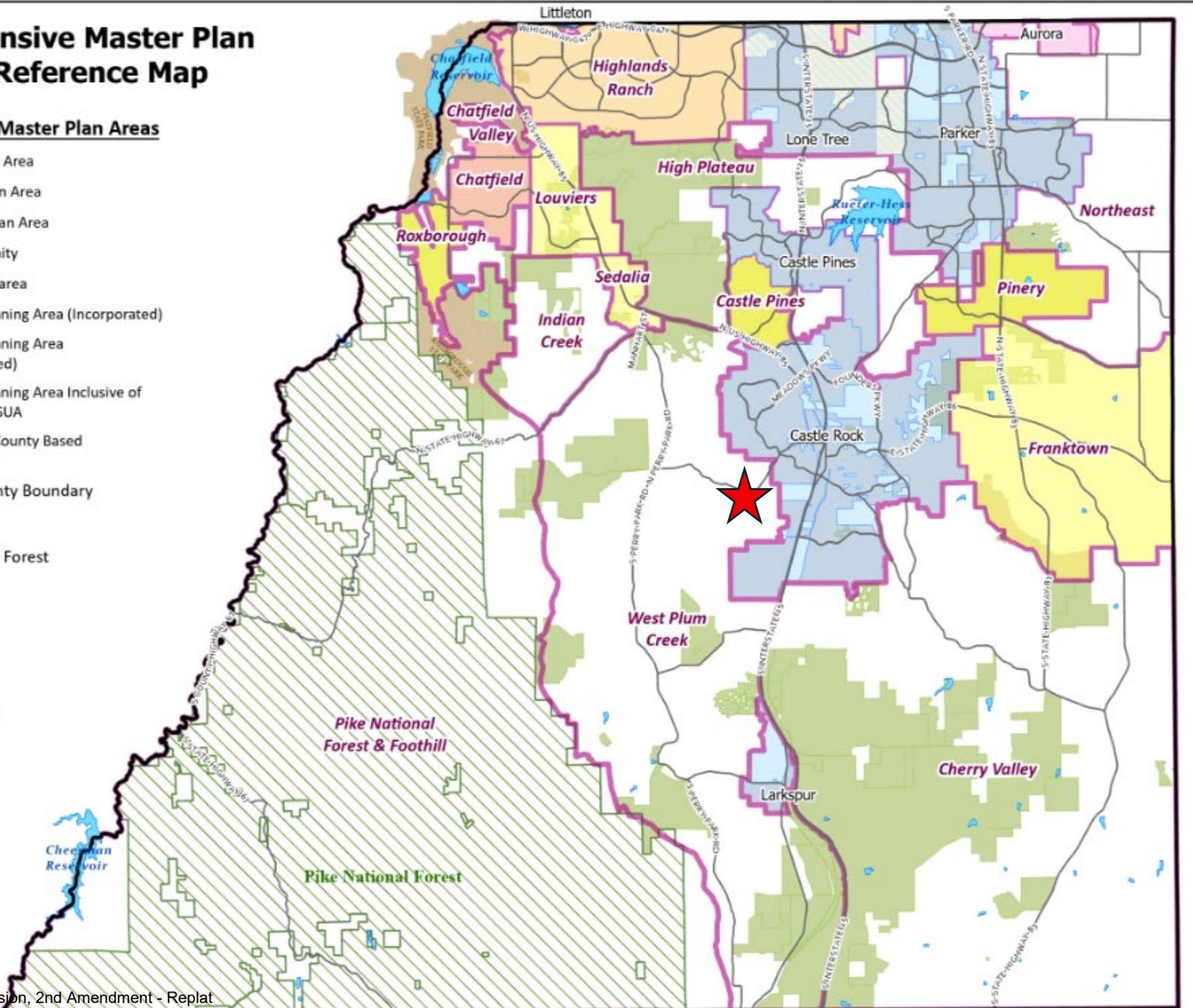
- Primary Urban Area
- Chatfield Urban Area
- Separated Urban Area
- Rural Community
- Nonurban Subarea
- Municipal Planning Area (Incorporated)
- Municipal Planning Area (Unincorporated)
- Municipal Planning Area Inclusive of County PUA / SUA
- Non-Douglas County Based Municipalities
- Douglas County Boundary

## Parks

- Pike National Forest
- State Parks
- Open Space
- Lakes

## Roadways

- Major Roads

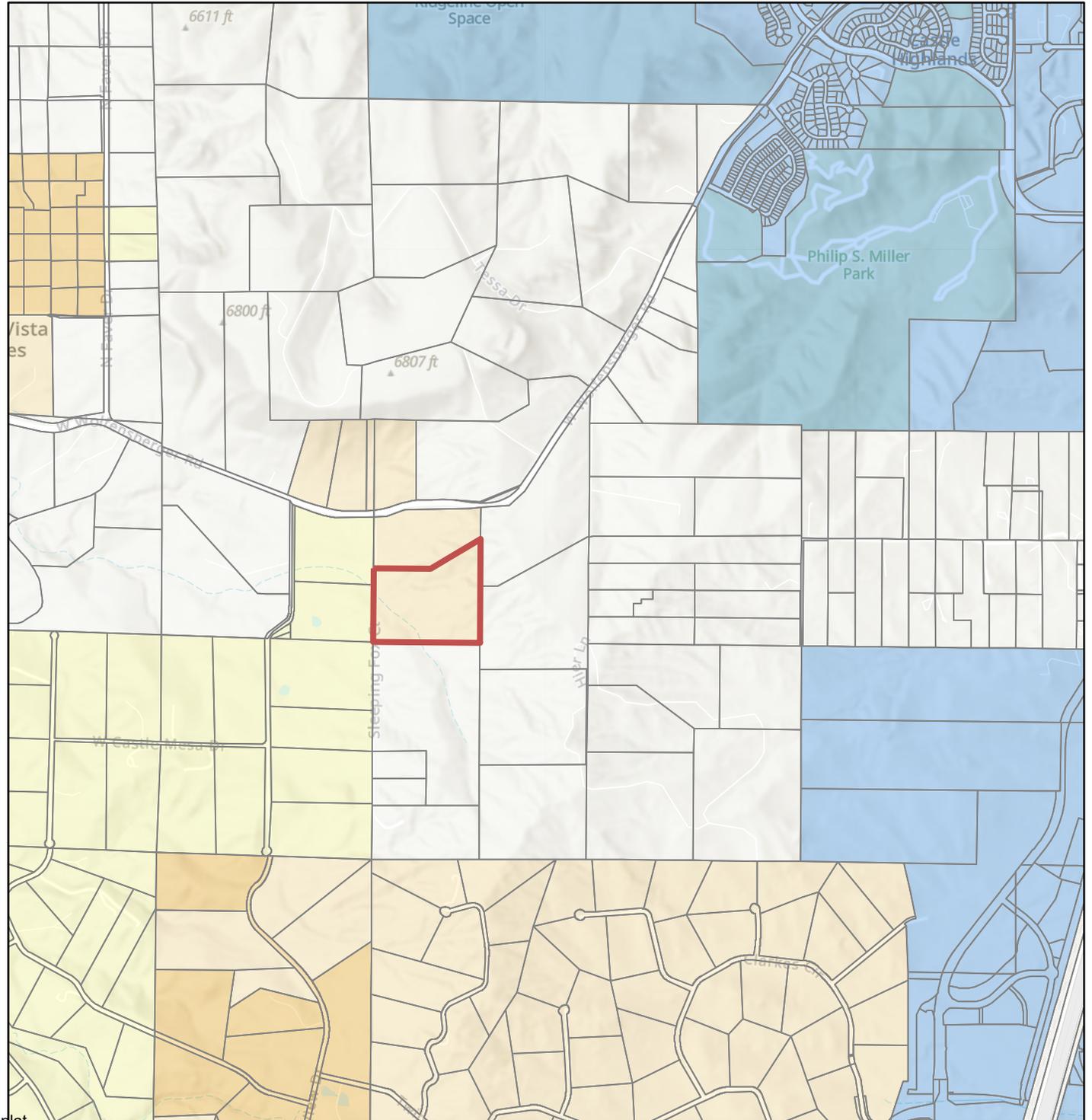


# Hemphill Subdivision, 2nd Amendment

## SB2025-013 Zoning Map



- LEGEND
- Parcels - PARCELS
  - ZONE DISTRICT
  - A1 - AGRICULTURAL ONE
  - LRR - LARGE RURAL RESIDENTIAL
  - RR - RURAL RESIDENTIAL
  - ER - ESTATE RESIDENTIAL
  - CTY
  - World\_Hillshade
  - A1 - AGRICULTURAL ONE
  - LRR - LARGE RURAL RESIDENTIAL
  - RR - RURAL RESIDENTIAL
  - ER - ESTATE RESIDENTIAL
  - CTY



# Hemphill Subdivision, 2nd Amendment

SB2025-013  
Aerial Map



## LEGEND

-  Parcels - PARCELS
-  World\_Hillshade



**Referral Agency Response Report**

**Project Name:** Hemphill Subdivision, 2nd Amendment

**Project File #:** SB2025-013

**Date Sent:** 05/07/2025

**Date Due:** 05/28/2025

Agency	Date Received	Agency Response	Response Resolution
Addressing Analyst	05/08/2025	No Comment.	No action required.
Assessor	05/27/2025	<p><b>Verbatim Response:</b> Property is currently owned by the Manatt Hier Revocable Trust, so the owner signature block needs to be updated/ signed by the trustees of the trust.</p>	Exhibit revised by applicant to resolve comments.
AT&T Long Distance - ROW	05/15/2025	<p><b>Summary of Response:</b> There should be no conflicts with AT&amp;T facilities.</p>	No action required.
Bear Canyon Ranch HOA		No Response Received.	No action required.
Black Hills Energy		No Response Received.	No action required.
Building Services	05/13/2025	<p><b>Verbatim Response:</b> Please submit a site plan, show the existing building(s), and show the distances of the exterior walls to the property lines for review.</p>	The applicant provided a supplemental exhibit as requested by the Building Division. No further action is required at this time.
Castle Rock Fire and Rescue Department		No Response Received.	No action required.
CenturyLink		No Response Received.	No action required.
Colorado Division of Water Resources	05/28/2025	<p><b>Summary of Response:</b> The Colorado Division of Water Resources initially provided comments related to the proposed water supply for the replat request in their review later dated May 28, 2025.</p> <p>In a subsequent review letter dated January 14, 2026, CDWR stated that the water supply is adequate and can be provided without causing injury to decreed water rights, provided well permit 153256 is re-permitted as a non-exempt well, pursuant to the water decree.</p>	Plat notes and conditions of approval ensure compliance with the approved water decree.
Colorado Geological Survey	05/27/2025	<p><b>Verbatim Response:</b> No concerns, no comment</p>	No action required.
Comcast		No Response Received.	No action required.
CORE Electric Cooperative	05/20/2025	No Comment.	No action required.

**Referral Agency Response Report**

**Project Name:** Hemphill Subdivision, 2nd Amendment

**Project File #:** SB2025-013

**Date Sent:** 05/07/2025

**Date Due:** 05/28/2025

Agency	Date Received	Agency Response	Response Resolution
Douglas County Conservation District	05/28/2025	<p><b>Summary of Response:</b>                      The Conservation District noted there is no specific Integrated Noxious Weed Control Plan. Additional comments regarding limitations of soil, topsoil, erosion barriers, vehicle tracking control systems, Low Impact Development techniques, and that the GESC field manual is complied with.</p>	<p>The Douglas County GESC Manual establishes requirements for amount of disturbed area, revegetation, and all other grading-related components.</p>
Douglas County Health Department	05/08/2025	<p><b>Summary of Response:</b>                      No objection to the property being served by an OWTS provided that the system is permitted, inspected, and operated accordance with DCHD’s current OWTS regulations.</p>	<p>The applicant will obtain OWTS approval as part of the building permit process for residential construction on proposed Lot 2A-2.</p>
Douglas County Historic Preservation	05/22/2025	<p><b>Summary of Response:</b>                      At this time, the Curator has no further recommendations. Prior to any ground disturbance, a Class II survey will need to be submitted to evaluate for cultural resources on the site.</p>	<p>The applicant will watch for any historic, archeological, or paleontological resources and will complete appropriate data management forms in the event of such discovery as noted in proposed condition # 6.</p>
Douglas County Water Commission	05/19/2025	<p><b>Summary of Response:</b>                      Commissioner Smethills questioned if the County should approve the subdivision prior to the groundwater being adjudicated. Commissioner Ela commented on Commissioner Smethills’ question by indicating that non-tributary groundwater is tied to property ownership and does not have to be adjudicated.</p>	<p>No action required.</p>
Douglas County School District RE 1	05/15/2025	<p><b>Summary of Response:</b>                      No objection to the replat request provided the applicant agrees to pay the cash-in-lieu fee of \$500 prior to plat recordation.</p>	<p>Proposed condition # 1 requires payment of school fees prior to recordation of the replat exhibit.</p>
Engineering Services	05/13/2025	<p><b>Summary of Response:</b>                      No comments on the replat. Comments provided regarding the GESC plans submitted for review.</p>	<p>The applicant addressed the comments related to the GESC plans.</p>
Jackson 105 FD		<p>No Response Received.</p>	<p>No action required.</p>
Keene Ranch HOA		<p>No Response Received.</p>	<p>No action required.</p>

**Referral Agency Response Report****Project Name:** Hemphill Subdivision, 2nd Amendment**Project File #:** SB2025-013**Date Sent:** 05/07/2025**Date Due:** 05/28/2025

<b>Agency</b>	<b>Date Received</b>	<b>Agency Response</b>	<b>Response Resolution</b>
Office of Emergency Management	05/12/2025	<b>Verbatim Response:</b> OEM has no issues with this project	No action required.
Rural Water Authority of Douglas County		No Response Received.	No action required.
Sheriff's Office	05/12/2025	<b>Verbatim Response:</b> Deputy Jeff Pelle reviewed this regarding security with Crime Prevention Through Environmental Design (CEPTD) concepts in mind. No comments or concerns at this time for this request from DCSO.	No action required.
Sheriff's Office E911		No Response Received.	No action required.
Town of Castle Rock	05/13/2025	No Comment.	No action required.
Twin Oaks HOA		No Response Received.	No action required.
Wildfire Mitigation	05/22/2025	<b>Verbatim Response:</b> The lot does contain a wildfire hazard. The proposed created lot contains a lower hazard with some breaks between oak clumps. Defensible space/wildfire mitigation requirements will be implemented at the time of building permit. Applicant is encouraged to complete wildfire mitigation efforts on the 20 acre piece with the existing residence.	A wildfire hazard assessment has been completed. Standard mitigation will be required at the time of building permits.  The applicant has acknowledged the recommendation.
Xcel Energy-Right of Way & Permits	05/23/2025	<b>Summary of Response:</b> No apparent conflict with the replat request.	No action required.

**From:** [annb@cw64.com](mailto:annb@cw64.com)  
**To:** [Eric Pavlinek](mailto:Eric.Pavlinek@douglas.co.us)  
**Cc:** [CHOY, PAM](mailto:CHOY_PAM@cw64.com); [duanew@cw64.com](mailto:duanew@cw64.com); [jt@cw64.com](mailto:jt@cw64.com)  
**Subject:** W Wolfensberger Rd Castle Rock, Colorado Douglas County eReferral #SB2025-013  
**Date:** Thursday, May 15, 2025 1:47:39 PM

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Hi Eric,

This is in response to your eReferral with a utility map showing any buried AT&T Long Line Fiber Optics near W Wolfensberger Rd Castle Rock, Colorado. The Earth map shows the project area in red. Based on the address and/or map you provided, there should be NO conflicts with the AT&T Long Lines, as we do not have facilities in that area.

Please feel free to contact us with any questions or concerns.

Ann Barnowski  
Clearwater Consulting Group Inc  
120 9th Avenue South  
Suite 140  
Nampa, ID 83651  
[Annb@cw64.com](mailto:Annb@cw64.com)

The attached google earth maps are intended to show approximate locations of the buried AT&T long line fiber optic cable. The maps are provided for informational purposes only. In no way should the maps be used for anything other than general guidelines as to where the fiber is or is not and any other use of these maps is strictly prohibited.

-----Original Message-----

From: [epavlinek@douglas.co.us](mailto:epavlinek@douglas.co.us) <[epavlinek@douglas.co.us](mailto:epavlinek@douglas.co.us)>  
Sent: Wednesday, May 7, 2025 10:59 AM  
To: [annb@cw64.com](mailto:annb@cw64.com) <[annb@cw64.com](mailto:annb@cw64.com)>  
Subject: Douglas County eReferral (SB2025-013) Is Ready For Review

There is an eReferral for your review. Please use the following link to log on to your account:

<https://apps.douglas.co.us/planning/projects/Login.aspx>

Project Number: SB2025-013

Project Name: Hemphill Subdivision, 2nd Amendment

Project Summary: Applicant is requesting replat approval to subdivide Lot 2A into two lots. The property is approximately 29.97 acres in size and zoned Large Rural Residential. Lot 2A-1 is proposed to be 19.97 acres and Lot 2A-2 is proposed to be 10 acres in size.

This referral will close on Wednesday, May 28, 2025.

If you have any questions, please contact me.

Sincerely,

Eric Pavlinek

Planning Services  
100 Third Street  
Castle Rock, CO 80104  
303-660-7460 (main)



PROJECT AREA

46

Big Bear Dr

S Peak View Dr

Big Bear Dr

W Castle Mesa Dr

S Peak View Dr

Mountain View Rd





May 28, 2025

Eric Pavlinek

Douglas County Planning Services

Transmission via email: [epavlinek@douglas.co.us](mailto:epavlinek@douglas.co.us)

**Re: Hemphill Subdivision - 2<sup>nd</sup> Amendment**

Part of the NW ¼ of Sec. 16, Twp. 8S, Rng. 67W, 6<sup>th</sup> P.M., Douglas County

Water Division 1, Water District 8

CDWR Assigned Referral No. 34053

Dear Eric Pavlinek,

We have received your May 7, 2025 proposal to subdivide an existing approximately 29.97 acre parcel known as Lot 2A Hemphill Subdivision - 1<sup>st</sup> Amendment into two lots. Proposed Lot 2A-1 will be 19.97 acres, and Lot 2A-2 will be 10.00 acres in size.

### **Water Supply Demand**

According to the referral documents, the estimated annual water demands for Lot 2A-1 (19.97 acres) and Lot 2A-2 (10.00 acres) of the proposed subdivision are 1 acre-foot/year/lot. Specific uses for each lot were not provided in the referral documents.

### **Source of Water Supply**

The proposed source of water for the subdivision appear to be individual on-lot wells producing from the nontributary Lower Dawson aquifer. At the time of this review, the ground water underlying the subject property has not been quantified and



adjudicated in Division 1 Water Court. Therefore, the quantities of Denver Basin ground water underlying the subject property available for appropriation are approximate, and not final. The Applicant has estimated the amounts of Lower Dawson aquifer water available to parcel 2A-1 and 2A-2, as shown in the table below:

Aquifer	Annual total amount estimated by Applicant underlying entire 20.97 acres (100 year aquifer allocation)	Annual total amount estimated by Applicant underlying Lot 2A-1 (19.97 acres, 100 year aquifer allocation)	Annual total amount estimated by Applicant underlying Lot 2A-2 (10.00 acres, 100 year aquifer allocation)	Type
Lower Dawson <sup>1</sup>	2.68	1.34	1.34	NT*
Denver	18.69	12.46	6.23	NNT**
Arapahoe	14.18	9.45	4.73	NT*
Laramie Fox-Hills	7.87	5.25	2.62	NT*
Total	43.42	28.50	14.92	-

\*nontributary

\*\*not nontributary 4% replacement requirement

<sup>1</sup> The amounts of Lower Dawson aquifer water available, as estimated by the Applicant, were reduced for area claimed by the cylinder of appropriation for pre-Senate Bill 213 well permit no. 16809-F. Due to the limited availability of Lower Dawson water underlying the subject parcel, the total amount of Lower Dawson water estimated to be available has been evenly split between Lot 2A-1 and Lot 2A-2 of the proposed subdivision.

A review of our records indicate that there are wells located on the subject property.

Well permit no. 16809-F was issued on January 17, 1973 for domestic, livestock watering, and irrigation use. Well permit no. 16809-F has an appropriation based on the law as it existed before the enactment of Senate Bill 73-213, known as a “Pre-213 Well”. Well permit no. 16809-F currently claims a portion of the Lower Dawson

aquifer groundwater underlying the subject property. According to the referral documents, well permit no. 16809-F may be located on the parcel to the North (Lot 1 of Hemphill Subdivision), as it serves the home located on Lot 1.

Well permit no. 153256 was issued on January 12, 1989 pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a tract of land of 35 acres described as a portion W ½ of the W ½ of Section 16, Twp. 8S, Rng. 67W, 6<sup>th</sup> P.M. (Hemphill Subdivision Lot 2) for domestic uses. Well permit no. 153256 was completed into the Lower Dawson aquifer. **Section 37-92-602(3)(b)(III), C.R.S., requires that the cumulative effect of all wells in a subdivision be considered when evaluating material injury to decreed water rights. Therefore, well permit no. 153256 must be re-permitted as a non-exempt well, or must be plugged and abandoned since the provisions of C.R.S. 37-92-602 which allowed for issuance of the well permit will no longer apply.**

The proposed source of water for this subdivision is a bedrock aquifer in the Denver Basin. The State Engineer's Office does not have evidence regarding the length of time for which this source will be a physically and economically viable source of water. According to section 37-90-137(4)(b)(I), C.R.S., "Permits issued pursuant to this subsection (4) shall allow withdrawals on the basis of an aquifer life of one hundred years." Based on this allocation approach, the annual amounts of undecreed water is equal to one percent of the total amount, as determined by rules 8.A and 8.B of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7. Therefore, the water may be withdrawn in those annual amounts for a maximum of 100 years.

Applications for on lot well permits, submitted by an entity other than the current water right holder, must include evidence that the applicant has acquired the right to the portion of water being requested on the application.

### **State Engineer's Office Opinion**

Pursuant to Section 30-28-136(1)(h)(l), C.R.S., the State Engineer's Office has not received enough information to render an opinion regarding the adequacy of the proposed water supply. Prior to further review of the subdivision water supply plan the following information is required:

1. Provide a decree showing the ground water is physically and legally available for the proposed uses, and in sufficient quantities to meet the proposed demands.
2. If multiple aquifers will be used to meet the demands, specify which lot has access to which aquifer(s). Please note that if well(s) constructed in the Denver aquifer are proposed, the Applicant must also provide evidence that they have an approved augmentation plan.
3. Clarify if well permit no. 153256 is to be re-permitted as a non-exempt well pursuant to an approved Water Court Division 1 decree or plugged and abandoned prior to the subdivision approval.

Please contact Mike Matz at 303-866-3581 x8241 or at [michael.matz@state.co.us](mailto:michael.matz@state.co.us) with any questions.

Sincerely,



*for* Ioana Comaniciu, P.E.  
Water Resources Engineer



January 14, 2026

Eric Pavlinek

Douglas County Planning Services

Transmission via email: [epavlinek@douglas.co.us](mailto:epavlinek@douglas.co.us)

**Re: Hemphill Subdivision - 2<sup>nd</sup> Amendment (2<sup>nd</sup> Letter)**

Part of the NW ¼ of Sec. 16, Twp. 8S, Rng. 67W, 6<sup>th</sup> P.M., Douglas County

Water Division 1, Water District 8

CDWR Assigned Referral No. 34053

Dear Eric Pavlinek,

We have received the additional information provided on January 12, 2026 to subdivide an existing approximately 29.97 acre parcel known as Lot 2A Hemphill Subdivision - 1<sup>st</sup> Amendment into two lots. Proposed Lot 2A-1 will be 19.97 acres, and Lot 2A-2 will be 10.00 acres in size.

Our office previously provided comments for the proposed subdivision in a letter dated May 28, 2025. The comments outlined in this letter supersede those provided in the previous letter.

### **Water Supply Demand**

According to the referral documents, the estimated annual water demands for Lot 2A-1 (19.97 acres) and Lot 2A-2 (10.00 acres) of the proposed subdivision are 1 acre-foot/year/lot. Specific uses for each lot were not provided in the referral documents.



**Source of Water Supply**

The proposed source of water for the subdivision are individual on-lot wells producing from the nontributary Lower Dawson aquifer. The Denver Basin ground water underlying the subject property was adjudicated in Division 1 Water Court Case No. 25CW3086, and the amounts quantified in that case are shown below:

<b>Aquifer</b>	<b>Decreed annual amount underlying 30+/- acres (100 year aquifer allocation)</b>	<b>Decreed total amount underlying 30+/- acres</b>	<b>Type</b>
<b>Lower Dawson<sup>1</sup></b>	<b>3.78</b>	<b>378</b>	<b>NT*</b>
<b>Denver</b>	<b>16.3</b>	<b>1,630</b>	<b>NNT**</b>
<b>Arapahoe</b>	<b>14.0</b>	<b>1,400</b>	<b>NT*</b>
<b>Laramie Fox-Hills</b>	<b>7.88</b>	<b>788</b>	<b>NT*</b>
<b>Total</b>	<b>41.96</b>	<b>4,196</b>	<b>-</b>

**\*nontributary**

**\*\*not nontributary 4% replacement requirement**

**<sup>1</sup> The amounts of Lower Dawson aquifer water available were reduced for area claimed by the cylinder of appropriation for pre-Senate Bill 213 well permit no. 16809-F.**

A review of our records indicates that there is an existing well operating under permit no. 153256, located on the subject property.

Well permit no. 153256 was issued on January 12, 1989 pursuant to CRS 37-92-602(3)(b)(II)(A) as the only well on a tract of land of 35 acres described as a portion W ½ of the W ½ of Section 16, Twp. 8S, Rng. 67W, 6<sup>th</sup> P.M. (Hemphill Subdivision Lot 2) for fire protection, ordinary household purposes inside one single-family dwelling, the irrigation of not more than one acre of home gardens and lawns, and the watering of

domestic animals. . Well permit no. 153256 was completed into the Lower Dawson aquifer. **Section 37-92-602(3)(b)(III), C.R.S., requires that the cumulative effect of all wells in a subdivision be considered when evaluating material injury to decreed water rights. Therefore, well permit no. 153256 must be re-permitted as a non-exempt well, or must be plugged and abandoned since the provisions of C.R.S. 37-92-602 which allowed for issuance of the well permit will no longer apply.**

According to Water Court Division 1 Case No. 25CW3086, well permit no. 153256 will be re-permitted as a non-exempt well, pursuant to the decree.

The proposed source of water for this subdivision is a bedrock aquifer in the Denver Basin. The State Engineer's Office does not have evidence regarding the length of time for which this source will be a physically and economically viable source of water. According to section 37-90-137(4)(b)(I), C.R.S., "Permits issued pursuant to this subsection (4) shall allow withdrawals on the basis of an aquifer life of one hundred years." Based on this **allocation** approach, the annual amounts of water decreed in 25CW3086 are equal to one percent of the total amount, as determined by rules 8.A and 8.B of the Statewide Nontributary Ground Water Rules, 2 CCR 402-7. Therefore, the water may be withdrawn in those annual amounts for a maximum of 100 years.

Applications for on lot well permits, submitted by an entity other than the current water right holder ("Manatt Hier Revocable Trust"), must include evidence that the applicant has acquired the right to the portion of water being requested on the application.

### **State Engineer's Office Opinion**

Based upon the above and pursuant to section 30-28-136(1)(h)(I), C.R.S., it is our opinion that the proposed water supply is adequate and can be provided without

causing injury to decreed water rights, provided well no. 153256 will be re-permitted as a non-exempt well, pursuant to the decree in Case No. 25CW3086.

Our opinion that the water supply is **adequate** is based on our determination that the amount of water required annually to serve the subdivision is currently physically available, based on current estimated aquifer conditions.

Our opinion that the water supply can be **provided without causing injury** is based on our determination that the amount of water that is legally available on an annual basis, according to the statutory **allocation** approach, for the proposed uses is greater than the annual amount of water required to supply existing water commitments and the demands of the proposed subdivision.

Our opinion is qualified by the following:

The Division 1 Water Court has retained jurisdiction over the final amount of water available pursuant to the above-referenced decree, pending actual geophysical data from the aquifer.

**The amounts of water in the Denver Basin aquifer, and identified in this letter, are calculated based on estimated current aquifer conditions. The source of water is from a non-renewable aquifer, the allocations of which are based on a 100-year aquifer life. The county should be aware that the economic life of a water supply based on wells in a given Denver Basin aquifer may be less than the 100 years used for allocation due to anticipated water level declines. We recommend that the county determine whether it is appropriate to require development of renewable water resources for this subdivision to provide for a long-term water supply.**

Please contact Mike Matz at 303-866-3581 x8241 or at [michael.matz@state.co.us](mailto:michael.matz@state.co.us) with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ioana Comaniciu". The signature is written in a cursive, somewhat stylized font.

Ioana Comaniciu, P.E.

Water Resources Engineer

Ec: Well permit no. 153256



## REFERRAL RESPONSE REQUEST

Date sent: May 7, 2025

Comments due by: **May 28, 2025**

**Project Name:** Hemphill Subdivision, 2<sup>nd</sup> Amendment

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**Project File #:** SB2025-013

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**Project Summary:** Applicant is requesting replat approval to subdivide Lot 2A into two lots. The property is approximately 29.97 acres in size and zoned Large Rural Residential. Lot 2A-1 is proposed to be 19.97 acres and Lot 2A-2 is proposed to be 10 acres in size.

Information on the identified development proposal located in Douglas County is enclosed. Please review and comment in the space provided.

<input type="checkbox"/> No Comment	
<input type="checkbox"/> Please be advised of the following concerns:  _____	
<input checked="" type="checkbox"/> See letter attached for detail.	
<b>Agency:</b> Douglas County Conservation District	<b>Phone #:</b> (303) 218 - 2622
<b>Your Name:</b> David Shohet, President <i>(please print)</i>	<b>Your Signature:</b> <i>David Shohet</i> <small>Signed by: 6E6057CEE3D2404...</small>
	<b>Date:</b> 5/27/2025

Additional information and documents can be found at [www.douglas.co.us/pro](http://www.douglas.co.us/pro) and performing a Project Search for the Project Number provided above. You can then view the documents and details within the project file. Agencies should be advised that failure to submit written comments prior to the due date, or to obtain the applicant's written approval of an extension, will result in written comments being accepted for informational purposes only.

Sincerely,  
*Eric Pavlinek*  
Eric Pavlinek, Project Planner



**DOUGLAS**  
—CONSERVES—

**DOUGLAS COUNTY CONSERVATION DISTRICT**

PO Box 688 / 7519A E. Hwy 86 Franktown, CO 80116 / Phone 303-218-2622

DATE: May 28, 2025

RE: SB2025-013

The Douglas County Conservation District (the District) provides Douglas County subdivision reviews as directed by Senate Bill 35 since 1972. District comments are made on the suitability of soils for the proposed land uses, floodwater management, and watershed protection. The District also often submits advisory comments regarding rural water supply issues, agricultural land use conversion, and endangered species protection if the development plan affects those issues.

According to U.S.D.A. Natural Resources Conservation Service (NRCS) soils survey (enclosed Pages 21 - 24), Stapleton-Bresser association, the Peyton-Pring-Crowfoot sandy Loams, and the Fondis-Kutch association are very limited to somewhat limited for dwellings with and without basements, and small commercial buildings due to flooding, and roads due to shrink-swell soil properties, slope, and depth to hard bedrock. Due to the limitations on the above soils on the site, alternatives to mitigate the limitations of the soil will be required in your engineering design or construction techniques.

Topsoil should be stripped to a depth of 6 inches and all stockpiles should have side slopes no steeper than 3:1 and seeded. All disturbed areas should be seeded and mulched with weed free hay mulch at 4,000 lbs. /acre. Recommended seeding dates for Colorado are November 1 to May 1, when the soil is not frozen. Grasses should be seeded when soil moisture and temperature are optimum for germination, unless a dormant planting is desired. Grass seed should be drilled at a depth of ¼ to ½ inch deep and if broadcasted, double the seeding rate. For more information on grass seed selections and seeding rates please contact the Douglas County Conservation District.

The District recommends disturbed land be mulched or revegetated within 45 days of disturbance.

The District recommends using a phased grading approach. By limiting the area being graded to 15 acres or less and seeding with native grasses the land area disturbed is minimized. The development site is 30 acres.



**DOUGLAS**  
—CONSERVES—

**DOUGLAS COUNTY CONSERVATION DISTRICT**

PO Box 688 / 7519A E. Hwy 86 Franktown, CO 80116 / Phone 303-218-2622

There is no Integrated Noxious Weed Control plan and it is recommended that an integrated weed management program be reviewed and approved by the Douglas County Weed Inspector and/or Weed Advisory board, the County Extension Agent, NRCS, or a qualified weed management professional prior to the land use authority approval.

Vehicle tracking control stations need to be installed at all entrance and exit points on the site. The station should consist of a pad of 3 to 6-inch rock or a vehicle control pad/mat to strip mud from tires prior to vehicles leaving the construction site to prevent spreading of noxious weeds.

The channels of many of the major streams are not stable and undergo substantial shifts in alignment during flood events. Upstream development increases the magnitude and frequency of local flooding. Floods that exceed the computed 100-year storm do regularly occur. The District does not support development proposals that are located in or near drainages or development that disturbs wetlands. The FEMA Flood Map is attached and lacks any issues.

Silt fences or other forms of erosion barriers need to be planned and installed as a temporary sediment control device used on construction sites to protect water quality.

The District strongly recommends that Low Impact Development (LID) techniques be implemented for economic and conservation benefits.

Thank you for the opportunity to review this project. Direct any questions to Heather Kelly, District Manager, at [Heather@DouglasConserves.org](mailto:Heather@DouglasConserves.org) or (303) 218 – 2622.



A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

# Custom Soil Resource Report for Castle Rock Area, Colorado

**SB2025-013**



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

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Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

## Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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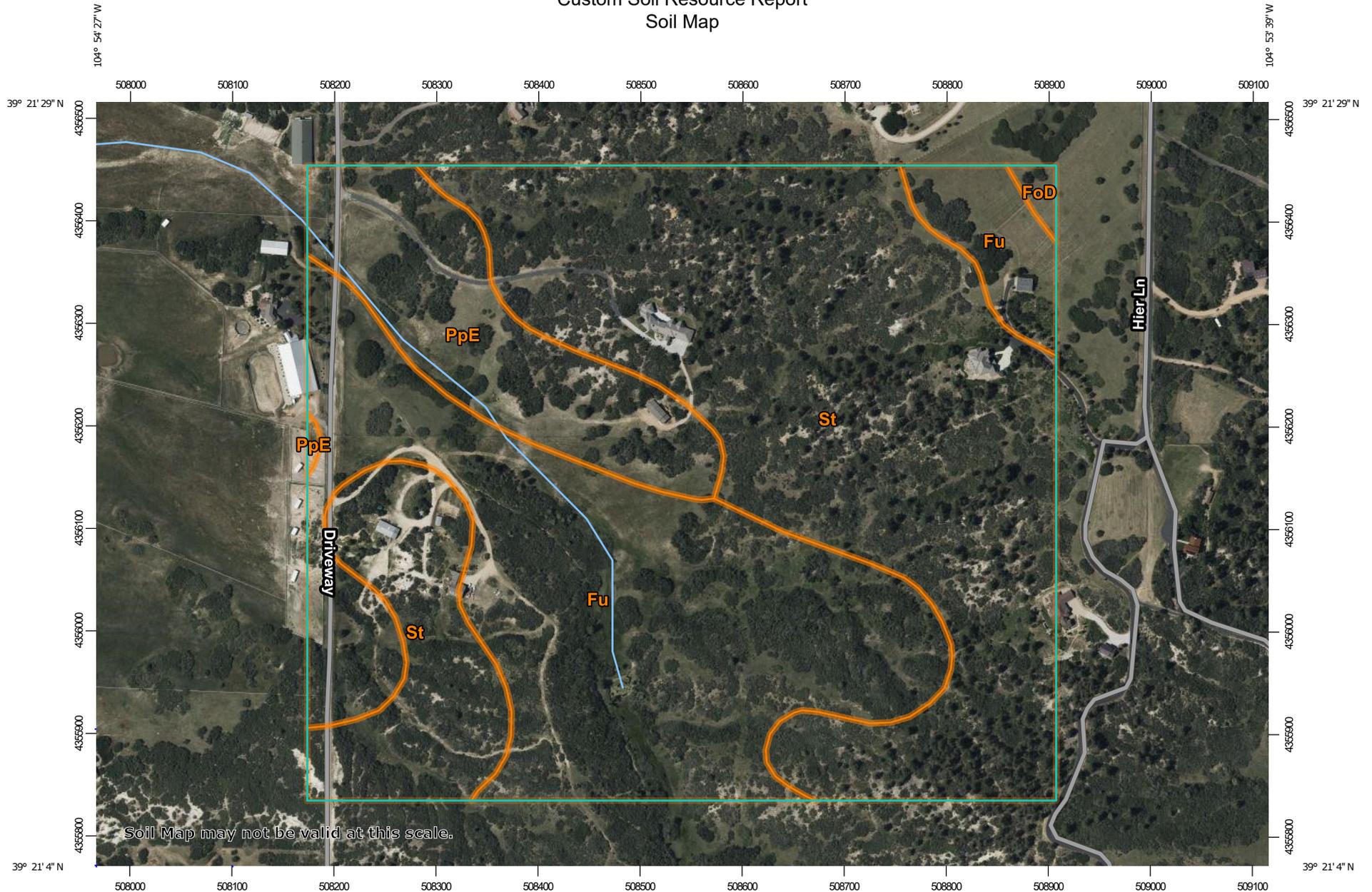
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

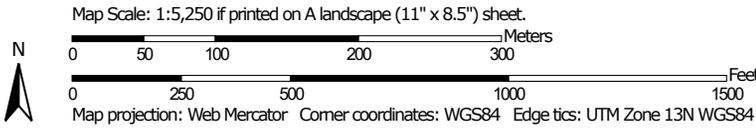
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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

### Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



## Custom Soil Resource Report

### MAP LEGEND

#### Area of Interest (AOI)

 Area of Interest (AOI)

#### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

#### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

#### Water Features

 Streams and Canals

#### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

#### Background

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Castle Rock Area, Colorado  
 Survey Area Data: Version 17, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FoD	Fondis clay loam, 3 to 9 percent slopes	0.5	0.4%
Fu	Fondis-Kutch association	41.4	36.7%
PpE	Peyton-Pring-Crowfoot sandy loams, 5 to 25 percent slopes	13.0	11.5%
St	Stapleton-Bresser association	58.0	51.4%
<b>Totals for Area of Interest</b>		<b>112.8</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

## Custom Soil Resource Report

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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## Castle Rock Area, Colorado

### FoD—Fondis clay loam, 3 to 9 percent slopes

#### Map Unit Setting

*National map unit symbol:* jqyp  
*Elevation:* 5,500 to 6,800 feet  
*Mean annual precipitation:* 15 to 19 inches  
*Mean annual air temperature:* 47 to 50 degrees F  
*Frost-free period:* 120 to 135 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Fondis and similar soils:* 85 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Fondis

##### Setting

*Landform:* Ridges, buttes, mesas  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Eolian deposits over coarse-silty outwash derived from arkose

##### Typical profile

*H1 - 0 to 7 inches:* clay loam  
*H2 - 7 to 24 inches:* clay  
*H3 - 24 to 60 inches:* sandy clay loam

##### Properties and qualities

*Slope:* 3 to 9 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* High  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* High (about 9.4 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4e  
*Land capability classification (nonirrigated):* 4e  
*Hydrologic Soil Group:* C  
*Ecological site:* R049XB208CO - Clayey Foothill  
*Hydric soil rating:* No

#### Minor Components

##### Kutch

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

## Custom Soil Resource Report

### **Englewood**

*Percent of map unit: 5 percent*  
*Hydric soil rating: No*

### **Denver**

*Percent of map unit: 4 percent*  
*Hydric soil rating: No*

### **Aquic haplustolls**

*Percent of map unit: 1 percent*  
*Landform: Swales*  
*Hydric soil rating: Yes*

## **Fu—Fondis-Kutch association**

### **Map Unit Setting**

*National map unit symbol: jqyq*  
*Elevation: 5,500 to 6,800 feet*  
*Mean annual precipitation: 15 to 19 inches*  
*Mean annual air temperature: 47 to 50 degrees F*  
*Frost-free period: 120 to 135 days*  
*Farmland classification: Not prime farmland*

### **Map Unit Composition**

*Fondis and similar soils: 50 percent*  
*Kutch and similar soils: 35 percent*  
*Minor components: 15 percent*  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Fondis**

#### **Setting**

*Landform: Draws, valley sides*  
*Down-slope shape: Linear*  
*Across-slope shape: Linear*  
*Parent material: Eolian deposits over coarse-silty outwash derived from arkose*

#### **Typical profile**

*H1 - 0 to 7 inches: loam*  
*H2 - 7 to 24 inches: clay*  
*H3 - 24 to 60 inches: sandy clay loam*

#### **Properties and qualities**

*Slope: 5 to 15 percent*  
*Depth to restrictive feature: More than 80 inches*  
*Drainage class: Well drained*  
*Runoff class: High*  
*Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)*  
*Depth to water table: More than 80 inches*  
*Frequency of flooding: None*

## Custom Soil Resource Report

*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* High (about 9.2 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* R049XB208CO - Clayey Foothill  
*Hydric soil rating:* No

### Description of Kutch

#### Setting

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Fine-textured residuum weathered from calcareous shale

#### Typical profile

*H1 - 0 to 6 inches:* sandy loam  
*H2 - 6 to 32 inches:* clay  
*H3 - 32 to 36 inches:* weathered bedrock

#### Properties and qualities

*Slope:* 5 to 40 percent  
*Depth to restrictive feature:* 20 to 40 inches to paralithic bedrock  
*Drainage class:* Well drained  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.20 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 15 percent  
*Gypsum, maximum content:* 2 percent  
*Maximum salinity:* Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)  
*Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* D  
*Ecological site:* R049XB208CO - Clayey Foothill  
*Hydric soil rating:* No

### Minor Components

#### Bresser

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Newlin

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Hilly gravelly land

*Percent of map unit:* 4 percent

## Custom Soil Resource Report

*Hydric soil rating:* No

### **Aquic haplustolls**

*Percent of map unit:* 1 percent

*Landform:* Swales

*Hydric soil rating:* Yes

## **PpE—Peyton-Pring-Crowfoot sandy loams, 5 to 25 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* jqzn

*Elevation:* 6,500 to 8,000 feet

*Mean annual precipitation:* 15 to 18 inches

*Mean annual air temperature:* 44 to 46 degrees F

*Frost-free period:* 115 to 120 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Peyton and similar soils:* 40 percent

*Pring and similar soils:* 25 percent

*Crowfoot and similar soils:* 25 percent

*Minor components:* 10 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Peyton**

#### **Setting**

*Landform:* Valley sides, ridges

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Weathered alluvium derived from arkose

#### **Typical profile**

*H1 - 0 to 11 inches:* sandy loam

*H2 - 11 to 30 inches:* sandy clay loam

*H3 - 30 to 40 inches:* sandy loam

*H4 - 40 to 60 inches:* sandy loam

#### **Properties and qualities**

*Slope:* 5 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 7.5 inches)

## Custom Soil Resource Report

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* C  
*Ecological site:* R048AY222CO - Loamy Park  
*Hydric soil rating:* No

### Description of Pring

#### Setting

*Landform:* Hills  
*Landform position (three-dimensional):* Base slope, crest  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from arkosic sedimentary rock

#### Typical profile

*H1 - 0 to 12 inches:* sandy loam  
*H2 - 12 to 60 inches:* gravelly sandy loam

#### Properties and qualities

*Slope:* 5 to 25 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Well drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Moderate (about 6.1 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* A  
*Ecological site:* R048AY222CO - Loamy Park  
*Hydric soil rating:* No

### Description of Crowfoot

#### Setting

*Landform:* Valley sides, ridges  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Residuum weathered from arkosic sedimentary rock

#### Typical profile

*H1 - 0 to 6 inches:* sandy loam  
*H2 - 6 to 19 inches:* loamy sand  
*H3 - 19 to 32 inches:* gravelly sandy clay loam  
*H4 - 32 to 43 inches:* gravelly sandy loam  
*H5 - 43 to 60 inches:* coarse sand

#### Properties and qualities

*Slope:* 5 to 15 percent  
*Depth to restrictive feature:* More than 80 inches

## Custom Soil Resource Report

*Drainage class:* Well drained  
*Runoff class:* Medium  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 2.00 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Available water supply, 0 to 60 inches:* Low (about 5.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* B  
*Ecological site:* R049XY216CO - Sandy Divide  
*Hydric soil rating:* No

### Minor Components

#### Brussett

*Percent of map unit:* 3 percent  
*Hydric soil rating:* No

#### Jarre

*Percent of map unit:* 3 percent  
*Hydric soil rating:* No

#### Tomah

*Percent of map unit:* 3 percent  
*Hydric soil rating:* No

#### Aquic haploborolls

*Percent of map unit:* 1 percent  
*Landform:* Swales  
*Hydric soil rating:* Yes

## St—Stapleton-Bresser association

### Map Unit Setting

*National map unit symbol:* jr09  
*Elevation:* 5,500 to 6,600 feet  
*Mean annual precipitation:* 15 to 19 inches  
*Mean annual air temperature:* 49 to 51 degrees F  
*Frost-free period:* 120 to 135 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Stapleton and similar soils:* 60 percent  
*Bresser and similar soils:* 25 percent  
*Minor components:* 15 percent

## Custom Soil Resource Report

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Stapleton

#### Setting

*Landform:* Valley sides, knobs, ridges

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Weathered alluvium derived from arkose

#### Typical profile

*H1 - 0 to 7 inches:* sandy loam

*H2 - 7 to 16 inches:* sandy loam

*H3 - 16 to 60 inches:* gravelly sandy loam

#### Properties and qualities

*Slope:* 8 to 30 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.60 to 6.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* A

*Ecological site:* R049XB210CO - Sandy Foothill

*Hydric soil rating:* No

### Description of Bresser

#### Setting

*Landform:* Valley sides

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy alluvium and/or sandy eolian deposits

#### Typical profile

*H1 - 0 to 8 inches:* sandy loam

*H2 - 8 to 30 inches:* sandy clay loam

*H3 - 30 to 60 inches:* loamy sand

#### Properties and qualities

*Slope:* 8 to 15 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Well drained

*Runoff class:* Medium

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high  
(0.20 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Moderate (about 7.6 inches)

## Custom Soil Resource Report

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 6e

*Hydrologic Soil Group:* B

*Ecological site:* R049XB210CO - Sandy Foothill

*Hydric soil rating:* No

### **Minor Components**

#### **Loamy alluvial land**

*Percent of map unit:* 14 percent

*Hydric soil rating:* No

#### **Aquic haplustolls**

*Percent of map unit:* 1 percent

*Landform:* Swales

*Hydric soil rating:* Yes

# **Soil Information for All Uses**

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## **Suitabilities and Limitations for Use**

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

## **Building Site Development**

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

### **Dwellings With Basements (SB2025-013 )**

ENG - Engineering

Dwellings are single-family houses of three stories or less. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet.

The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification of the soil. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

## Custom Soil Resource Report

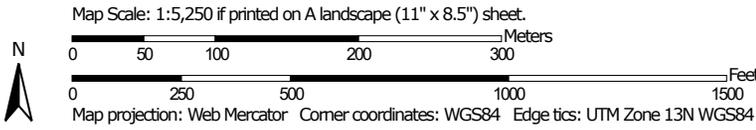
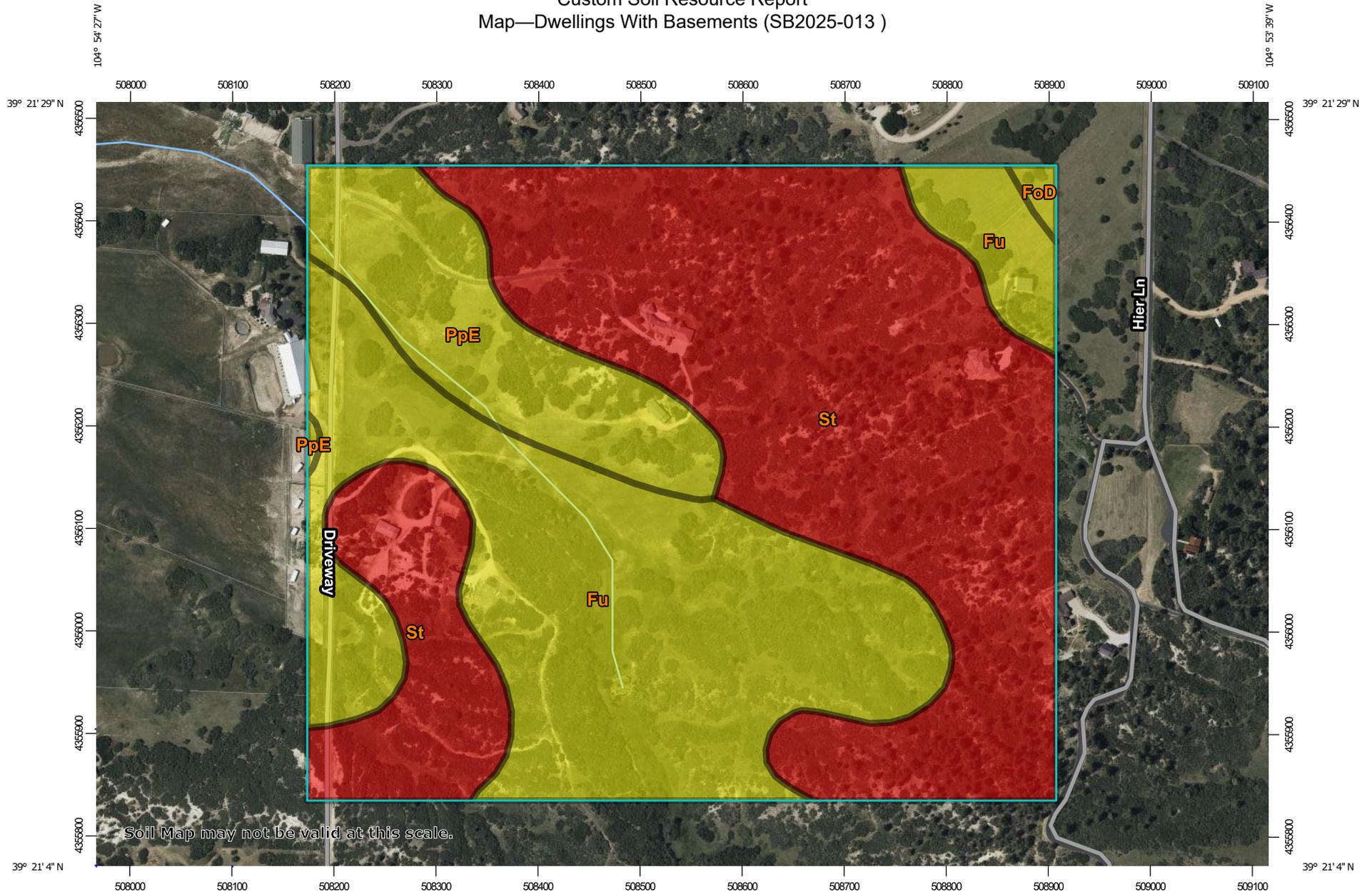
The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

### Custom Soil Resource Report Map—Dwellings With Basements (SB2025-013 )



## Custom Soil Resource Report

### MAP LEGEND

- Area of Interest (AOI)**  
 Area of Interest (AOI)
- Background**  
 Aerial Photography
- Soils**
- Soil Rating Polygons**
-  Very limited
  -  Somewhat limited
  -  Not limited
  -  Not rated or not available
- Soil Rating Lines**
-  Very limited
  -  Somewhat limited
  -  Not limited
  -  Not rated or not available
- Soil Rating Points**
-  Very limited
  -  Somewhat limited
  -  Not limited
  -  Not rated or not available
- Water Features**
-  Streams and Canals
- Transportation**
-  Rails
  -  Interstate Highways
  -  US Routes
  -  Major Roads
  -  Local Roads

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Castle Rock Area, Colorado  
 Survey Area Data: Version 17, Aug 29, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 1, 2023—Sep 1, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Custom Soil Resource Report

**Tables—Dwellings With Basements (SB2025-013 )**

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
FoD	Fondis clay loam, 3 to 9 percent slopes	Somewhat limited	Fondis (85%)	Shrink-swell (0.01)	0.5	0.4%
Fu	Fondis-Kutch association	Somewhat limited	Fondis (50%)	Slope (0.16)	41.4	36.7%
				Shrink-swell (0.01)		
PpE	Peyton-Pring-Crowfoot sandy loams, 5 to 25 percent slopes	Somewhat limited	Peyton (40%)	Slope (0.16)	13.0	11.5%
			Crowfoot (25%)	Slope (0.16)		
St	Stapleton-Bresser association	Very limited	Stapleton (60%)	Slope (1.00)	58.0	51.4%
<b>Totals for Area of Interest</b>					<b>112.8</b>	<b>100.0%</b>

Rating	Acres in AOI	Percent of AOI
Very limited	58.0	51.4%
Somewhat limited	54.8	48.6%
<b>Totals for Area of Interest</b>	<b>112.8</b>	<b>100.0%</b>

**Rating Options—Dwellings With Basements (SB2025-013 )**

*Aggregation Method: Dominant Condition*  
*Component Percent Cutoff: None Specified*  
*Tie-break Rule: Higher*

## References

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- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

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# National Flood Hazard Layer FIRMMette



104°54'22"W 39°21'36"N



## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i>
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped
		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **5/27/2025 at 7:32 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

May 8, 2025

Eric Pavlinek  
100 Third St.  
Castle Rock, CO 80104

RE: SB2025-013

Dear Mr. Pavlinek,

Thank you for the opportunity to review and comment on the request to subdivide a 30-acre lot into 10 and 20 acre lots. Douglas County Health Department (DCHD) staff have reviewed the application for compliance with pertinent environmental and public health regulations. After reviewing the application, DCHD has the following comment(s).

**Water Service**

Water will be provided by individual wells. Drinking water contaminated with pathogens can cause a variety of illnesses in humans. It is important to protect source water from contamination, and to treat drinking water to eliminate pathogens before it is provided for human consumption. The Colorado Division of Water Resources (DWR) is the agency that regulates well permitting. More information can be found here <https://dwr.colorado.gov/>.

**On-Site Wastewater Treatment System (OWTS)**

Proper wastewater management promotes effective and responsible water use, protects potable water from contaminants, and provides appropriate collection, treatment, and disposal of waste, which protects public health and the environment.

DCHD has no objection to a property being served by an OWTS provided that the system is permitted, inspected and operated in accordance with DCHD's current OWTS Regulation. The applicant may contact DCHD at 720-907-4886 or [EH@douglas.co.us](mailto:EH@douglas.co.us). More information is available at <https://www.douglas.co.us/health-department/environmental-health/>.

*920 West Wolfensburger has a permitted OWTS (TCHD #10127). The proposed 10-acre parcel will require the installation of a permitted OWTS for DCHD to provide a favorable recommendation regarding the proposed method of wastewater disposal.*

Please feel free to contact me at 720-907-4888 or [bfreyer@douglas.co.us](mailto:bfreyer@douglas.co.us) if you have any questions about our comments.

Sincerely,



Brent Freyer  
Environmental Health Specialist II  
Douglas County Health Department

May 22, 2025

Eric Pavlinek  
Douglas County Department of Community Development  
Planning Services Division  
100 Third St., Castle Rock, CO 80104

Re: SB2025-013 Hemphill Subdivision, 2nd Amendment

Dear Mr. Pavlinek,

This letter provides comments regarding the request to replat approval to subdivide Lot 2A into two lots. The property is approximately 29.97 acres in size and zoned Large Rural Residential. Lot 2A-1 is proposed to be 19.97 acres and Lot 2A-2 is proposed to be 10 acres in size.

At this time the Curator has no further recommendations. If there are future development plans that involve any ground disturbance a Class II survey will need to be performed to evaluate for cultural resources before any disturbance occurs.

There is potential for buried archaeological resources related to prehistoric activities in the project area and potential for the discovery of subsurface cultural deposits during ground moving activities. Should buried artifacts and features be discovered, we recommend completion of the appropriate Colorado Office of Archaeology and Historic Preservation (OAHP) Data Management and Historic and/or Prehistoric Component forms, following OAHP guidelines, with accompanying sketch maps and photographs. Completed forms are submitted to OAHP to ensure that Douglas County's historic or prehistoric data is included in the Colorado OAHP state-wide database of cultural resources.

Thank you in advance for your attention to the preservation and protection of Douglas County's cultural resources for future generations.

Sincerely,

*Brittany Cassell*

Brittany Cassell, Curator



620 Wilcox Street  
Castle Rock, Colorado 80104

May 15<sup>th</sup>, 2025

Eric Pavlinek | Principal Planner  
Douglas County Department of Community Development  
Planning Services Division  
Address | 100 Third St., Castle Rock, CO 80104  
Direct | 303.814.4377 Main | 303.660.7460  
Email [epavlinek@douglas.co.us](mailto:epavlinek@douglas.co.us)

RE: Hemphill Subdivision 2<sup>nd</sup> Amendment-Subdivision-Replat (SB2025-013)

Dear Mr. Pavlinek,

Thank you for the opportunity to respond to the above referenced application. It is our understanding that the applicant is requesting replat approval to subdivide Lot 2A into two lots. The property is approximately 29.97 acres in size and zoned Large Rural Residential. Lot 2A-1 is proposed to be 19.97 acres and Lot 2A-2 is proposed to be 10 acres in size. The property is generally located south of West Wolfensberger Rd., between Peak View Drive and Hier Lane.

Pursuant to Section 1004.05.4 of the Douglas County Subdivision Resolution, "For residential minor development final plat or replats creating 10 or fewer residential lots, the minimum cash-in-lieu fee shall be \$500 per each new residential lot." DCSD requests the \$500 cash-in-lieu fee upon final plat approval and prior to plat recordation.

Assuming the applicant agrees with the payment of these fee requirements, DCSD has no objection to approval of this application. Thank you for your support of our mutual constituents

Sincerely,

Shavon Caldwell  
Planning Manager, DCSD Planning & Construction  
[scaldwell2@dcsdk12.org](mailto:scaldwell2@dcsdk12.org)  
303.387.0417

## Eric Pavlinek

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**To:** Chuck Smith  
**Subject:** RE: Douglas County eReferral (SB2025-013) Is Ready For Review

-----Original Message-----

From: Chuck Smith <CSmith@douglas.co.us>  
Sent: Tuesday, May 13, 2025 9:25 AM  
To: Eric Pavlinek <epavlinek@douglas.co.us>  
Subject: FW: Douglas County eReferral (SB2025-013) Is Ready For Review

Good Morning Eric - I have reviewed the replat and have no comments on the replat. Attached are my redlines on the grading plans - if you have any questions, please let me know

Thanks

Chuck Smith, CFM | Engineer III – Douglas County Engineering Douglas County Department of Public Works Engineering  
Engineering Services Address | 100 Third St., Castle Rock, CO 80104 Main | 303-660-7490 Email | CSmith@douglas.co.us

**STANDARD NOTES:**

1. THE DOUGLAS COUNTY ENGINEERING DIRECTOR SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE ENGINEERING DIVISION HAS REVIEWED THE DOCUMENT AND FOUND IT IN GENERAL CONFORMANCE WITH THE DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS AND THE DOUGLAS COUNTY SUBDIVISION RESOLUTION OR ACCEPTED VARIANCES TO THOSE REGULATIONS. THE DOUGLAS COUNTY ENGINEERING DIRECTOR, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY, OTHER THAN STATED ABOVE, FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS. THE OWNER AND ENGINEER UNDERSTAND THAT THE RESPONSIBILITY FOR THE ENGINEERING ADEQUACY OF THE FACILITIES DEPICTED IN THIS DOCUMENT LIES SOLELY WITH THE PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF COLORADO WHOSE STAMP AND SIGNATURE IS AFFIXED TO THIS DOCUMENT.
2. ALL CONSTRUCTION SHALL CONFORM TO DOUGLAS COUNTY STANDARDS. ANY CONSTRUCTION NOT SPECIFICALLY ADDRESSED BY THESE PLANS AND SPECIFICATIONS WILL BE BUILT IN COMPLIANCE WITH THE LATEST EDITION OF THE MOST STRINGENT OF THE FOLLOWING:
  - THE DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS
  - THE COLORADO DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - THE COLORADO DEPARTMENT OF TRANSPORTATION M STANDARDS.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DOUGLAS COUNTY ENGINEERING DIVISION AS APPLICABLE. THE COUNTY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO ITS STANDARDS AND SPECIFICATIONS.
4. THE CONTRACTOR SHALL NOTIFY THE DOUGLAS COUNTY ENGINEERING INSPECTION DIVISION, 303-688-7487, A MINIMUM OF 24 HOURS AND A MAXIMUM OF 72 HOURS PRIOR TO STARTING CONSTRUCTION. CONTRACTOR SHALL NOTIFY DOUGLAS COUNTY ENGINEERING INSPECTION WHEN WORKING OUTSIDE OF THE PUBLIC RIGHT-OF-WAY OF ANY FACILITY THAT WILL BE CONVEYED TO THE COUNTY, URBAN DRAINAGE AND FLOOD CONTROL DISTRICT, OR OTHER SPECIAL DISTRICT FOR MAINTINANCE (STORM SEWER, ENERGY DISSIPATORS, DETENTION OUTLET STRUCTURES, OR OTHER DRAINAGE INFRASTRUCTURES). FAILURE TO NOTIFY THE ENGINEERING INSPECTION DIVISION TO ALLOW THEM TO INSPECT THE CONSTRUCTION MAY RESULT IN NON-ACCEPTANCE OF THE FACILITY/INFRASTRUCTURE BY THE COUNTY AND/OR URBAN DRAINAGE.
5. CONSTRUCTION WILL NOT BEGIN UNTIL ALL APPLICABLE PERMITS HAVE BEEN ISSUED. IF A DOUGLAS COUNTY ENGINEERING INSPECTOR IS NOT AVAILABLE AFTER PROPER NOTICE OF CONSTRUCTION ACTIVITY HAS BEEN PROVIDED, THE PERMITEE MAY COMMENCE WORK IN THE INSPECTOR'S ABSENCE. HOWEVER, DOUGLAS COUNTY RESERVES THE RIGHT NOT TO ACCEPT THE IMPROVEMENT IF SUBSEQUENT TESTING REVEALS AN IMPROPER INSTALLATION.
6. THE LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ACTUAL CONSTRUCTION. FOR INFORMATION CONTACT: COLORADO 811, AT 1-800-922-1987 (WWW.COLORADO811.ORG)
7. THE CONTRACTOR SHALL HAVE ONE (1) COPY OF THE PLANS SIGNED BY THE DOUGLAS COUNTY ENGINEERING DIRECTOR AND ONE (1) COPY OF THE ROADWAY DESIGN AND CONSTRUCTION STANDARDS, AS AMENDED, AND ALL APPLICABLE PERMITS AT THE JOB SITE AT ALL TIMES.
8. ALL PROPOSED STREET CUTS TO EXISTING PAVEMENTS FOR UTILITIES, STORM SEWER OR FOR OTHER PURPOSES ARE LISTED AND REFERENCED BELOW:
 

NONE
9. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL BE SUBMITTED TO DOUGLAS COUNTY FOR ACCEPTANCE WITH THE RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT APPLICATION. A RIGHT-OF-WAY USE AND CONSTRUCTION PERMIT WILL NOT BE ISSUED WITHOUT AN ACCEPTED TRAFFIC CONTROL PLAN FOR TRAFFIC CONTROL DURING CONSTRUCTION.
10. THE CONSTRUCTION PLANS SHALL BE CONSIDERED VALID FOR THREE (3) YEARS FROM THE DATE OF COUNTY ACCEPTANCE. AFTER WHICH TIME THESE PLANS SHALL BE VOID AND WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY DOUGLAS COUNTY.
11. DOUGLAS COUNTY STANDARD DETAILS SHALL NOT BE MODIFIED. ANY NON-STANDARD DETAILS WILL BE CLEARLY IDENTIFIED AS SUCH.
12. PAVING, INCLUDING CONSTRUCTION OF CURB AND GUTTERS (WHEN USED), SHALL NOT START UNTIL A PAVEMENT DESIGN REPORT AND SUBGRADE COMPACTION TESTS ARE ACCEPTED BY THE ENGINEERING INSPECTION DIVISION FOR ALL PUBLIC AND PRIVATE ROADS.
13. STANDARD DOUGLAS COUNTY HANDICAP RAMPS ARE TO BE CONSTRUCTED AT ALL CURB RETURNS AND AT MID-BLOCK LOCATIONS OPPOSITE OF ONE OF THE CURB RETURNS OF ALL "T" INTERSECTIONS AS IDENTIFIED ON THESE PLANS.
14. ALL STATIONING IS BASED ON CENTERLINE OF ROADWAYS UNLESS OTHERWISE NOTED.
15. ALL ELEVATIONS ARE ON UNITED STATES COAST AND GEODETIC SURVEY (USC&GS) (NAVD88) DATUM WITH DATE. THE RANGE POINT OR MONUMENTS SHALL BE SHOWN ON CONSTRUCTION DRAWINGS.
16. ALL STORM SEWER IMPROVEMENTS (PUBLIC AND PRIVATE) INCLUDING, BUT NOT LIMITED TO, INLETS, PIPES, CULVERTS, CHANNELS, DITCHES, HYDRAULIC STRUCTURES, RIPRAP, DETENTION BASINS, FOREBAYS, MICROPOOLS, AND WATER QUALITY FACILITIES REQUIRE PERMITTING AND INSPECTIONS. PLEASE CONTACT THE DOUGLAS COUNTY ENGINEERING INSPECTION DIVISION AT 303-688-7487 FOR PERMITTING REQUIREMENTS AND INSPECTIONS SCHEDULING.
17. TWO (2) MANHOLE ACCESS POINTS ARE REQUIRED ON ALL TYPE "R" CURB INLETS GREATER THAN OR EQUAL TO TEN (10) FEET IN LENGTH.
18. EPOXY COATED REBAR IS REQUIRED ON ALL DRAINAGE STRUCTURES.
19. DOUGLAS COUNTY REQUIRES CLASS D CONCRETE FOR ALL DRAINAGE STRUCTURES.
20. ALL RCP STORM SEWERS MUST USE ASTM C443 WATERTIGHT GASKETS PER THE CURRENT DOUGLAS COUNTY AND URBAN DRAINAGE DESIGN CRITERIA.
21. ALL RCP SHALL BE CLASS III STORM SEWER PIPE UNLESS OTHERWISE SPECIFIED.
22. JOINT RESTRAINTS ARE REQUIRED FOR A MINIMUM OF THE LAST TWO PIPE JOINTS AND FLARED END SECTION OF AN RCP OUTFALL.
23. PRECAST INLETS AND MANHOLE BASES ARE NOT ALLOWED.
24. TOE WALLS ARE REQUIRED AT THE END OF ALL FLARED END SECTIONS AT THE OUTLET END OF CULVERTS AND STORM SEWER OUTFALLS.
25. FILTER FABRIC IS REQUIRED UNDER ALL RIPRAP PADS.
26. THE PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF COLORADO, SIGNING THESE PLANS IS RESPONSIBLE FOR ASSURING THAT THE DETAILS INCLUDED ARE COMPATIBLE WITH THE STANDARD DOUGLAS COUNTY DETAILS CONTAINED IN THE LATEST VERSIONS OF THE CRITERIA MANUALS. THIS INCLUDES, BUT IS NOT LIMITED TO:
  - DOUGLAS COUNTY ROADWAY DESIGN AND CONSTRUCTION STANDARDS
  - DOUGLAS COUNTY STORM DRAINAGE DESIGN AND TECHNICAL CRITERIA
  - DOUGLAS COUNTY GRADING, EROSION AND SEDIMENT CONTROL CRITERIA
  - CDOT M & S STANDARDS
  - MUTCD
  - URBAN STORM DRAINAGE CRITERIA MANUAL VOLUMES 1,2 &3
27. A TEMPORARY CONSTRUCTION ACCESS PERMIT FROM DOUGLAS COUNTY MAY BE REQUIRED FOR ANY PROJECT.

Remove these notes - our standard notes are included with the GESC details

# PRIVATE ROAD CONSTRUCTION PLANS

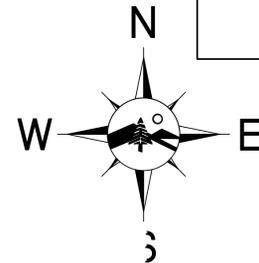
## For HEMPHILL SUBDIVISION SECTION 16, TOWNSHIP 8 SOUTH RANGE 67 WEST OF THE 6TH P.M., DOUGLAS COUNTY, COLORADO.

**OWNER:**  
ROBERT AND MARGARET HIER  
920 W. WOLFENBERGER ROAD  
CASTLE ROCK, CO 80109  
PHONE: 303-688-3105

**REPRESENTATIVE:**  
DAVID E. ARCHER & ASSOCIATES, INC.  
105 WILCOX STREET  
CASTLE ROCK CO 80104  
PHONE: (303)-688-4642  
FAX: (303)-688-4675

**LEGAL DESCRIPTION:**

LOT 1 & 2, HEMPHILL SUBDIVISION  
DOUGLAS COUNTY, COLORADO.



- VICINITY MAP -  
SCALE: 1"=2000'

NOTE:  
HEMPHILL SUBDIVISION AND MAINTAINED PER THE MAINTINANCE AGREEMENT RECORDED AT RECEPTION NUMBER \_\_\_\_\_ AND IT WILL NOT BE THE RESPONSIBILITY OF THE COUNTY, INCLUDING SNOW PLOWING.

Kevin E. Archer, P.E.  
David E. Archer & Associates, Inc.

Engineering doesn't have any comments on the replat document - the engineering review fee (\$640) needs to be paid prior to our approval or the replat

**UNCC**  
CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.

Ass't Director of Development Review

Date \_\_\_\_\_

These construction plans have been reviewed by Douglas County for ~~street~~ and drainage improvements only.

Engineering Division Acceptance Block

GESC - for all signature pages

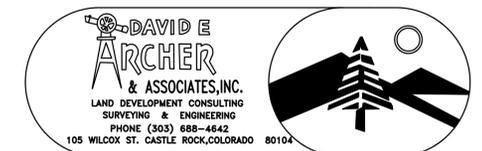
**SHEET INDEX**

SHEET NO.	DESCRIPTION
SHEET 1 of 4	COVER SHEET
SHEET 2 of 4	OVERALL SITE PLAN
SHEET 3 of 4	PRIVATE ROAD CONSTRUCTION PLAN
SHEET 4 of 4	INITIAL, INTERIM, & FINAL GESC PLAN

**DOUGLAS COUNTY STANDARD NOTES AND DETAILS**

SHEET 1	GESC STANDARD NOTES AND DETAILS
SHEET 2	GESC STANDARD NOTES AND DETAILS
SHEET 3	GESC STANDARD NOTES AND DETAILS

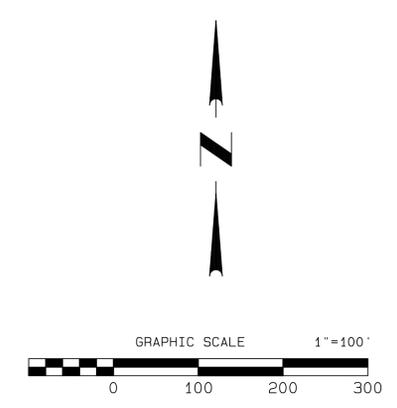
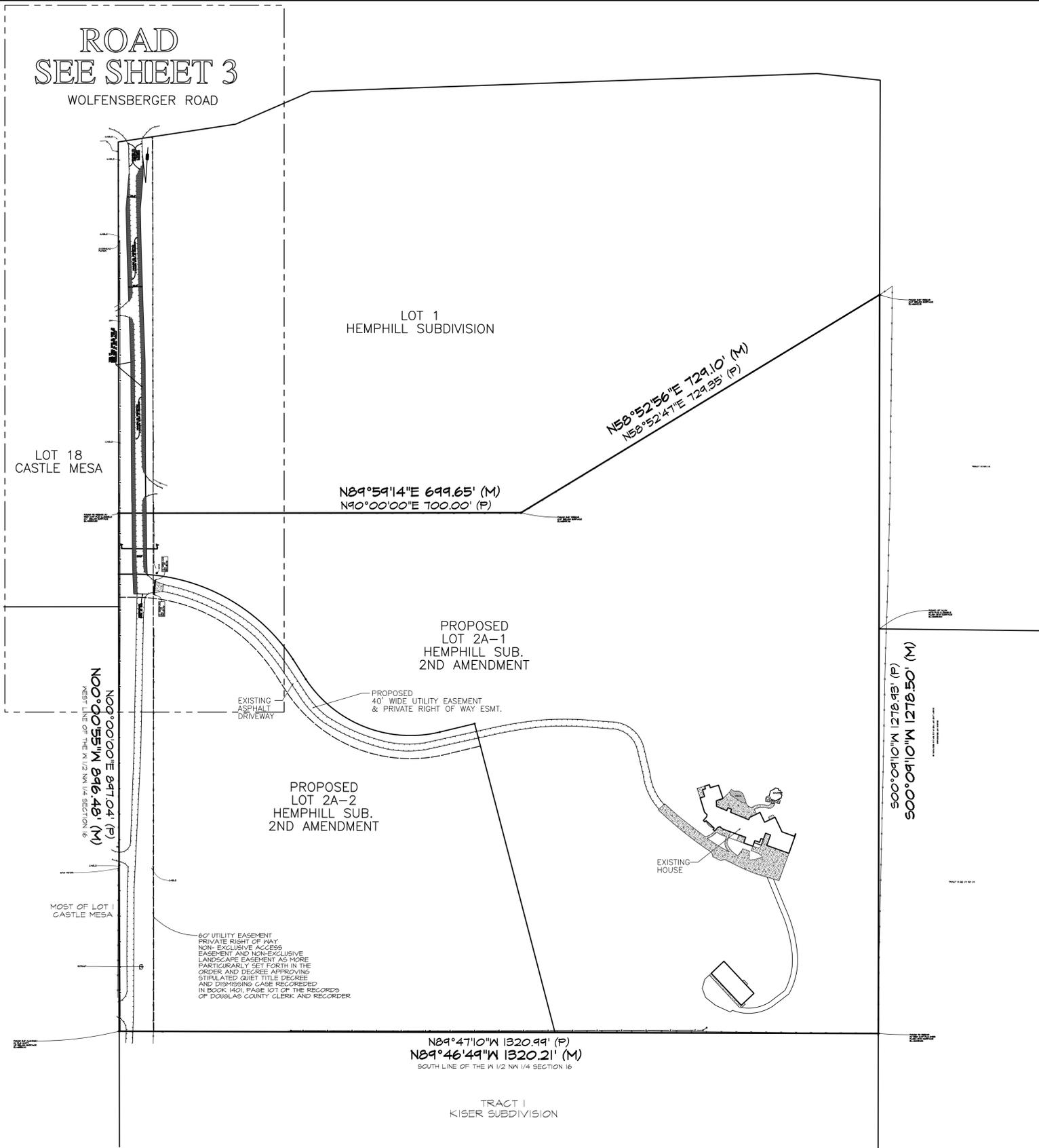
DIRT VOLUME:  
200 Cubic Yards of Excavation  
200 Cubic Yards of Fill.  
Dirt will balance out on Site.



**SHEET 1 of 4**  
**JOB NUMBER 24-0820**

REVISIONS

ROAD  
SEE SHEET 3  
WOLFENBERGER ROAD



EXISTING CONTOURS (2' INTERVAL)

PROPOSED CONTOURS (2' INTERVAL)

**UNCC**  
CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES.

~~Asst Director of Development Review~~  
~~Date~~  
~~These construction plans have been reviewed by Douglas County for street, and drainage improvements only.~~  
~~Engineering Division Acceptance Block~~

**DAVID E. ARCHER & ASSOCIATES INC.**  
LAND DEVELOPMENT CONSULTING  
SURVEYING & ENGINEERING  
PHONE (303) 688-4642  
105 W. LOCOX ST. CASTLE ROCK, COLORADO 80104

**HEMPHILL SUBDIVISION**  
IN SEC. 16, T8S, R87W, OF THE 6TH P.M.,  
DOUGLAS COUNTY, COLORADO

**PRIVATE ROAD PLAN & PROFILE**

CONTACT: BIER & COMPANY  
PHONE: 920-242-6716

REVISIONS	

SCALE 1"=100'

DATE 03-26-25

DR'N DMH CKD KEA

APP'D KEA

JOB NUMBER 24-0820

Sheet 2 of 4

Engineering Division Acceptance Block



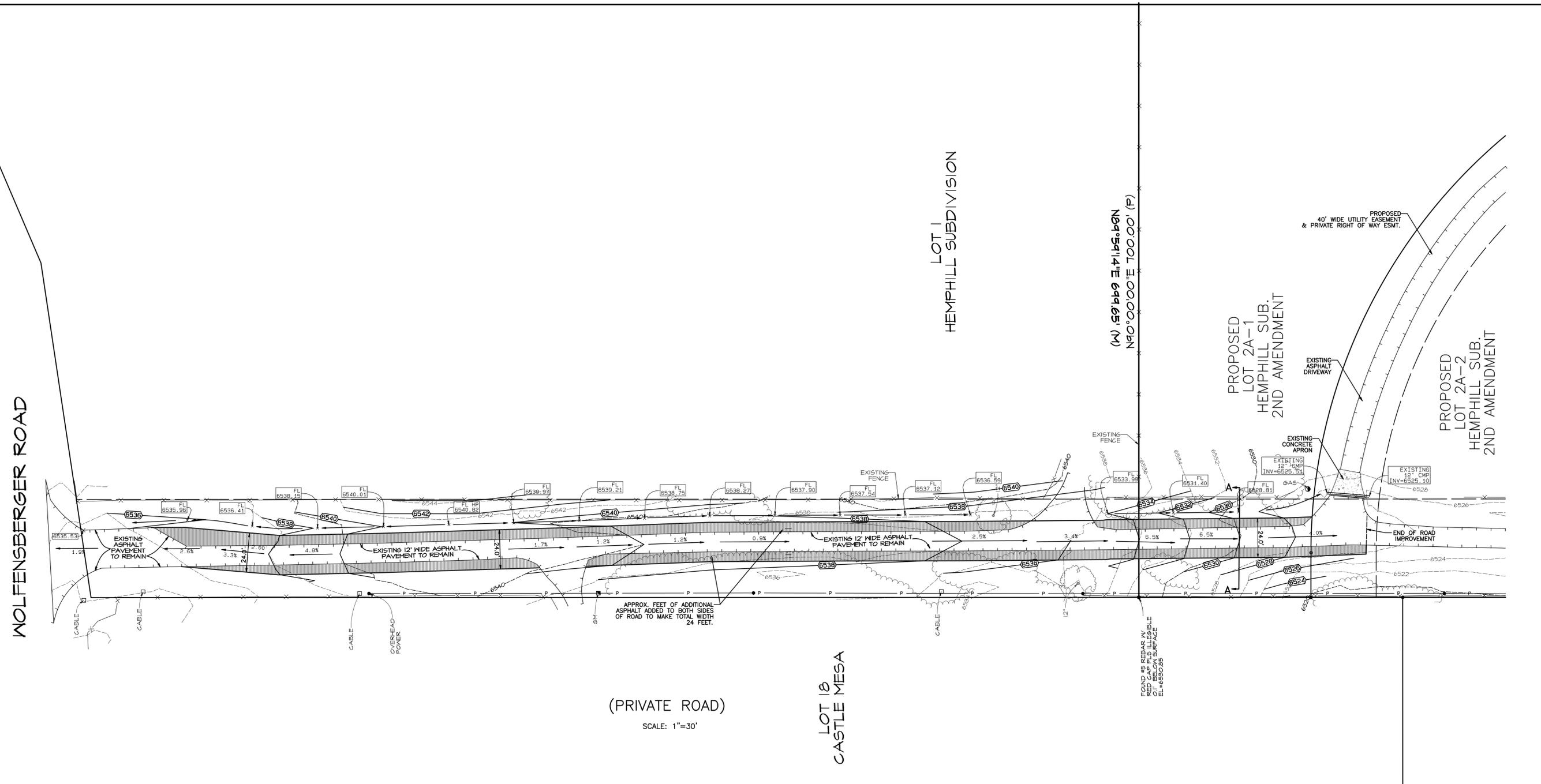
**DAVID E. ARCHER & ASSOCIATES, INC.**  
 LAND DEVELOPMENT CONSULTING  
 SURVEYING & ENGINEERING  
 105 WILLOW ST. CASTLE ROCK, COLORADO 80104

REVISIONS


**HEMPHILL SUBDIVISION**  
 IN SEC. 16, T8S, R67W OF THE 6TH P.M.  
 DOUGLAS COUNTY, COLORADO.  
**PRIVATE ROAD CONSTRUCTION PLAN**

CONTACT: HIER & COMPANY  
 PHONE: 920-242-6716

SCALE: 1"=30'  
 DATE: 03-26-25  
 DR'N: DMH CKD: KEA  
 AP'VD: KEA  
 JOB NUMBER: 24-0820  
 Sheet **3 of 4**



WOLFENSBERGER ROAD

LOT 1  
HEMPHILL SUBDIVISION

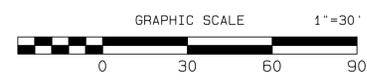
PROPOSED  
LOT 2A-1  
HEMPHILL SUB.  
2ND AMENDMENT

PROPOSED  
LOT 2A-2  
HEMPHILL SUB.  
2ND AMENDMENT

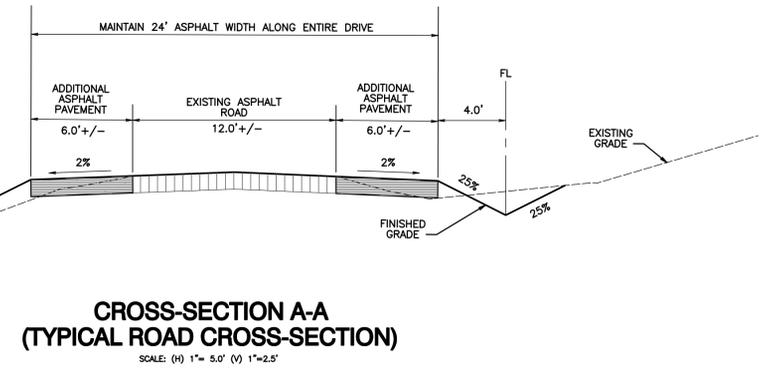
(PRIVATE ROAD)

SCALE: 1"=30'

LOT 1B  
CASTLE MESA



- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- EDGE OF EXISTING ASPHALT PAVEMENT
- PROPOSED ASPHALT PAVEMENT



**CROSS-SECTION A-A**  
 (TYPICAL ROAD CROSS-SECTION)  
 SCALE: (H) 1"=5.0' (V) 1"=2.5'

**UNCC**  
 CALL UTILITY NOTIFICATION  
 CENTER OF COLORADO  
 1-800-922-1987  
 CALL 2-BUSINESS DAYS IN ADVANCE  
 BEFORE YOU DIG, GRADE, OR EXCAVATE  
 FOR THE MARKING OF UNDERGROUND  
 MEMBER UTILITIES.

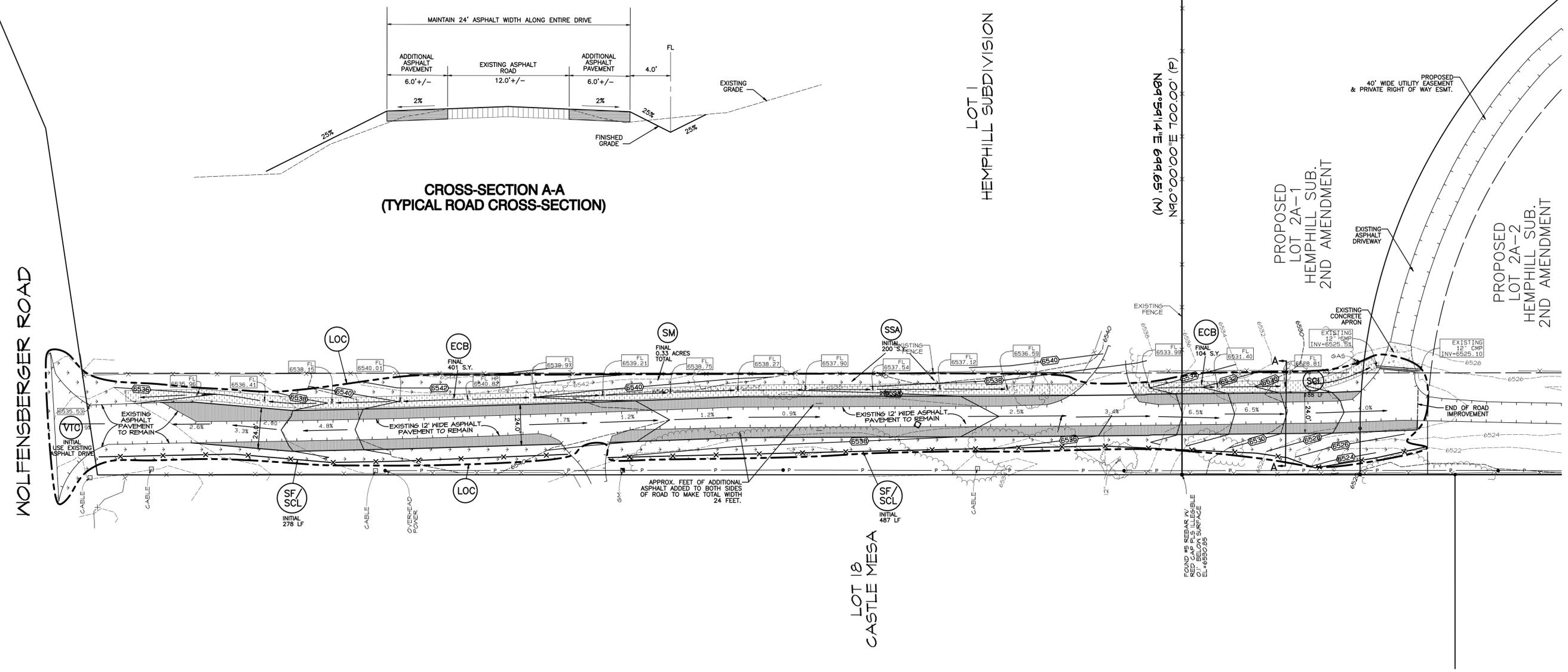
Ass't Director of Development Review

Date \_\_\_\_\_

These construction plans have been reviewed by Douglas County for street, and drainage improvements only.

Engineering Division Acceptance Block

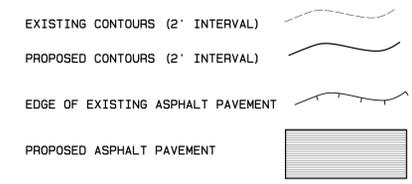
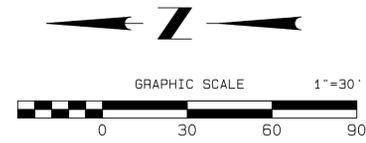
Fri Mar 28 09:59:21 2025  
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**CROSS-SECTION A-A  
 (TYPICAL ROAD CROSS-SECTION)**

**LEGEND**

- |  |  |  |  |
|--|--|--|--|
|  | <b>CD</b> CHECK DAM  |  | <b>ST</b> SEDIMENT TRAP                          |
|  | <b>CB</b> COMPOST BLANKET  |  | <b>SM</b> SEEDING AND MULCHING                   |
|  | <b>CFB</b> COMPOST FILTER BERM   |  | <b>SF/SCL</b> SILT FENCE OR SEDIMENT CONTROL LOG |
|  | <b>CWA</b> CONCRETE WASHOUT AREA                                       |  | <b>SSA</b> STABILIZED STAGING AREA               |
|  | <b>CF</b> CONSTRUCTION FENCE   |  | <b>SR</b> SURFACE ROUGHENING                     |
|  | <b>CM</b> CONSTRUCTION MARKER  |  | <b>TSD</b> TEMPORARY SLOPE DRAIN                 |
|  | <b>DW</b> DEWATERING   |  | <b>TSC</b> TEMPORARY STREAM CROSSING             |
|  | <b>DD</b> DIVERSION DITCH  |  | <b>TER</b> TERRACING                             |
|  | <b>ECB</b> NORTH AMERICAN GREEN SC150 EROSION CONTROL BLANKET OR EQUAL |  | <b>VTC</b> VEHICLE TRACKING CONTROL              |
|  | <b>IP</b> INLET PROTECTION   |  | <b>WW</b> VTC WITH WHEEL WASH                    |
|  | <b>RCD</b> REINFORCED CHECK DAM  |  | <b>LOC</b> LIMITS OF CONSTRUCTION                |
|  | <b>RRB</b> REINFORCED ROCK BERM  |  | <b>LOC</b> GROUND SLOPE DESIGNATION              |
|  | <b>RRC</b> RRB FOR CULVERT PROTECTION                                  |  |  |
|  | <b>SB</b> SEDIMENT BASIN   |  |  |
|  |  |  |  |



put together an "opinion of probable cost" spreadsheet for the grading permit

ASSISTANT DIRECTOR OF DEVELOPMENT REVIEW

DATE \_\_\_\_\_

THESE CONSTRUCTION DRAWINGS HAVE BEEN REVIEWED BY DOUGLAS COUNTY FOR GRADING, EROSION AND SEDIMENT CONTROL IMPROVEMENTS ONLY.

ENGINEERING DIVISION ACCEPTANCE BLOCK

**UNCC**  
 CALL UTILITY NOTIFICATION CENTER OF COLORADO  
 1-800-922-1987  
 CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

**HEMPHILL SUBDIVISION**  
 IN SEC. 16, T8S, R67W OF THE 6TH P.M.,  
 DOUGLAS COUNTY, COLORADO.

**INITIAL, INTERIM, FINAL GESC PLAN**

CONTACT: HIER & COMPANY  
 PHONE: 920-242-6716

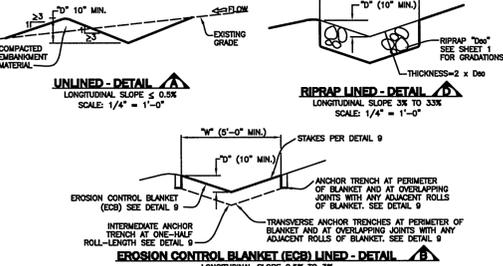
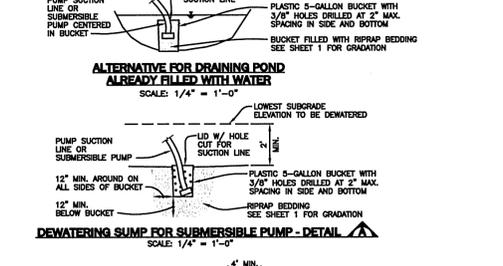
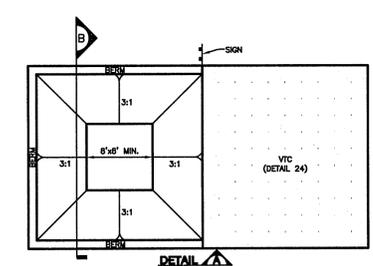
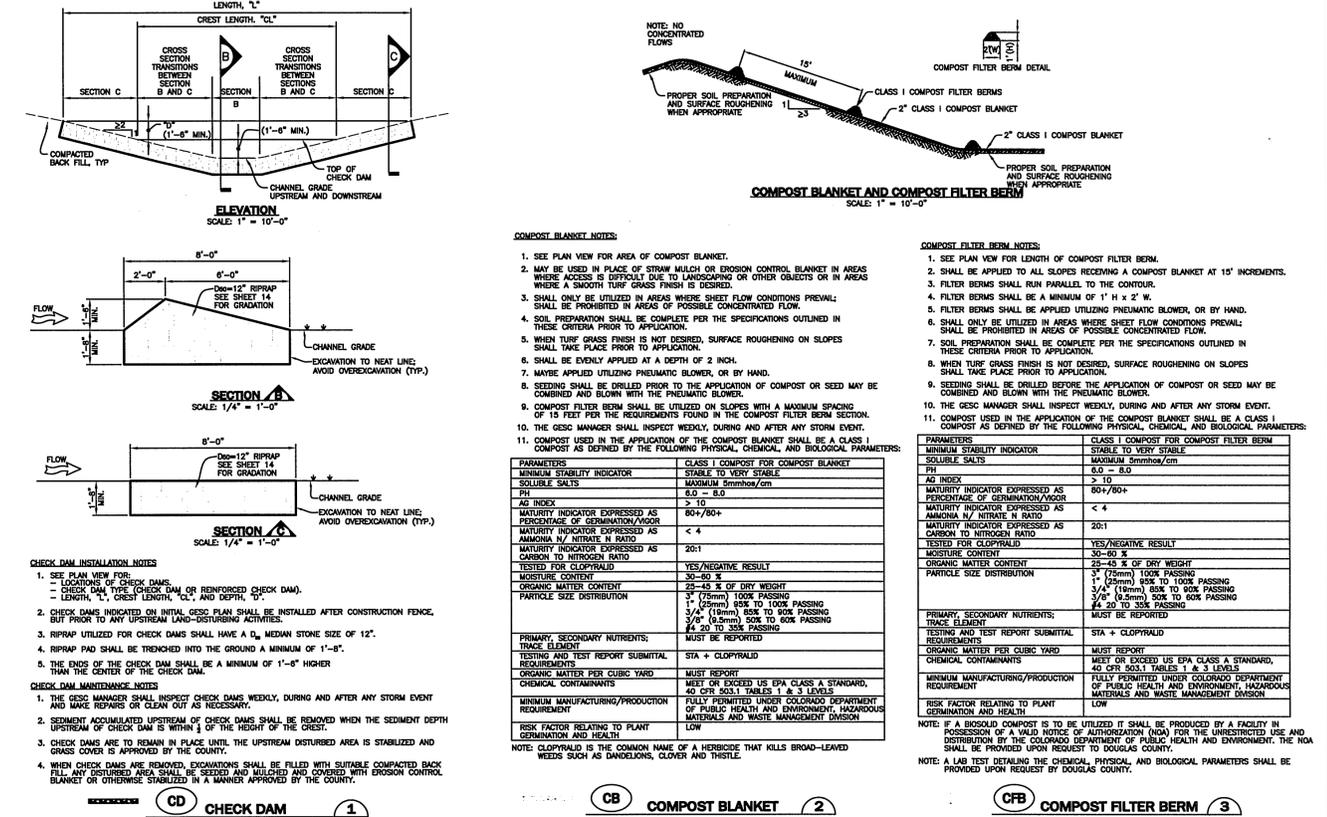
SCALE 1"=30'  
 DATE 03-26-25  
 DR'N DMH CKD KEA  
 AP'VD KEA  
 JOB NUMBER 24-0820  
 Sheet 4 of 4

**DAVID E. ARCHER & ASSOCIATES, INC.**  
 LAND DEVELOPMENT CONSULTING  
 SURVEYING & ENGINEERING  
 PHONE (303) 688-4642  
 105 MILCOX ST. CASTLE ROCK, COLORADO 80104

**GRADING, EROSION, AND SEDIMENT CONTROL (GESC) GENERAL NOTES**

- THE DOUGLAS COUNTY ENGINEER'S SIGNATURE AFFIXED TO THIS DOCUMENT INDICATES THE DOUGLAS COUNTY PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISION, HAS REVIEWED THE DOCUMENT AND FOUND IT IN COMPLIANCE WITH THE DOUGLAS COUNTY SUBDIVISION REGULATIONS AND/OR THE GRADING, EROSION AND SEDIMENT CONTROL (GESC) CRITERIA MANUAL, THE DOUGLAS COUNTY ENGINEER, THROUGH ACCEPTANCE OF THIS DOCUMENT, ASSUMES NO RESPONSIBILITY OTHER THAN AS STATED ABOVE FOR THE COMPLETENESS AND/OR ACCURACY OF THESE DOCUMENTS.
- THE ADEQUACY OF THIS GESC PLAN LIES WITH THE ORIGINAL DESIGN ENGINEER.
- THE GESC PLAN SHALL BE CONSIDERED VALID FOR TWO (2) YEARS FROM THE DATE OF ACCEPTANCE BY DOUGLAS COUNTY, AFTER WHICH TIME THE PLAN SHALL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY DOUGLAS COUNTY.
- ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION BY THE DOUGLAS COUNTY ENGINEERING DIVISION. DOUGLAS COUNTY RESERVES THE RIGHT TO ACCEPT OR REJECT ANY SUCH MATERIALS AND WORKMANSHIP THAT DOES NOT CONFORM TO THE GESC MANUAL, GESC PLAN OR GESC PERMIT.
- THE PLACEMENT OF EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE IN ACCORDANCE WITH THE DOUGLAS COUNTY - ACCEPTED GESC PLAN AND THE DOUGLAS COUNTY GESC MANUAL.
- ANY VARIATION IN MATERIAL TYPE OR LOCATION OF EROSION AND SEDIMENT CONTROL BMPs FROM THE DOUGLAS COUNTY - ACCEPTED GESC PLAN WILL REQUIRE APPROVAL FROM AN ACCOUNTABLE REPRESENTATIVE OF THE DOUGLAS COUNTY ENGINEERING DIVISION.
- AFTER THE GESC PLAN HAS BEEN ACCEPTED, THE GESC PERMIT APPLIED FOR, FEES AND FISCAL SECURITY SUBMITTED TO THE COUNTY, AND THE GESC FIELD MANUAL OBTAINED AND REVIEWED, THE CONTRACTOR MAY INSTALL THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs INDICATED ON THE ACCEPTED GESC PLAN.
- THE FIRST BMP TO BE INSTALLED ON THE SITE SHALL BE CONSTRUCTION FENCE, MARKERS, OR OTHER APPROVED MEANS OF DEFINING THE LIMITS OF CONSTRUCTION, INCLUDING CONSTRUCTION LIMITS ADJACENT TO STREAM CORRIDORS AND OTHER AREAS TO BE PRESERVED.
- AFTER INSTALLATION OF THE INITIAL-STAGE EROSION AND SEDIMENT CONTROL BMPs, THE PERMITTEE SHALL CALL THE DOUGLAS COUNTY ENGINEERING PERMITS TECHNICIAN AT 303-660-7487 TO SCHEDULE A PRECONSTRUCTION MEETING AT THE PROJECT SITE. THE REQUEST SHALL BE MADE A MINIMUM OF THREE BUSINESS DAYS PRIOR TO THE REQUESTED MEETING TIME. NO CONSTRUCTION ACTIVITIES SHALL BE PLANNED WITHIN 24 HOURS AFTER THE PRECONSTRUCTION MEETING.
- THE OWNER OR OWNER'S REPRESENTATIVE, THE GESC MANAGER, THE GENERAL CONTRACTOR, AND THE GRADING SUBCONTRACTOR, IF DIFFERENT FROM THE GENERAL CONTRACTOR, MUST ATTEND THE PRECONSTRUCTION MEETING. IF ANY OF THE REQUIRED PARTICIPANTS FAIL TO ATTEND THE PRECONSTRUCTION MEETING, OR IF THE GESC FIELD MANUAL IS NOT ON SITE, OR IF THE INSTALLATION OF THE INITIAL BMPs ARE NOT APPROVED BY THE DOUGLAS COUNTY GESC INSPECTOR, THE APPLICANT WILL HAVE TO PAY A RESUBMISSION FEE, ADDRESS ANY PROBLEMS WITH BMP INSTALLATION, AND CALL TO RESCHEDULE THE MEETING, WITH A CORRESPONDING DELAY IN THE START OF CONSTRUCTION. DOUGLAS COUNTY STRONGLY ENCOURAGES THE APPLICANT TO HAVE THE ENGINEER OF RECORD AT THE PRECONSTRUCTION MEETING. FAILURE OF THE ENGINEER OF RECORD TO ATTEND MAY RESULT IN A DELAY OF THE START OF CONSTRUCTION.
- THE GESC MANAGER SHALL STRICTLY ADHERE TO THE DOUGLAS COUNTY-APPROVED LIMITS OF CONSTRUCTION AT ALL TIMES. THE DOUGLAS COUNTY ENGINEERING DIVISION MUST APPROVE ANY CHANGES TO THE LIMITS OF CONSTRUCTION AND AT THE DISCRETION OF THE ENGINEERING DIVISION, ADDITIONAL EROSION/SEDIMENT CONTROLS MAY BE REQUIRED IN ANY ADDITIONAL AREAS OF CONSTRUCTION.
- THE MAXIMUM AREA OF CONSTRUCTION SHALL BE LIMITED TO 40 ACRES (70 ACRES IF APPROVED FOR SOIL MITIGATION OPERATIONS) TO REDUCE THE AMOUNT OF LAND DISTURBED AT ANY ONE TIME. LARGER SITES SHALL BE DIVIDED INTO PHASES THAT ARE EACH 40 TO 70 ACRES OR LESS IN SIZE. THESE PROJECTS SHALL CONDUCT GRADING ACTIVITIES IN ACCORDANCE WITH THE ACCEPTED GESC PLAN, BMP INSTALLATION AND APPROVAL BY DOUGLAS COUNTY AT THE START AND COMPLETION OF EACH PHASE SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURES OUTLINED IN THE GESC MANUAL AND/OR GESC FIELD MANUAL.
- PRIOR TO ACTUAL CONSTRUCTION, THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES. FOR INFORMATION, CONTACT THE DENVER INTER-UTILITY GROUP AT 1-800-922-1987 OR FAX AT (303)534-6700.
- NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED WHEREVER POSSIBLE. EXPOSURE OF SOIL TO EROSION BY REMOVAL OR DISTURBANCE OF VEGETATION SHALL BE LIMITED TO THE AREA REQUIRED FOR IMMEDIATE CONSTRUCTION OPERATIONS.
- THE GESC PERMIT SHALL BE VALID FOR A PERIOD OF ONE (1) YEAR.
- A COPY OF THE GESC PERMIT, ACCEPTED GESC PLANS AND THE GESC FIELD MANUAL SHALL BE ON SITE AT ALL TIMES.
- THE GESC MANAGER SHALL BE RESPONSIBLE FOR ENSURING THAT THE SITE REMAINS IN COMPLIANCE WITH THE GESC PERMIT AND SHALL BE THE PERMITTEE'S CONTACT PERSON WITH THE COUNTY FOR ALL MATTERS PERTAINING TO THE GESC PERMIT. THE GESC MANAGER SHALL BE PRESENT AT THE MAJORITY OF THE TIME AND SHALL BE AVAILABLE THROUGH A 24-HOUR CONTACT NUMBER. IN THE EVENT THAT THE CONTRACTOR'S GESC MANAGER IS NOT ON SITE AND CANNOT BE REACHED DURING A VIOLATION, THE ALTERNATE GESC MANAGER SHALL BE CONTACTED. IF NEITHER THE GESC MANAGER NOR ALTERNATE GESC MANAGER CAN BE CONTACTED DURING ANY VIOLATION, A STOP WORK ORDER SHALL BE ISSUED.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE THROUGH THE DOUGLAS COUNTY-APPROVED ACCESS POINT. A VEHICLE TRACKING CONTROL PAD IS REQUIRED AT ALL ACCESS POINTS ON THE SITE. ADDITIONAL STABILIZED CONSTRUCTION ENTRANCES MAY BE ADDED WITH AUTHORIZATION FROM THE DOUGLAS COUNTY ENGINEERING DIVISION.
- THE GESC MANAGER IS RESPONSIBLE FOR CLEANUP OF SEDIMENT OR CONSTRUCTION DEBRIS TRACKED ONTO ADJACENT PAVED AREAS. PAVED AREAS INCLUDING STREETS ARE TO BE KEPT CLEAN THROUGHOUT BUILD-OUT AND SHALL BE CLEANED WITH A STREET SWEEPER OR SIMILAR DEVICE. AT FIRST NOTICE OF ACCIDENTAL TRACKING OR AT THE DISCRETION OF THE DOUGLAS COUNTY GESC INSPECTOR, STREET WASHING IS NOT ALLOWED. DOUGLAS COUNTY RESERVES THE RIGHT TO REQUIRE ADDITIONAL MEASURES TO ENSURE AREA STREETS ARE KEPT FREE OF SEDIMENT AND/OR CONSTRUCTION DEBRIS.
- APPROVED EROSION AND SEDIMENT CONTROL BMPs SHALL BE MAINTAINED AND KEPT IN GOOD REPAIR FOR THE DURATION OF THIS PROJECT. AT A MINIMUM, THE GESC MANAGER SHALL INSPECT ALL BMPs IN ACCORDANCE WITH THE ACCEPTED GESC PLAN AND GESC MANUAL. ALL NECESSARY MAINTENANCE AND REPAIR ACTIVITIES SHALL BE COMPLETED WITHIN 48 HOURS FOR LEVEL III VIOLATIONS, AND IMMEDIATELY FOR LEVEL II VIOLATIONS, OR AS DIRECTED BY A DOUGLAS COUNTY GESC INSPECTOR. ACCUMULATED SEDIMENT AND CONSTRUCTION DEBRIS SHALL BE REMOVED AND PROPERLY DISPOSED.
- STRAW BALES ARE NOT A DOUGLAS COUNTY GESC-ACCEPTED SEDIMENT CONTROL BMP.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN THE LOCATION SHOWN ON THE ACCEPTED GESC PLAN. THE GESC MANAGER SHALL SCHEDULE AN INSPECTION WITH THE DOUGLAS COUNTY GESC INSPECTOR AS SOON AS TOPSOIL STRIPPING IS COMPLETED. FAILURE TO SCHEDULE SUCH INSPECTION OR FAILURE TO STOCKPILE TOPSOIL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER. THE STOP WORK ORDER SHALL REMAIN IN PLACE UNTIL TOPSOIL IS STOCKPILED ON SITE OR APPROPRIATE SOIL AMENDMENTS ARE STOCKPILED ON SITE.
- THE ACCEPTED GESC PLAN MAY REQUIRE CHANGES OR ALTERATIONS AFTER APPROVAL TO MEET CHANGING SITE OR PROJECT CONDITIONS OR TO ADDRESS INEFFICIENCIES IN DESIGN OR INSTALLATION. THE GESC MANAGER SHALL OBTAIN PRIOR APPROVAL FROM THE DESIGN ENGINEER AND DOUGLAS COUNTY ENGINEERING FOR ANY PROPOSED CHANGES.
- LINING OF TEMPORARY SLOPES AND DITCHES SHALL BE IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
- NO PERMANENT EARTH SLOPES GREATER THAN 3:1 SHALL BE ALLOWED.
- ANY SETTLEMENT OR SOIL ACCUMULATIONS BEYOND THE LIMITS OF CONSTRUCTION DUE TO GRADING OR EROSION SHALL BE REPAIRED IMMEDIATELY BY THE GESC MANAGER. THE GESC MANAGER SHALL BE HELD RESPONSIBLE FOR OBTAINING ACCESS RIGHTS TO ADJACENT PROPERTY, IF NEEDED, AND REMEDIATING ANY ADVERSE IMPACTS TO ADJACENT WATERWAYS, WETLANDS, PROPERTIES, ETC. RESULTING FROM WORK DONE AS PART OF THIS PROJECT.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- SOILS THAT WILL BE STOCKPILED FOR MORE THAN THIRTY (30) DAYS SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS OF STOCKPILE CONSTRUCTION. NO STOCKPILES SHALL BE PLACED WITHIN ONE HUNDRED (100) FEET OF A DRAINAGE WAY UNLESS OTHERWISE APPROVED BY THE DOUGLAS COUNTY ENGINEERING DIVISION.
- ALL CHEMICAL OR HAZARDOUS MATERIAL SPILLS WHICH MAY ENTER WATERS OF THE STATE OF COLORADO, WHICH INCLUDE BUT ARE NOT LIMITED TO SURFACE WATER, GROUND WATER AND DRY CULLETS OR STORM SEWER LEADING TO SURFACE WATER, SHALL BE IMMEDIATELY REPORTED TO THE COPELPER FOR CRS 25-8-801, AND DOUGLAS COUNTY. RELEASES OF PETROLEUM PRODUCTS AND CERTAIN HAZARDOUS SUBSTANCES LISTED UNDER THE FEDERAL CLEAN WATER ACT (40 CFR PART 116) MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER AS WELL AS THE COPELPER. CONTACT INFORMATION FOR COPELPER, DOUGLAS COUNTY AND THE NATIONAL RESPONSE CENTER CAN BE FOUND IN APPENDIX A. SPILLS THAT POSE AN IMMEDIATE RISK TO HUMAN LIFE SHALL BE REPORTED TO 911. FAILURE TO REPORT AND CLEAN UP ANY SPILL SHALL RESULT IN ISSUANCE OF A STOP WORK ORDER.
- ALL WORK ON SITE SHALL STAY A MINIMUM OF ONE HUNDRED (100) FEET AWAY FROM ANY DRAINAGE WAY, WETLAND, ETC. UNLESS OTHERWISE NOTED ON AN ACCEPTED DOUGLAS COUNTY GESC PLAN.
- ALL PROJECTS SHALL BALANCE EARTHWORK QUANTITIES ON SITE. IN THE EVENT A VARIANCE IS GRANTED BY THE COUNTY ENGINEER TO ALLOW IMPORT OR EXPORT OF MATERIAL, THE PERMITTEE SHALL HAVE A GESC PERMIT IN HAND FOR THE IMPORT OR EXPORT SITE PRIOR TO ANY TRANSPORTING OF EARTHEN MATERIAL. THE GESC MANAGER SHALL NOTIFY THE DOUGLAS COUNTY GESC INSPECTOR OF THE LOCATION AND PERMIT NUMBERS OF BOTH THE EXPORTING AND IMPORTING SITES PRIOR TO ANY IMPORT/EXPORT OPERATIONS.
- THE USE OF REBAR, STEEL STAKES OR STEEL FENCE POSTS FOR STAKING OR SUPPORT OF ANY EROSION OR SEDIMENT CONTROL BMP IS PROHIBITED EXCEPT STEEL TEE-POSTS FOR USE IN SUPPORTING CONSTRUCTION FENCES.
- THE CLEANING OF CONCRETE DELIVERY TRUCK CHUTES IS RESTRICTED TO APPROVED CONCRETE WASH OUT LOCATIONS ON THE JOB SITE. THE DISCHARGE OF WATER CONTAINING WASTE CONCRETE TO THE STORM SEWER SYSTEM IS PROHIBITED. ALL CONCRETE WASTE SHALL BE PROPERLY CLEANED UP AND DISPOSED AT AN APPROPRIATE LOCATION.
- ALL DEWATERING ON SITE SHALL BE COORDINATED WITH A DOUGLAS COUNTY GESC INSPECTOR AND BE FREE OF SEDIMENT IN ACCORDANCE WITH THE GESC CRITERIA MANUAL.
- ALL PERMANENT INSTALLATIONS OF PIPES FOR STORM SEWERS, SLOPE DRAINS, AND CULVERTS, TOGETHER WITH RIPRAP APRONS OR OTHER INLET AND OUTLET PROTECTION, REQUIRE INSPECTION BY DOUGLAS COUNTY ENGINEERING SEPARATE FROM GESC INSPECTIONS.
- ALL DISTURBED AREAS SHALL BE DRILL SEEDED AND CRIMP MULCHED IN ACCORDANCE WITH THE GESC CRITERIA MANUAL WITHIN THIRTY DAYS OF INITIAL EXPOSURE OR WITHIN SEVEN DAYS OF SUBSTANTIAL COMPLETION (AS DEFINED BY DOUGLAS COUNTY) OF AN AREA, WHICHEVER IS LESS. THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- HYDRAULIC SEEDING AND HYDRAULIC MULCHING ARE NOT AN ACCEPTABLE METHOD OF SEEDING OR MULCHING IN DOUGLAS COUNTY.
- NO CURB AND GUTTER PERMITS SHALL BE ISSUED UNTIL ALL DISTURBED AREAS ARE DRILL SEEDED AND CRIMP MULCHED.
- NO PAVING PERMITS SHALL BE ISSUED UNTIL ALL INTERIM INLET PROTECTION IS INSTALLED AND APPROVED BY THE GESC INSPECTOR.
- A FINAL GESC INSPECTION SHALL BE CONDUCTED A MINIMUM OF TWO WEEKS PRIOR TO THE ANTICIPATED REQUEST FOR CERTIFICATE OR TEMPORARY CERTIFICATE OF OCCUPANCY OR INITIAL ACCEPTANCE.

DETAIL NO.	SHEET NO.	BMP LEGEND
1	1	CD CHECK DAM
2	2	CB COMPOST BLANKET
3	3	CFB COMPOST FILTER BERM
4	4	CWA CONCRETE WASHOUT AREA
5	5	CF CONSTRUCTION FENCE
6	6	CM CONSTRUCTION MARKERS
7	7	DW DEWATERING
8	8	DD DIVERSION DITCH
9	9	ESB EROSION CONTROL BLANKET
10	10	IP INLET PROTECTION
11	11	RCD REINFORCED CHECK DAM
12	12	RRB REINFORCED ROCK BERM
13	13	RRP RRB FOR CULVERT PROTECTION
14	14	SB SEDIMENT BASIN
15	15	SCL SEDIMENT CONTROL LOG
16	16	ST SEDIMENT TRAP
17	17	SM SEEDING AND MULCHING
18	18	SF SILT FENCE
19	19	SS STABILIZED STAGING AREA
20	20	SR SURFACE ROUGHENING
21	21	TSD TEMPORARY SLOPE DRAIN
22	22	TSC TEMPORARY STREAM CROSSING
23	23	TER TERRACING
24	24	VTC VEHICLE TRACKING CONTROL
25	25	WW VTC WITH WHEEL WASH
		ROCK AND RIPRAP GRADATIONS
		LIMITS OF CONSTRUCTION



**TABLE 1. RIPRAP GRADATIONS**

ISO MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
6	70 - 100 20 - 70 2 - 10	12 8 2	85 35 0.4
9	70 - 100 20 - 70 2 - 10	15 12 3	160 85 1.3
12	70 - 100 20 - 70 2 - 10	21 12 4	440 275 5
18	100 33 - 50 2 - 10	30 24 4	1280 570 10
24	100 33 - 50 2 - 10	42 30 4	3500 1700 10

**TABLE 2. RIPRAP BEDDING**

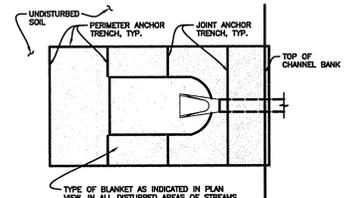
SEIVE SIZE	MASS PERCENT PASSING SQUARE MESH SEIVES
	CLASS A
3"	100
1 1/2"	20 - 90
NO. 4	0 - 20
NO. 200	0 - 3

**TABLE 3. 1 1/2" CRUSHED ROCK**

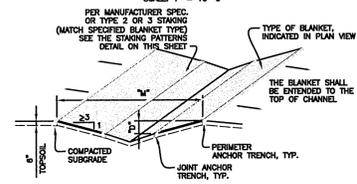
SEIVE SIZE	MASS PERCENT PASSING SQUARE MESH SEIVES
	CLASS A
2"	100
1 1/2"	90 - 100
1"	20 - 55
3/4"	0 - 15
3/8"	0 - 5

**TABLE 4. ROCK AND RIPRAP GRADATIONS**

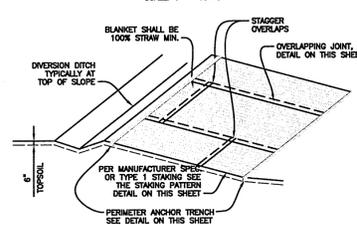
SEIVE SIZE	MASS PERCENT PASSING SQUARE MESH SEIVES
	CLASS A
NO. 4	100
NO. 10	100
NO. 20	100
NO. 40	100
NO. 60	100
NO. 80	100
NO. 100	100
NO. 120	100
NO. 150	100
NO. 200	100
NO. 250	100
NO. 300	100
NO. 350	100
NO. 425	100
NO. 500	100
NO. 600	100
NO. 750	100
NO. 900	100
NO. 1060	100
NO. 1250	100
NO. 1500	100
NO. 1800	100
NO. 2100	100
NO. 2500	100
NO. 3000	100
NO. 3500	100
NO. 4000	100
NO. 4500	100
NO. 5000	100
NO. 5600	100
NO. 6300	100
NO. 7000	100
NO. 7800	100
NO. 8500	100
NO. 9300	100
NO. 10000	100
NO. 11000	100
NO. 12000	100
NO. 13000	100
NO. 14000	100
NO. 15000	100
NO. 16000	100
NO. 17000	100
NO. 18000	100
NO. 19000	100
NO. 20000	100
NO. 22000	100
NO. 24000	100
NO. 26000	100
NO. 28000	100
NO. 30000	100
NO. 32000	100
NO. 34000	100
NO. 36000	100
NO. 38000	100
NO. 40000	100
NO. 42000	100
NO. 44000	100
NO. 46000	100
NO. 4800	



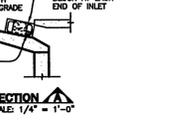
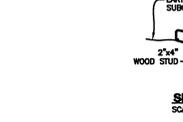
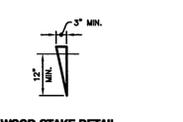
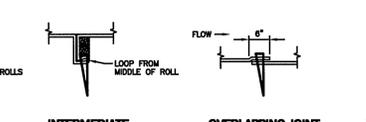
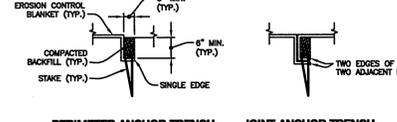
**IN DISTURBED AREAS OF STREAMS AND DRAINAGE CHANNELS - DETAIL**  
SCALE: 1" = 10'-0"



**IN DIVERSION DITCH OR SMALL DITCH DRAINAGEWAY - DETAIL**  
SCALE: 1" = 10'-0"



**OUTSIDE OF STREAMS AND DRAINAGE CHANNELS - DETAIL**  
SCALE: 1" = 10'-0"



**EROSION CONTROL BLANKET INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF PERIMETER OF EROSION CONTROL BLANKET.
  - TYPE OF BLANKET (STRAW, STRAW-COCOONUT, COCONUT, OR EXCESSION).
  - AREA "A" IN SQUARE YARDS OF EACH TYPE OF BLANKET.
- ALL EROSION CONTROL BLANKETS AND NETTING SHALL BE MADE OF 100% NATURAL AND BIODEGRADABLE MATERIAL; NO PLASTIC OR OTHER SYNTHETIC MATERIAL, EVEN IF PHOTO DEGRADABLE, SHALL BE ALLOWED.
- IN AREAS WHERE EROSION CONTROL BLANKET IS SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING BELOW THE BLANKET IN ACCORDANCE WITH THE REQUIREMENTS OF DETAIL 17. SEEDING AND MULCHING, SURFACE SHALL BE SMOOTH AND MUST BE PRIOR TO BLANKET INSTALLATION AND THE BLANKET SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
- PERIMETER ANCHOR TRENCH SHALL BE USED AT OUTSIDE PERIMETER OF ALL BLANKET AREAS.
- JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL BLANKETS EXCEPT STRAW, WHICH MAY USE AN OVERLAPPING JOINT.
- INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF THE ROLL LENGTH FOR COCONUT AND EXCESSION BLANKETS.
- THE OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF BLANKETS TOGETHER FOR BLANKETS ON SLOPES.
- MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKET SHALL CONFORM TO TABLE 7.1.

**EROSION CONTROL BLANKET INSTALLATION NOTES - CONTINUED**

- ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKET SHALL BE RESEEDED AND MULCHED IN ACCORDANCE WITH DETAIL 17.
- SEE DRAINAGE DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION MEASURES THAT MAY EXCEED THE DESIGN CONDITIONS ASSOCIATED WITH THE DETAILS ABOVE.

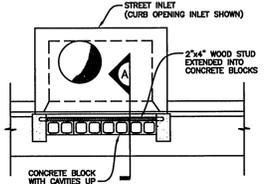
TABLE 7.1 - EROSION CONTROL BLANKET TYPE			
TYPE	COCONUT CONTENT	STRAW CONTENT	NETTING MIN.
STRAW	0%	100%	DOUBLE/NATURAL
STRAW-COCOONUT	50% MIN.	50% MAX.	DOUBLE/NATURAL
COCONUT	100%	0%	DOUBLE/NATURAL
EXCESSION	0%	0%	DOUBLE/NATURAL

**EROSION CONTROL BLANKET MAINTENANCE NOTES**

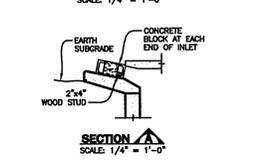
- THE GESC MANAGER SHALL INSPECT EROSION CONTROL BLANKETS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS AS NECESSARY.
- EROSION CONTROL BLANKET IS TO BE LEFT IN PLACE UNLESS REQUESTED TO BE REMOVED BY THE COUNTY.
- ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE RE-INSTALLED. ANY SUBGRADE AREAS BELOW THE BLANKET THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET RE-INSTALLED.



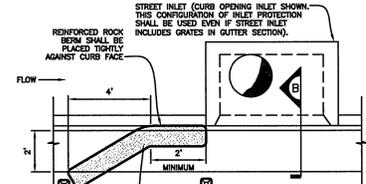
**ECB EROSION CONTROL BLANKET 9**



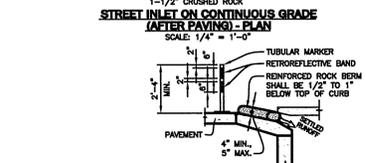
**INTERIM CONFIGURATION (BEFORE PAVING) STREET INLET - PLAN**  
SCALE: 1/4" = 1'-0"



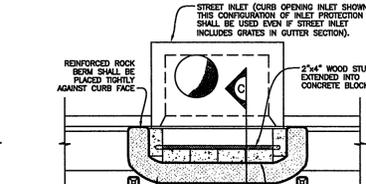
**SECTION**  
SCALE: 1/4" = 1'-0"



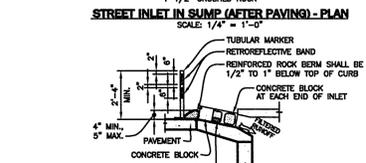
**STREET INLET ON CONTINUOUS GRADE (AFTER PAVING) - PLAN**  
SCALE: 1/4" = 1'-0"



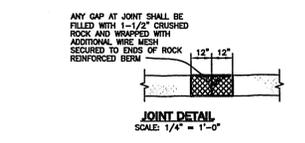
**SECTION**  
SCALE: 1/4" = 1'-0"



**STREET INLET IN SUMP (AFTER PAVING) - PLAN**  
SCALE: 1/4" = 1'-0"



**SECTION**  
SCALE: 1/4" = 1'-0"



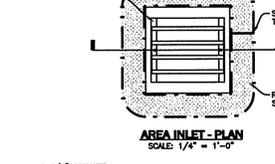
**JOINT DETAIL**  
SCALE: 1/4" = 1'-0"

**INLET PROTECTION INSTALLATION NOTES**

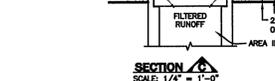
- INTERIM CONFIGURATION OF INLET PROTECTION IN STREETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVING) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
- INLET PROTECTION AT AREA INLETS SHALL BE INSTALLED WITHIN 48-HOURS OF POURING INLET.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON SHEET 14 (1-1/2" MINUS), RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
- WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- REINFORCED ROCK BERM SHALL BE CONSTRUCTED IN ONE PIECE OR SHALL BE CONSTRUCTED USING JOINT DETAIL.
- TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS ADOPTED.
- THE TOP OF REINFORCED ROCK BERM SHALL BE 1/2"-1" BELOW TOP OF CURB.

**INLET PROTECTION MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT INLET PROTECTION WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY. MORE FREQUENT INSPECTIONS AND REPAIRS SHALL BE REQUIRED DURING WINTER CONDITIONS DUE TO FREEZE/THAW PROBLEMS.
- SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS WITHIN 2-1/2 INCHES OF THE CREST.
- INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED, UNLESS THE COUNTY APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
- WHEN INLET PROTECTION AT AREA INLETS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



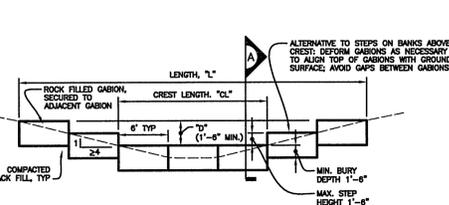
**AREA INLET - PLAN**  
SCALE: 1/4" = 1'-0"



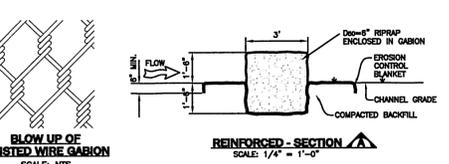
**SECTION**  
SCALE: 1/4" = 1'-0"



**IP INLET PROTECTION 10**



**REINFORCED - ELEVATION**  
SCALE: 1" = 10'-0"



**REINFORCED - SECTION**  
SCALE: 1/4" = 1'-0"

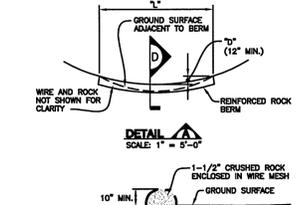
**REINFORCED CHECK DAM INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF CHECK DAMS.
  - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
  - LENGTH, "L", CREST LENGTH, "C", AND DEPTH, "D".
- CHECK DAMS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 1-1/2" AND A MINIMUM WIRE THICKNESS OF 1/8" WIRE HOE RINGS AT 4" SPACING OR STEEL WIRE REINFORCED BEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT GABION.
- RRFP UTILIZED FOR CHECK DAMS SHALL HAVE A D, MEDIAN STONE SIZE OF 6".
- THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'-4".
- EROSION BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1'-8" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

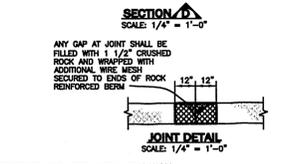
**REINFORCED CHECK DAM MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT CHECK DAMS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CHECK DAM IS WITHIN 4" OF THE HEIGHT OF THE CREST.
- CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRMP MULCHED AND COVERED WITH EROSION CONTROL BLANKET OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

**RCD REINFORCED CHECK DAM 11**



**DETAIL**  
SCALE: 1" = 5'-0"



**JOINT DETAIL**  
SCALE: 1/4" = 1'-0"

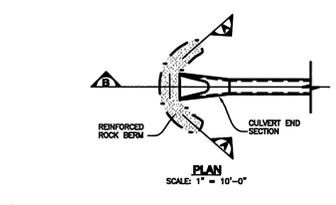
**REINFORCED ROCK BERM INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF REINFORCED ROCK BERMS.
  - LENGTH, "L", AND DEPTH, "D" DIMENSIONS.
- REINFORCED ROCK BERM SECTION APPLIES TO CULVERT INLET FILTER AND INLET PROTECTION.
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON SHEET 1 (1-1/2" MINUS). RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
- WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1.0 INCH (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48-INCHES.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- FOR CONCENTRATED FLOW AREAS THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

**REINFORCED ROCK BERM MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT REINFORCED ROCK BERM WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED ROCK BERM SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS WITHIN 5 INCHES OF THE CREST.
- REINFORCED ROCK BERMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED.
- WHEN REINFORCED ROCK BERMS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

**RRB REINFORCED ROCK BERM 12**



**PLAN**  
SCALE: 1" = 10'-0"



**SECTION**  
SCALE: 1" = 10'-0"



**JOINT DETAIL**  
SCALE: 1/4" = 1'-0"

**SECTION**  
SCALE: 1/4" = 1'-0"

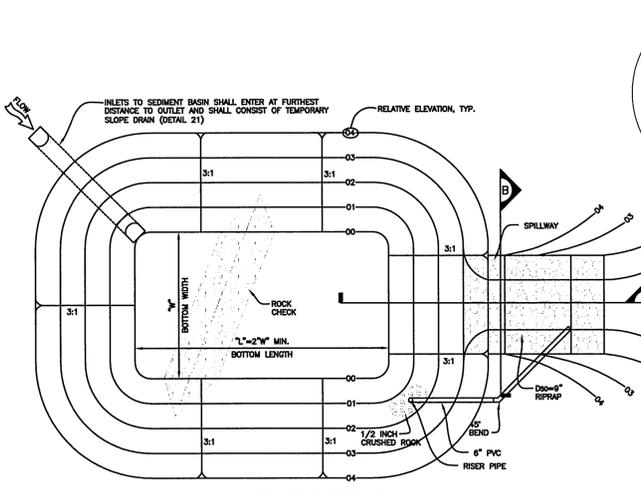
**INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF CULVERT INLET FILTERS.
  - LENGTH, "L", AND DEPTH, "D".
- CRUSHED ROCK SHALL BE FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON SHEET 1 (1-1/2" MINUS). RECYCLED CONCRETE MEETING THIS GRADATION MAY BE USED.
- WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6-INCH CENTERS ALONG ALL JOINTS AND AT 2-INCH CENTERS ON ENDS OF BERM.
- THE ENDS OF THE REINFORCED ROCK BERM SHALL BE 12" HIGHER THAN THE CENTER OF THE BERM.

**MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT CULVERT INLET FILTERS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF CULVERT INLET FILTER SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF FILTER IS 1/2 THE HEIGHT OF THE REINFORCED ROCK BERM.
- RRB FOR CULVERT PROTECTION ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- WHEN CULVERT INLET FILTERS ARE REMOVED, ANY DISTURBED AREA SHALL BE DRILL SEEDED AND CRMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

**RRC RRB FOR CULVERT PROTECTION 13**



**STANDARD BASIN - PLAN**  
SCALE: 1" = 10'-0"

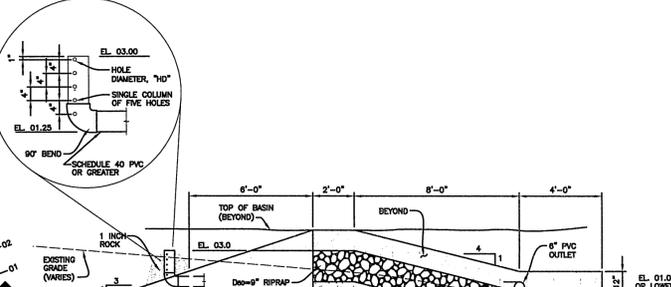
**SEDIMENT BASIN INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF SEDIMENT BASIN.
  - TYPE OF BASIN (STANDARD BASIN OR NON-STANDARD BASIN).
  - FOR STANDARD BASIN, CREST LENGTH, "CL", BOTTOM WIDTH, "W", AND HOLE DIAMETER, "HD".
  - FOR NON-STANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT, "R", NUMBER OF COLUMNS, "N", HOLE DIAMETER, "HD", AND PIPE DIAMETER, "D".
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.
- THE DETAILS SHOWN ON THIS SHEET PERTAIN TO STANDARD SEDIMENT BASINS (IDENTIFIED ON THE GESC PLAN VIEW DRAWINGS USED FOR DRAINAGE AREAS LESS THAN 10 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASINS) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 10 ACRES.

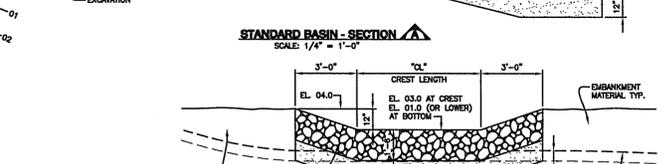
**SEDIMENT BASIN MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SEDIMENT BASIN WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED IN SEDIMENT BASIN SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 2.0 FEET OF THE CREST OF THE SPILLWAY.
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- IF SEDIMENT BASINS ARE REMOVED, THE DISTURBED AREA SHALL BE SEED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

**SB SEDIMENT BASIN 14**



**STANDARD BASIN - SECTION**  
SCALE: 1/4" = 1'-0"



**STANDARD BASIN - SECTION**  
SCALE: 1/4" = 1'-0"

**SEDIMENT BASIN MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SEDIMENT BASIN WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
- SEDIMENT ACCUMULATED IN SEDIMENT BASIN SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 2.0 FEET OF THE CREST OF THE SPILLWAY.
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY.
- IF SEDIMENT BASINS ARE REMOVED, THE DISTURBED AREA SHALL BE SEED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

**SB SEDIMENT BASIN 14**

**Sheet Revisions**

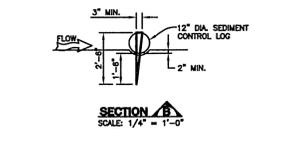
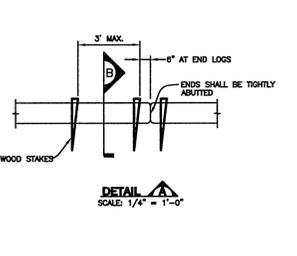
NOTE: SCALES SHOWN ARE FOR 24"x36" SHEETS; ADJUST ACCORDINGLY FOR 11"x17" SHEETS.



**GESC GRADING, EROSION, AND SEDIMENT CONTROL**

**GESC PLAN STANDARD NOTES AND DETAILS**

**SHEET 2 OF 3**



**SEDIMENT CONTROL LOG INSTALLATION NOTES**

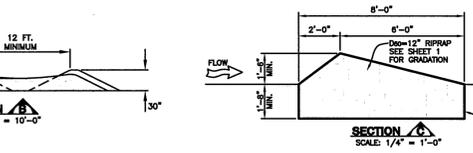
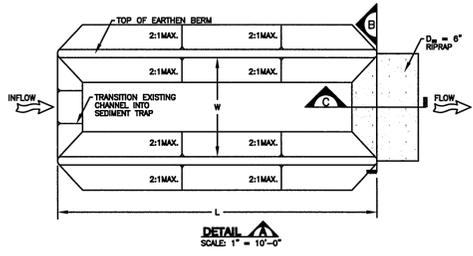
- SEE PLAN VIEW FOR:
  - LOCATION AND LENGTH OF SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOGS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION, THE BERM SHALL BE COMPACTED TO 85% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- NOT FOR USE IN CONCENTRATED FLOW AREAS.
- THE SEDIMENT CONTROL LOG SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 2".

**SEDIMENT TRAP INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.
- SEDIMENT TRAPS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
- SEDIMENT TRAP BERMS SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION, THE BERM SHALL BE COMPACTED TO 85% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- RRAP OUTLET SHALL BE CONSTRUCTED WITH D<sub>50</sub>=12" RRAP WITH A MINIMUM OVERFLOW OF 6".
- THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RRAP OUTLET STRUCTURE.
- THE ENDS OF THE RRAP OUTLET STRUCTURE SHALL BE MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

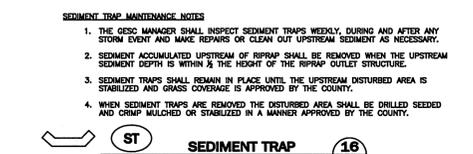
**SEDIMENT TRAP MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SEDIMENT TRAPS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOGS SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 8" OF THE CREST OF LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION, IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE RESEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.



**SEDIMENT TRAP MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SEDIMENT TRAPS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF RRAP SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN 8" OF THE HEIGHT OF THE RRAP OUTLET STRUCTURE.
- WHEN SEDIMENT TRAPS ARE REMOVED THE DISTURBED AREA SHALL BE DRILLED SEEDING AND CRIMP MULCHED OR STABILIZED IN A MANNER APPROVED BY THE COUNTY.

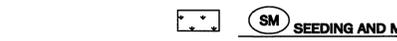


**SEEDING AND MULCHING INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - AREA OF SEEDING AND MULCHING.
  - TYPE OF SEED MIX (PERMANENT, TEMPORARY, OR LOW-GROWTH).
- ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS SEEDS AS RUSSIAN OR CANADIAN THISTLE, COARSE FESCUE, EUROPEAN BROWBEARD, JOHNSON GRASS, KNOTWEED AND LEAFY SPURGE.
- THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY AND THAT THE SEED IS FREE FROM NOXIOUS SEEDS AS LISTED IN TABLE 1. THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY AND THAT THE SEED IS FREE FROM NOXIOUS SEEDS AS LISTED IN TABLE 1.
- DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT.
- IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO CONTRACTOR AND FORWARDED TO THE DOUGLAS COUNTY GESC INSPECTOR.
- THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE: (OUNCES OF SEED) X (PURITY) X (GERMINATION) = POUNDS OF PURE LIVE SEED (PLS).
- PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE COUNTY.
- ALL AREAS TO BE SEEDING AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE DEPTH), HAIL ROADS AND OTHER COMPACTED AREAS SHALL BE LOESSED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL.
- SOIL IS TO BE THOROUGHLY LOESSED (TILLED) TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEDING. THE TOP 6 INCHES OF THE SEED BED SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLOSURE GREATER THAN 3 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY LOESSED SHALL BE REJECTED.
- SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH OF 1/4 INCH. ROW SPACING SHALL BE NO MORE THAN 8 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW AT LEAST 50 PERCENT OF THE MULCH BY WEIGHT SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE.
- IF THE PERMITTEE DEMONSTRATES TO THE COUNTY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH. THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED ABOVE.
- SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 7 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA (AS DEFINED BY THE COUNTY). THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.
- MULCH SHALL BE APPLIED WITHIN 24-HOURS OF SEEDING.
- TACKIFIER SHOULD BE UTILIZED TO HELP WITH STRAW DISPLACEMENT.

**SEEDING AND MULCHING MAINTENANCE NOTES**

- SEEDING AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY FOR A PERIOD OF TWO YEARS FOLLOWING INITIAL SEEDING. RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS FAILING TO MEET THE REQUIRED COVERAGE.
- REQUIRED COVERAGE FOR STANDARDS, OPEN SPACE AND LOW GROWTH SEED MIXES SHALL BE DEFINED AS FOLLOWS:
  - THREE (3) PLANTS PER SQUARE FOOT WITH A MINIMUM HEIGHT OF 3 INCHES. THE 3 PLANTS PER SQUARE FOOT SHALL BE OF THE VARIETY AND SPECIES LISTED IN THE DOUGLAS COUNTY-APPROVED MIX.
  - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FOOT BY TWO-FOOT OR EQUIVALENT).
  - FREE OF ERUPTED AREAS.
  - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC CRITERIA MANUAL.
- REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DEFINED AS FOLLOWS:
  - AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES LISTED.
  - NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FOOT BY TWO-FOOT OR EQUIVALENT).
  - FREE OF ERUPTED AREAS.
  - FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC CRITERIA MANUAL.
- RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE COUNTY.



**DOUGLAS COUNTY PERMANENT DRILL SEEDING MIX**

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BIG BLUESTEM	KAW	PNWS	10	1.1
YELLOW INDIANGRASS	CHEYENNE	PNWS	10	1
SWITCHGRASS	BLACKWELL	PNWS	10	0.4
SIDEGRASS GRAMA	VAUGHN	PNWB	10	0.9
WESTERN WHEATGRASS	ARRIBA	PNCS	10	1.8
BLUE GRAMA	HACHITA	PNWB	10	0.3
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
PRAIRIE SANDREED	DOOSHEN	PNWS	10	0.7
GREEN NEEDLEGRASS	LDORM	PNCS	10	1
SLENDER WHEATGRASS	PRIYOR	PNCS	5	0.6
STREAMBANK WHEATGRASS	SOOR	PNCS	5	0.6
TOTAL				9.2

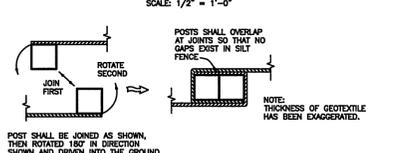
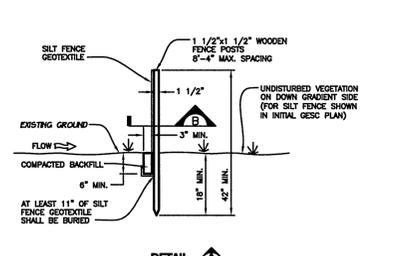
**DOUGLAS COUNTY TEMPORARY DRILL SEEDING MIX**

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
SMOOTH BROMEGRASS	LINCOLN	PICS	30	3.9
INTERMEDIATE WHEATGRASS	OHIE	PICS	30	4.5
PURSCENT WHEATGRASS	LUNA	PICS	30	4.2
ANNUAL RYEGRASS	N/A	ACB	10	0.8
TOTAL				13.4

**DOUGLAS COUNTY LOW-GROWTH DRILL SEEDING MIX**

SPECIES	VARIETY	NOTES	% IN MIX	POUNDS OF PLS PER ACRE
BUFFALOGRASS	TEXOKA	PNWS	20	3.2
BLUE GRAMA	HACHITA	PNWB	20	0.6
WESTERN WHEATGRASS	ARRIBA	PNCS	20	3.2
SIDEGRASS GRAMA	VAUGHN	PNWB	20	1.8
THICKSPIKE WHEATGRASS	CRITANA	PNCS	10	1
STREAMBANK WHEATGRASS	SOOR	PNCS	10	1.2
TOTAL				11.0

NOTES:  
 P=PERENNIAL  
 A=ANNUAL  
 N=NATIVE  
 I=INTRODUCED  
 W=WINTER SEASON  
 C=COOL SEASON  
 S=SOON TURNER  
 B=BUNCHGRASS

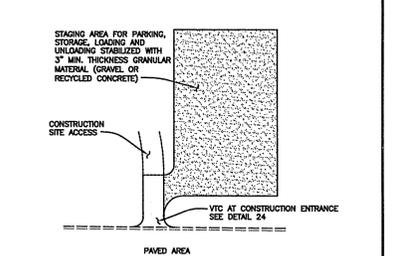


**SILT FENCE INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION AND LENGTH OF FENCE.
- ANCHOR TRENCH SHALL BE EXCAVATED WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE. NO ROAD GRADERS, BACKHOES, ETC. SHALL BE USED. TRENCH SHALL BE COMPACTED BY HAND WITH "JUMPING JACK" OR BY WHEEL ROLLING. CONSTRUCTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
- SILT FENCE GEOTEXTILE SHALL MEET THE FOLLOWING REQUIREMENTS:
  - 6-TO 12-GALLONS PER MINUTE PER SQUARE FOOT FLOW CAPACITY.
  - 60 LB. TENSILE STRENGTH PER ASTM D4434.
  - UV DESIGN AT 500 HRS MIN. 70% STRENGTH RETAINED PER ASTM D 4355.
- SILT FENCE INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.

**SILT FENCE MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SILT FENCE DAILY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 8-INCHES.
- SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS APPROVED BY THE COUNTY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE RESEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

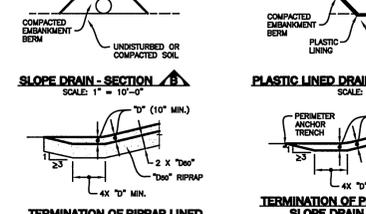
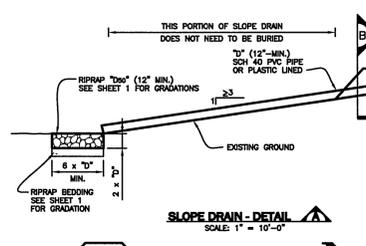
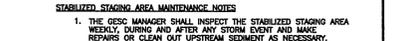


**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR GENERAL LOCATION OF STAGING AREA. CONTRACTOR MAY MODIFY LOCATION AND SIZE OF STABILIZED STAGING AREA WITH COUNTY APPROVAL. GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE) SHALL BE USED TO STABILIZE STAGING AREA.
- STABILIZED STAGING AREA SHALL BE LARGE ENOUGH TO FULLY CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- IF REQUIRED BY THE COUNTY, SITE ACCESS ROADS SHALL BE STABILIZED IN THE SAME MANNER AS THE STAGING AREA.
- STAGING AREA SHALL BE STABILIZED PRIOR TO ANY OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM OF 3' OF GRANULAR MATERIAL (GRAVEL OR RECYCLED CONCRETE).

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT THE STABILIZED STAGING AREA WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- GESC MANAGER SHALL PROVIDE ADDITIONAL THICKNESS OF GRANULAR MATERIAL, IF ANY RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.
- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING AND LOADING OPERATIONS.
- ANY ACCUMULATED DIRT OR MUD SHALL BE REMOVED FROM THE SURFACE OF THE STAGING AREA.
- THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED.

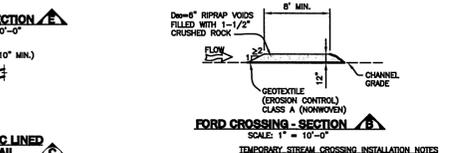
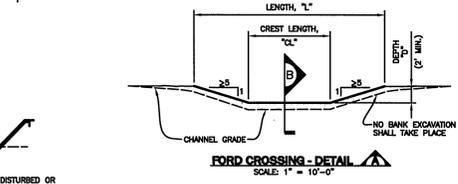


**SLOPE DRAIN INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION AND LENGTH OF SLOPE DRAIN.
  - PIPE DIAMETER, "D", AND RIPRAP SIZE, "D<sub>50</sub>".
- SLOPE DRAIN DIMENSIONS SHALL BE CONSIDERED MINIMUM DIMENSIONS. CONTRACTOR MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO EXISTING STREAM CHANNEL DURING BASEFLOO OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SLOPE DRAINS INDICATED ON INITIAL GESC PLAN SHALL BE INSTALLED PRIOR TO ANY UPSTREAM LAND-DISTURBING ACTIVITIES.
- FOR TEMPORARY SLOPE DRAINS, PIPE MAY BE INSTALLED ON TOP OF SLOPE. HOWEVER, 12" MIN. COVER AT TOP OF SLOPE SHALL BE PROVIDED.
- A RRAP PAD SHALL BE PLACED AT THE OUTFALL OF THE SLOPE DRAIN.

**SLOPE DRAIN MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT SLOPE DRAINS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF SLOPE DRAINS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 6-INCHES OF THE CREST (FOR CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES (CULVERT CROSSING).
- STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
- WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILLED SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

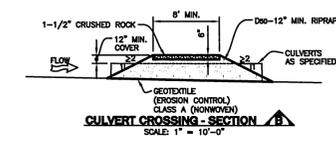
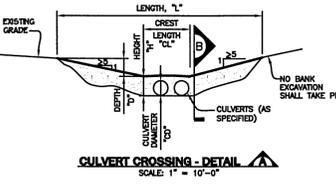


**FORD CROSSING INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF TEMPORARY STREAM CROSSING.
  - STREAM CROSSING TYPE (FORD OR CULVERT).
  - FOR FORD CROSSING: LENGTH, "L", CREST LENGTH, "L<sub>C</sub>", AND DEPTH, "D".
  - FOR CULVERT CROSSING: LENGTH, "L", CREST LENGTH, "L<sub>C</sub>", CROSSING HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "D<sub>C</sub>", AND NUMBER, TYPE AND CLASS OR GAUGE OF CULVERTS.
- TEMPORARY STREAM CROSSING DIMENSIONS, DSG, AND NUMBER OF CULVERTS INDICATED (FOR CULVERT CROSSING) SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CHANNEL OR EXISTING STREAM CHANNEL DURING BASEFLOO OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SEE SHEET 1 FOR RRAP AND 1-1/2" CRUSHED ROCK GRADATIONS.
- FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

**TEMPORARY STREAM CROSSING MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT STREAM CROSSINGS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF STREAM CROSSINGS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 6-INCHES OF THE CREST (FOR CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES (CULVERT CROSSING).
- STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
- WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILLED SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

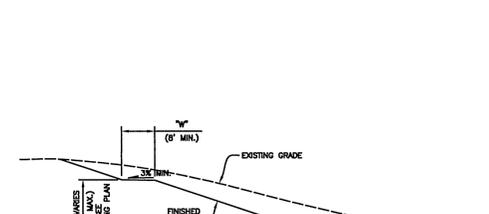


**CULVERT CROSSING INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF TEMPORARY STREAM CROSSING.
  - STREAM CROSSING TYPE (FORD OR CULVERT).
  - FOR FORD CROSSING: LENGTH, "L", CREST LENGTH, "L<sub>C</sub>", AND DEPTH, "D".
  - FOR CULVERT CROSSING: LENGTH, "L", CREST LENGTH, "L<sub>C</sub>", CROSSING HEIGHT, "H", DEPTH, "D", CULVERT DIAMETER, "D<sub>C</sub>", AND NUMBER, TYPE AND CLASS OR GAUGE OF CULVERTS.
- TEMPORARY STREAM CROSSING DIMENSIONS, DSG, AND NUMBER OF CULVERTS INDICATED (FOR CULVERT CROSSING) SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CHANNEL OR EXISTING STREAM CHANNEL DURING BASEFLOO OR FLOOD EVENTS SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- SEE SHEET 1 FOR RRAP AND 1-1/2" CRUSHED ROCK GRADATIONS.
- FOR A TEMPORARY STREAM CROSSING THAT WILL CARRY LOADS, THE TEMPORARY STREAM CROSSING MUST BE DESIGNED BY THE DESIGN ENGINEER.

**TEMPORARY STREAM CROSSING MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT STREAM CROSSINGS WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- SEDIMENT ACCUMULATED UPSTREAM OF STREAM CROSSINGS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF CROSSING IS WITHIN 6-INCHES OF THE CREST (FOR CROSSING) OR GREATER THAN AN AVERAGE DEPTH OF 12-INCHES (CULVERT CROSSING).
- STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED, BUT SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
- WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE DRILLED SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE COUNTY.

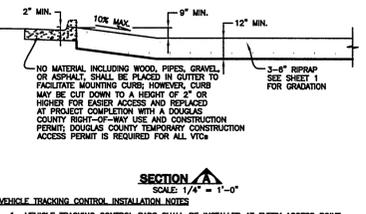
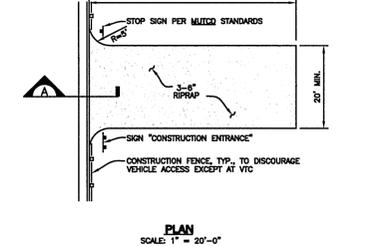


**TERRACING INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - WIDTH, "W", AND SLOPE, "Z".
- TERRACING IS NOT REQUIRED FOR SLOPES OF 4 TO 1 OR FLATTER.
- EARTH (VEGETATED) SLOPES STEEPER THAN 3 TO 1 ARE NOT ALLOWED ON THE SITE.

**TERRACING MAINTENANCE NOTES**

- THE GESC MANAGER SHALL INSPECT TERRACING WEEKLY, DURING AND AFTER ANY STORM EVENT AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
- ANY RILL EROSION OCCURRING ON SLOPES SHALL BE REPAIRED AND RESEEDED AND COVERED IN ACCORDANCE WITH DETAIL 17.

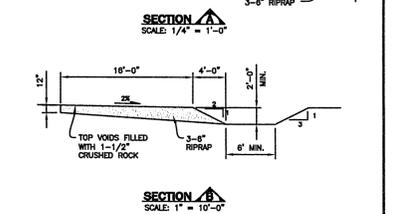
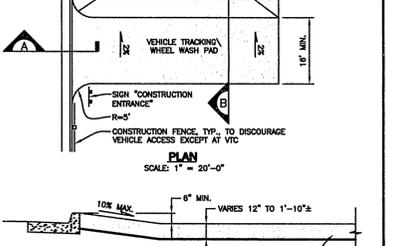


**VEHICLE TRACKING CONTROL INSTALLATION NOTES**

- VEHICLE TRACKING CONTROL PADS SHALL BE INSTALLED AT EVERY ACCESS POINT TO SITE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOLLERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY PERMITTEE.
- A DOUGLAS COUNTY TEMPORARY CONSTRUCTION ACCESS PERMIT IS REQUIRED FOR EACH ACCESS PERMIT.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

**VEHICLE TRACKING CONTROL MAINTENANCE NOTES**

- GESC MANAGER SHALL INSPECT VEHICLE TRACKING CONTROL DAILY. GRAVEL SURFACE SHALL BE CLEAN AND LOOSE ENOUGH TO RUT SLIGHTLY UNDER WHEEL LOADS AND CAUSE LOSS OF CURB TO DISLOGE AND FROM TRUCKS. WHEN GRAVEL BECOMES COMPACTED OR FILLED WITH SEDIMENT SO THAT THE EFFECTIVENESS OF THE PAD IS DIMINISHED, CONTRACTOR SHALL RE-INSTALL OVER, OR OTHERWISE LOOSEEN GRAVEL, PLACE ADDITIONAL NEW GRAVEL, OR REPLACE WITH NEW GRAVEL AS NECESSARY TO RESTORE EFFECTIVENESS.
- VEHICLE TRACKING CONTROL SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRAVEL MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED.

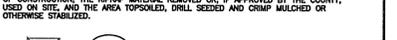


**VEHICLE TRACKING CONTROL WITH WHEEL WASH INSTALLATION NOTES**

- ALTHOUGH NOT NORMALLY USED, THE COUNTY RESERVES THE RIGHT TO REQUIRE VEHICLE TRACKING CONTROL WITH WHEEL WASH AT SITES WHERE TRACKING ONTO PAVED AREAS BECOMES A SIGNIFICANT PROBLEM.
- IF VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES ARE REQUIRED, ALL WHEELS ON EVERY VEHICLE LEAVING THE SITE SHALL BE WASHED BY A PRESSURE-WASHER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A WATER SOURCE.
- VEHICLE TRACKING CONTROL PADS SHALL CONSIST OF HARD, DENSE, DURABLE STONE ANGULAR IN SHAPE AND RESISTANT TO WEATHERING. ROUNDED STONE OR BOLLERS WILL NOT BE ACCEPTABLE. THE STONES SHALL BE 3" WITH A MAXIMUM SIZE OF 6". THE STONE SHALL HAVE A SPECIFIC GRAVITY OF AT LEAST 2.6. CONTROL OF GRADATION WILL BE BY VISUAL INSPECTIONS.
- ANY CRACKED OR DAMAGED CURB AND GUTTER AND SIDEWALK SHALL BE REPLACED BY CONTRACTOR.
- A STOP SIGN INSTALLED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AS AMENDED, SHALL BE INSTALLED FOR EXITING TRAFFIC AT THE VTC.

**VEHICLE TRACKING CONTROL WITH WHEEL WASH MAINTENANCE NOTES**

- GESC MANAGER SHALL INSPECT VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITIES DAILY. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM PAD SURFACE.
- ACCUMULATED SEDIMENT IN THE WASHWATER/SEDIMENT TRAP SHALL BE REMOVED WHEN THE SEDIMENT DEPTH REACHES AN AVERAGE OF 12-INCHES.
- VEHICLE TRACKING CONTROL WITH WHEEL WASH FACILITY SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRAVEL MATERIAL REMOVED OR, IF APPROVED BY THE COUNTY, USED ON SITE, AND THE AREA TOPSOILED, DRILL SEEDING AND CRIMP MULCHED OR OTHERWISE STABILIZED.



NO.	REVISION	DATE

NOTE: SCALES SHOWN ARE FOR 24"x36" SHEETS; ADJUST ACCORDINGLY FOR 11"x17" SHEETS.



**GESC** GRADING, EROSION, AND SEDIMENT CONTROL

**GESC PLAN STANDARD NOTES AND DETAILS**

**SHEET 3 OF 3**



**Right of Way & Permits**

1123 West 3<sup>rd</sup> Avenue  
Denver, Colorado 80223  
Telephone: 303.285.6612  
[violeta.ciocanu@xcelenergy.com](mailto:violeta.ciocanu@xcelenergy.com)

May 23, 2025

Douglas County Planning Services  
100 Third Street  
Castle Rock, CO 80104

Attn: Eric Pavlinek

**Re: Hemphill Subdivision, 2nd Amendment, Case # SB2025-013**

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the **replat request to subdivide Lot 2A into two lots** and currently has **no apparent conflict**.

As a safety precaution, PSCo would like to remind the developer to call the Utility Notification Center by dialing 811 for utility locates prior to construction.

Violeta Ciocanu (Chokanu)  
Right of Way and Permits  
Public Service Company of Colorado dba Xcel Energy  
Office: 303-285-6612 – Email: [violeta.ciocanu@xcelenergy.com](mailto:violeta.ciocanu@xcelenergy.com)

## Memorandum

**Date:** May 30, 2025

**To:** Eric Pavlinek, Principal Planner

**From:** DJ Beckwith, Principal Planner  
Lauren Pulver, Planning Supervisor  
Kati Carter, AICP, Assistant Director of Planning Resources  
Chris Pratt, Managing County Attorney

**CC:** Terence T. Quinn, AICP, Director of Community Development

**Subject:** **Water Commission Member Referral Comments**  
**SB2025-013 – Hemphill Subdivision, 2nd Amendment**

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The Douglas County Water Commission (Commission) met on May 19, 2025 and provided comment on SB2025-013 – Hemphill Subdivision, 2nd Amendment (Project). There was no consensus comment from the Commission, only individual comments were provided. All other members had no comment. The following is a summary of comments from each Commission member that provided comments on the Project. This Project was pulled from the agenda for discussion by Commission Member Harold Smethills.

Harold Smethills: Member Smethills questioned if the County should be approving the subdivision prior to the groundwater being adjudicated.

Evan Ela: Member Ela responded to Member Smethills' question by indicating that non-tributary groundwater is tied to landownership and does not have to be adjudicated.



**DAVID E. ARCHER & ASSOCIATES, INC.**  
**PROFESSIONAL LAND SURVEYORS & ENGINEERS**

105 Wilcox Street \* Castle Rock, CO 80104  
PHONE (303) 688-4642 \* FAX (303) 688-4675 \* karcher@davidearcher.com

January 27, 2026  
Job No. 24-0820

Eric Pavlinek, Principal Planner  
Department of Community Development  
Planning Services  
100 Third Street  
Castle Rock, CO 80104

RE: **Hemphill Subdivision, 2nd Amendment**  
**Project File: SB2025-013 – Referral Response**

Dear Eric,

We have received comments from the referral agencies for Hemphill Subdivision, 2<sup>nd</sup> Amendment. We have made the changes to the exhibits as requested and our written response follows:

**Assessor**

Property is currently owned by the Manatt Hier Revocable Trust, so the owner signature block needs to be updated/ signed by the trustees of the trust.

*The signature blocks have been updated.*

**Building Services**

Please submit a site plan, show the existing building(s), and show the distances of the exterior walls to the property lines for review.

*The supplemental exhibit submitted originally is attached.*

**Colorado Division of Water Resources**

*The new well will be drilled into the Lower Dawson aquifer.*

**Douglas County Conservation District.**

*The recommendations will be followed and detailed further with a future DESC plan for the home construction. A GESC plan has been submitted for the Road Improvements.*

**Douglas County School District RE1**

*The applicant agrees to the \$500 cash-in-lieu fee.*

**Engineering Services**

*The Cost estimate is attached and the redlines have been addressed.*

**Historic Preservation**

*We understand that a Class II Survey is required before building permit and should any artifacts be unearthed the recommendations noted will be followed.*

**Wildfire Mitigation**

*We understand that Wildfire Mitigation is required at the time of Building Permit and the applicant will look into Wildfire Mitigation on the 20 acre piece.*

Please feel free to contact us if you have any additional questions.

Thank you,



Kevin E. Archer, P.E.

**HEMPHILL SUBDIVISION, 2ND AMENDMENT**  
**A Replat of Lot 2A, HEMPHILL SUBDIVISION, 1ST AMENDMENT**  
**Located in the Northwest 1/4, of Section 16, Township 8 South, Range 67 West of the 6th P.M.,**  
**County of Douglas, State of Colorado.**  
**29.973 Acres 2 Residential Lots SB2025-013**

**LEGAL DESCRIPTION:**

Lot 2A, Hemphill Subdivision, 1st Amendment,  
 Douglas County, Colorado,  
 Containing 29.973 Acres More or Less.

**TITLE VERIFICATION:**

We Land Title Guarantee Company do hereby certify that we have examined the title of all land platted hereon and that title to such land is in the dedicator(s) free and clear of all liens, taxes and encumbrances:

Land Title Guarantee Company

By: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

State of Colorado }  
 County of Douglas } SS.

Acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2025, by \_\_\_\_\_

My commission expires: \_\_\_\_\_

Witness my hand and seal

\_\_\_\_\_  
 Notary Public

**NOTES:**

- Bearings are based on the consideration that the East line of Lot 2A, Hemphill Subdivision Rec No 9870764, County of Douglas, State of Colorado bears S00°09'10"W; Southeast corner is #5 Rebar with a 1-1/4" diameter red plastic cap stamped PLS 6935; Northeast corner is #5 Rebar as shown hereon between the identified monuments.
- The purpose of this replat is to create 2 Lots out of Lot 2A Hemphill Subdivision, 1st Amendment, and add additional an Access & Utility Easement.
- There will be a maintenance & ownership agreement for the 40'-foot wide private Access easement between the owners of Lot 2A-1 and Lot 2A-2.
- All Denver Basin Aquifer water beneath this property is dedicated through a Declaration of Restrictive Covenants recorded in the Douglas County Clerk and Recorders Office.
- The water supply for Lot 2A-2 shall be provided by an individual groundwater well completed in the nontributary Lower Dawson aquifer.

**BOARD OF COUNTY COMMISSIONERS:**

This plat was approved for filing by the Board of County Commissioners of Douglas County, CO, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, subject to any conditions specified hereon. The dedication of the utility easement are accepted by the board of County Commissioners.  
 Lot 2A, Hemphill Subdivision, 1st Amendment is amended by this plat subject to all covenants, conditions, and restrictions recorded against and appurtenant to the original plat recorded in the Office of the Douglas County Clerk and Recorder, Reception # 9870764.

All expenses incurred with respect to improvements for all utility services, paving, grading, landscaping, curbs, gutters, sidewalks, road lighting, road signs, flood protection devices, drainage structures, and all other improvements that may be required shall be the responsibility of the subdivider and not Douglas County.

This acceptance does not guarantee that the soil conditions, subsurface geology, groundwater conditions or flooding conditions of any lot shown hereon are such that a building permit, well permit, or sewage disposal permit will be issued.

Chair, Board of Douglas County Commissioners

**SURVEYOR:**

I, Darrell Eugene Roberts, a duly registered Professional Land Surveyor in the State of Colorado, do hereby certify that this plat truly and correctly represents the results of a survey made on January 2, 2025, by me or under my direct supervision and that all monuments exist as shown hereon; that mathematical closure errors are less than 1:50,000 (second order); and that said plat has been prepared in full compliance with all applicable laws of the State of Colorado dealing with monuments, subdivisions or surveying of land and all applicable provisions of the Douglas County Subdivision Resolution. This certification is based on my knowledge, information, and belief and is not a guaranty or warranty, either express or implied.

I attest the above on this \_\_\_\_\_ day of \_\_\_\_\_, 2026

Darrell Eugene Roberts for and on behalf of David E. Archer & Assoc. Inc.,  
 Colorado Registered Professional Land Surveyor # 36570

**DEDICATION STATEMENT:**

The undersigned, being all the owners, mortgagees, beneficiaries of deeds of trust and holders of other interests in the land described herein, have laid out, subdivided and platted said lands into two lots, and easements as shown hereon under the name and subdivision of HEMPHILL SUBDIVISION, 2ND AMENDMENT. The utility easements shown hereon are hereby dedicated for public utilities and cable communication systems and other purposes as shown hereon. The entities responsible for providing the services for which the easements are established are hereby granted the perpetual right of ingress and egress from and to adjacent properties for installation, maintenance and replacement of utility lines and related facilities. The utility easements shown hereon are dedicated and conveyed to Douglas County, CO, in fee simple absolute, with marketable title, for public uses and purposes.

Owner: Manatt Hier Revocable Trust

Robert L. Hier - Trustee

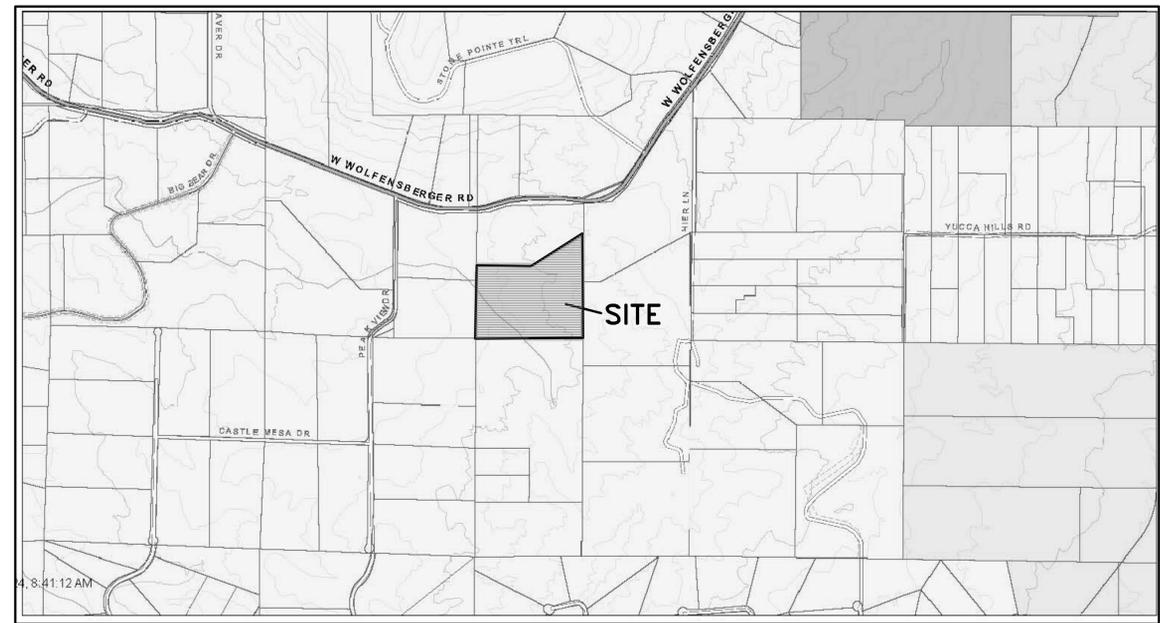
State of Colorado }  
 County of Douglas } SS.

Acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2026,  
 by Robert L. Hier as Trustee for the Manatt Hier Revocable Trust

My commission expires: \_\_\_\_\_

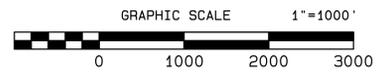
Witness my hand and seal

\_\_\_\_\_  
 Notary Public



**VICINITY MAP**

1"=1000'



G:\Drawings\2024\24-0820\Minor Plat\Minor Plat.plt  
 Tue Jan 20 04:26:32 2026

**APPLICANT INFORMATION:**

ROBERT L. HIER  
 920 W. WOLFENBERGER ROAD  
 CASTLE ROCK, CO 80109

\*NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

REVISIONS
01-03-24
06-02-25 Comments
01-14-26 Comments

**DAVID E. ARCHER & ASSOCIATES, INC.**  
 LAND DEVELOPMENT CONSULTING SURVEYING & ENGINEERING  
 PHONE (303) 688-4642  
 105 WILCOX ST. CASTLE ROCK, COLORADO 80104



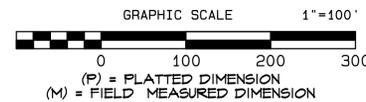
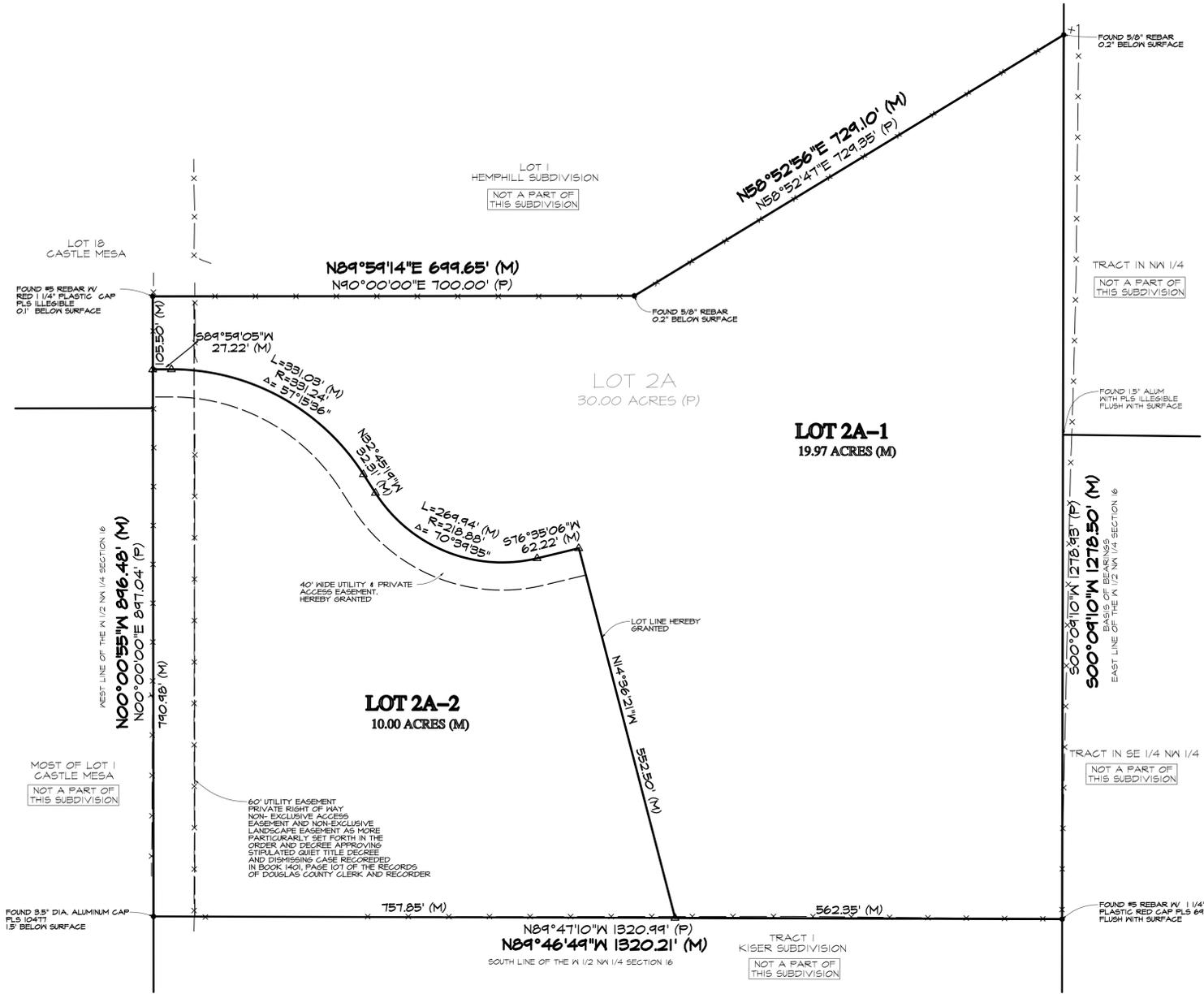
SCALE: 1"=100'	TITLE: <b>MINOR DEVELOPMENT PLAT</b>
DATE: 01-03-24	HEMPHILL SUBDIVISION, 2ND AMENDMENT
DRN: _____	Located in the Southeast 1/4 of Section 16,
CRK: _____	Township 8 South, Range 67 West of the
APPR: _____	6th P.M., Douglas County, Colorado.
CLIENT: HIER & COMPANY	
JOB NUMBER: 24-0820	
Sheet 1 of 2	

# HEMPHILL SUBDIVISION, 2ND AMENDMENT

## A Replat of Lot 2A, HEMPHILL SUBDIVISION, 1ST AMENDMENT

Located in the Northwest 1/4, Section 16, Township 8 South, Range 67 West of the 6th P.M.,  
County of Douglas, State of Colorado.

**29.973 Acres 2 Residential Lots SB2025-013**



**LEGEND:**

= SET 24" LONG #5 REBAR W/ 1 3/8" PINK PLASTIC CAP PLS 36057

G:\Drawings\2024\24-0820\Minor Plat\Minor Plat.dwg  
Tue Jan 20 04:36:27 2026

**\*NOTICE:** According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

<p><b>REVISIONS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">Tangent Cor. 02-08-25</td><td style="width: 50%;"></td></tr> <tr><td>06-02-25 Comments</td><td></td></tr> <tr><td>01-19-26 Comments</td><td></td></tr> </table>	Tangent Cor. 02-08-25		06-02-25 Comments		01-19-26 Comments		<p><b>DAVID E. ARCHER &amp; ASSOCIATES, INC.</b> LAND DEVELOPMENT CONSULTING SURVEYING &amp; ENGINEERING PHONE (303) 688-4642 105 WILCOX ST. CASTLE ROCK, COLORADO 80104</p>	<p><b>TITLE</b> MINOR DEVELOPMENT PLAT HEMPHILL SUBDIVISION, 2ND AMENDMENT Located in the Southeast 1/4 of Section 16, Township 8 South, Range 67 West of the 6th P.M., Douglas County, Colorado.</p> <p><b>CLIENT</b> HIER &amp; COMPANY</p> <p><b>JOB NUMBER</b> 24-0820</p>	<p><b>SCALE</b> 1"=100'</p> <p><b>DATE</b> 01-03-25</p> <p><b>DRN.</b> GMD</p> <p><b>APPR.</b></p>	<p><b>SHEET</b> 2 of 2</p>
Tangent Cor. 02-08-25										
06-02-25 Comments										
01-19-26 Comments										