



Planned Development Rezoning Staff Report

Date: August 13, 2025

To: Douglas County Board of County Commissioners

Through: Douglas J. DeBord, County Manager

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

CC: Trevor Bedford, AICP, Senior Planner
Curtis J. Weitkunat, AICP, Planning Manager
Steven E. Koster, AICP, Assistant Director of Planning Services

Subject: Ramblewood Planned Development - Rezoning

Project File: ZR2024-031

Planning Commission Hearing:	July 21, 2025 @ 6:00 p.m.
Planning Commission Hearing (Continued Hearing):	August 4, 2025 @ 6:00 p.m.
Board of County Commissioners Hearing:	August 26, 2025 @ 2:30 p.m.

I. EXECUTIVE SUMMARY

The applicants request a rezoning of approximately 176.79 acres from Agricultural One (A-1) and Rural Residential (RR) to Planned Development (PD). The site is located on the south side of Hilltop Road, across from its intersection with Merryvale Trail.

The PD establishes 13.9 acres of open space within two open space planning areas and a maximum of 68 residential lots within a 77-acre single-family residential planning area. Up to two agricultural lots within an 82.5-acre agricultural planning area. An additional 3.3-acre agricultural planning area is located south of Alpine Drive that allows agricultural uses with no dwellings.

The project is located within the Northeast Subarea as designated in the 2040 Douglas County Comprehensive Master Plan (CMP).

II. APPLICATION INFORMATION

A. Applicants

Hilltop Jam, LLC
2554 Aspen Drive
Park City, UT 84060

Bradley A Whittlesey & Joan V Whittlesey
4700 E Princeton Ave
Englewood, CO 80113

B. Applicants' Representative

Dan Sheldon
6900 E Bellview Avenue, Suite 300
Greenwood Village, CO 80111

C. Request

The applicants request approval of a rezoning of 176.79 acres of land from A-1 and RR to PD.

D. Process

A PD Rezoning application is processed pursuant to Section 15 of the Douglas County Zoning Resolution (DCZR). Per DCZR Section 1505.09 "The Board shall evaluate the rezoning request, staff report, referral agency comments, applicant responses, the Planning Commission recommendation, and public comment and testimony, and to approve, approve with conditions, continue, table for further study, remand to the Planning Commission, or deny the rezoning request. The Board's action shall be based on the evidence presented, compliance with the adopted County standards, regulations, policies, and other guidelines."

E. Location

The project is located on the south side of Hilltop Road, across from its intersection with Merryvale Trail.

F. Project Description

The proposed Ramblewood PD would establish a maximum of 68 residential lots within a 77-acre single-family residential planning area and 13.9 acres of open space within two open space planning areas. Up to two agricultural lots within an 82.5-acre agricultural planning area would also be allowed, along with a 3.3-acre agricultural planning area located south of Alpine Drive for agricultural uses but no dwellings. The proposed PD also includes the following commitments and development standards:

- Statement of Commitments:
 - Parks and Trails – The applicants plan to construct a 1.5-acre public park within the development. A network of trails will serve the development. Details of the trails will be determined during the subdivision process. Additional park and trail dedication requirements will be determined at final plat in accordance with Section 1003 of the Douglas County Subdivision Resolution.
 - Roads – The applicants are responsible for their fair share contribution towards the paving of Alpine Drive in the amount of \$27,554.32. This payment will be made prior to recordation of the final plat. The applicants will dedicate right-of-way for Hilltop Road as necessary and will dedicate 80 feet of right-of-way for Alpine Drive. The applicants will also be responsible for construction of access improvements into the subdivision from Hilltop Road.
 - Schools – No school land will be dedicated. Cash-in-lieu of land dedication will be determined at final plat and paid prior to recordation of the first final plat.

- Water and Sewer – Central water and sewer services are proposed for PA-A. Well and Septic are proposed for PA-B.
- Development Standards:
 - PA-A, Residential: Single-family detached dwellings on a minimum 10,000 square-foot lot with a maximum height of 35 feet.
 - PA-B, Agricultural: Single-family detached and agricultural properties with a minimum lot size of 20 acres with a maximum height of 35 feet.
 - PA-C, Agricultural: No dwelling units are permitted. Agricultural uses are allowed.
 - PA-D and PA-E, Open Space: Provides open space buffer to adjacent development. Only open space and trails are allowed.

III. CONTEXT

A. Background

The property has been historically zoned and used for agriculture. The surrounding properties to the west, south, and east are part of the Hidden Village subdivision, which was rezoned from agricultural to residential in 1970. These properties are now zoned RR to the south and west and Estate Residential (ER) to the east. The 3.3-acre portion of the project south of Alpine Drive is zoned RR and appears to have been rezoned with Hidden Village in the 1960s, although it is not a part of any Hidden Village plat.

B. Adjacent Land Uses and Zoning

The property is primarily surrounded by residential and agricultural properties.

Zoning and Land Use

	Zoning	Use
North	Rural Residential and Open Space	Single-Family Residential and Open Space Tracts
East	Estate Residential	Single-Family Residential
South	Estate Residential and Rural Residential	Single-Family Residential
West	Rural Residential and Agricultural One	Single-Family Residential and Agricultural

IV. PHYSICAL SITE CHARACTERISTICS

A. Site Characteristics and Constraints

The northern portion of the site generally slopes to the north towards Hilltop Road. The southern portion of the site has varying topography, generally sloping to the south towards Alpine Drive.

B. Transportation and Access

The subject property is located south of Hilltop Road. Primary access will be taken off of Hilltop Road with secondary access from Alpine Drive to the south. Hilltop Road is a major arterial roadway with plans to be widened in the future.

The applicants submitted a traffic impact analysis that was accepted by Douglas County. The applicants will be required to dedicate right-of-way for Alpine Drive and Hilltop Road. The applicants will additionally be required to construct access improvements from Hilltop Road and contribute towards the paving of Alpine Drive.

C. Soils and Geology

The CMP Class 3 Hazards and Environmental Constraints map indicated no constraints on the site. Future land use review will require a referral to Colorado Geological Survey and submittal of a preliminary geotechnical and sub-surface soil investigation.

D. Drainage and Erosion

The applicants submitted a Phase I drainage report which was accepted by Douglas County Public Works Engineering. Future subdivision plans will require Phase II and Phase III drainage reports.

E. Floodplain

A portion of the agricultural planning areas contains floodplain. The project does not intend to impact the floodplain and will be reviewed with future development plans.

F. Wildlife

The CMP Wildlife Resources map identifies the site as having low habitat value. The applicants provided an ecological resources survey of the site that concluded no threatened or endangered species, or their obvious habitat were seen on the property. The project includes open space buffers on the east and west sides of PA-A and wildlife friendly fencing adjacent to open space.

G. Historic Preservation

The applicants will complete a cultural resources survey at the time of preliminary plan. A referral will be made to the Douglas County Historic Preservation Board during the preliminary plan review process.

V. PROVISION OF SERVICES

A. Schools

The Douglas County School District (DCSD) indicated in its referral comments that the project generates a land dedication requirement of 1.646 acres. Since this is smaller than DCSD's minimum school site size, DCSD requests cash-in-lieu of land dedication. Cash-in-lieu of land dedication shall be determined at final plat, with payment due prior to recordation.

B. Fire Protection

Central water is proposed for PA-A, supporting fire protection services. South Metro Fire Rescue (SMFR) responded to the referral request with no objections to the proposal. SMFR will continue to review future subdivision applications.

C. Sheriff Services

The Douglas County Sheriff's Office (DCSO) provide emergency services to the site. The Office of Emergency Management responded to the referral request with no concerns. DCSO and DCSO E911 did not respond to the referral request.

D. Water and Sanitation

The applicants have proposed central water and sanitation services for 68 single-family residential lots in PA-A and individual well and septic systems for up to two agricultural lots in PA-B. The applicants have provided a will-serve letter from Parker Water and Sanitation District (PWSD) indicating sufficient capacity to serve the 68 lots. The applicants provided a letter from a qualified attorney demonstrating ownership of sufficient water rights to serve the two agricultural properties with individual wells.

For fulfillment of Section 18A, the applicants are required to submit a Declaration of Restrictive Covenants acceptable to Douglas County to reserve ground water in perpetuity for the benefit of future property owners within Ramblewood. An executed Declaration of Restrictive Covenants will be provided for the Board of County Commissioners' hearing as stated within staff report condition number one.

F. Utilities

Utility service is provided by CORE Electric and Xcel Energy. CORE and Xcel responded to the referral request with notes regarding easements to be added to future preliminary plan and final plat exhibits.

VI. AMENITIES

A. Parks, Trails, and Open Space

The applicants propose approximately 14 acres of open space that will provide trails for the development and buffers to adjacent properties. The applicants are also proposing a 1.5-acre public park to be owned and maintained by the future Ramblewood Metropolitan District. Additional contributions, including cash-in-lieu of land dedication will be determined at subdivision.

VII. PUBLIC NOTICE AND INPUT

Notifications of an application in process were mailed to the owners of all abutting properties. DCZR Section 1511 requires mailed, published, and posted notice of the public hearing. The applicants also held multiple outreach meetings with abutting residents and other property owners prior to and during the review process. Additionally, the applicants

chose to mail notices of public hearings to a larger area than required in the DCZR to include all residents of Hidden Valley.

Multiple emails regarding the application were received. Comments in favor of the application typically noted the public outreach by the applicants and the open space buffers provided. One abutting property owner noted concerns of future nuisance complaints as he has an operating farm abutting the northwestern portion of the project.

All public correspondence is included as an attachment to this staff report.

VIII. PLANNING COMMISSION HEARING

At a public hearing on August 4, 2025, the Planning Commission considered the applicants' request for approval of the rezoning. After presentations by staff and the applicants' representative, members of the public spoke in favor of the project, referencing their appreciation for public outreach and its compatibility with the area. Planning Commissioners asked clarifying questions of the applicants' representative regarding the clustering of lots and ensuring the agricultural lots were not developed in the future. The Planning Commission recommended approval of the application by a vote of 8 to 0.

IX. STAFF ANALYSIS

1503.01 Whether the application is in compliance with the requirements of this Resolution and the Douglas County Comprehensive Master Plan.

Staff Comment: The property is located within the Northeast Subarea as identified in Section 3 of the 2040 CMP. The CMP states that while approval criteria for land use applications require a finding of compliance with the CMP, "...the competing values of the plan must be balanced through the public review process to achieve the larger vision of the community." As such, the CMP acknowledges its own competing values and that implementation can only be achieved through the balancing of community values during the review process. The Ramblewood PD attempts to balance the competing values of the CMP.

Goals, objectives, and policies within Section 3 often discuss open space and wildlife (Policy 3-1E.1, Policy 3-2A.2, Policy 3-2D.1, Policy 3-3E.6), compatibility with the natural and rural characteristics of the area (Objective 3-2A, Objective 3-2B, Policy 3-2B.1, Policy 3-3E.1, Policy 3-3E.2, Policy 3-3E.3, Policy 3-3E.7) and availability of services including central water and sewer services (Policy 3-3E.2 and Policy 3-3E.3).

The applicants identified open space buffers and trails and will require wildlife fencing on properties adjacent to open space. The densest portions of the property will be clustered to preserve open space buffers and natural features to limit land disturbance while providing large enough lots to take existing vegetation into account when siting homes. To account for availability of services, the applicants provided will serve letters from the

Parker Water and Sanitation District, Douglas County School District, and South Metro Fire Rescue.

Policy 3-3E.1 states that “A maximum gross density of one dwelling unit per 2.5 acres is supported in the Northeast Subarea where it is logical infill, where approximately 50 percent of the property boundary is adjacent to zoned lands or parcel sizes consistent with the proposed development, and where site characteristics can generally support it.” The applicants provided a detailed response in its narrative.

In summary, the applicants explained that the Tallman Gulch development to the north was developed at approximately 2.1 dwelling units per acre. The Hidden Village subdivision was developed under a previous zoning resolution and generally consists of properties ranging from 3 to 4 acres in size and zoned RR to the west and south and ER to the north. The applicants have pointed out that the lot sizes of all of Hidden Village are most consistent with the current ER zoning. Finally, the applicants point out that the density requested for the Ramblewood PD is one unit per 2.5 acres, which is consistent with densities allowed in the ER zone district. The applicants provided an exhibit in the narrative that shows approximately 79 percent of the site is surrounded by either the Tallman Gulch or Hidden Village developments.

1503.02 Whether the application is in compliance with all applicable statutory provisions.

Staff Comment: The application complies with applicable provisions of the Colorado Revised Statutes.

1503.03 Whether there has been a substantial change in the character of the neighborhood, since the land was last zoned.

Staff Comment: Since the land was last zoned, the Hidden Village development surrounding the property to the west, south, and east has developed with RR and ER zoning and lots typically ranging from 3 to 4 acres in size. The Tallman Gulch property to the north across Hilltop Road was rezoned in for approximately one dwelling unit per 2.1 acres.

1503.04 Whether the application demonstrates public facilities and services necessary to accommodate the proposed development will be available concurrently with the impacts of such development.

Staff Comment: The rezoning was reviewed by South Metro Fire Rescue, which indicated no objection to the request. Xcel Energy and CORE Electric provided no objection to the development. The Douglas County Sheriff’s Office provided no response to the application.

Douglas County School District reviewed the application and requested cash-in-lieu of land dedication. The applicants have provided a commitment to pay cash-in-lieu for schools prior to recordation of the final plat.

1503.05 Whether the roadway capacity necessary to maintain the adopted level-of-services for the proposed development will be available concurrently with the impacts of such development.

Staff Comment: A Traffic Impact Study was submitted by the applicants and reviewed and accepted by Douglas County Public Works Engineering. The applicants will be required to dedicate right-of-way for Hilltop Road and Alpine Drive as well as make necessary access improvements off of Hilltop Road and contribute towards the paving of Alpine Drive to address impacts on roadway capacity.

1503.06 Whether the proposed zoning is compatible with surrounding land uses.

Staff Comment: The development has provided similar densities to nearby developments. The development will be single-family residential on the northern portion and agricultural on the southern portion. The single-family residential areas will be buffered from adjacent development to preserve the rural character of the area.

1503.07 Whether the subject land is suitable for the intended use and is compatible with the natural environment.

Staff Comment: The development is using open space buffers to cluster development, minimizing the impact on the natural environment. The development also allows for the preservation of approximately 85.8 acres of existing agricultural land on the southern portion of the property. The plan also avoids major impacts to the floodplain located in the southern, agricultural portion of the project.

1503.08 Whether the proposed development plan complies with the general requirements in 1502 herein.

Staff Comment: The general requirements in Section 1502 provide for the unified development of a PD and bind the owners of the property to the requirements of the PD. The proposed PD provides for unified development with a plan that is binding on the current and future owners.

1503.09 Whether the planned development provides for unified development control under a unified plan.

Staff Comment: The owners, successors, and assigns are bound by the terms of the development plan which will provide for unified control.

1503.10 Whether the application is in conformance with Section 18A, Water Supply Overlay District, herein.

Staff Comment: DCZR Section 1803A established approval standards to be used in the evaluation of land use applications reviewed under Section 18A.

1803A.01 The applicant has demonstrated that the water rights can be used for the proposed uses.

Staff Comment: The will-serve letter from PWSD demonstrates that the water rights owned by PWSD can be used for the proposed use since the Ramblewood PD is within the PWSD services area which already includes significant residential development.

The Water Supply Summary and Demand Analysis and the Supplemental Water Supply Summary demonstrate that the groundwater rights under the 160-acres are decreed for proposed uses.

1803A.02 The reliability of a renewable right has been analyzed and is deemed sufficient by the County based on its priority dates within the Colorado System of Water Rights Administration.

Staff Comment: PWSD has been determined to be an Established District pursuant to Section 1811A.10 and thus the water supply meets the requirements of this standard. The Water Supply Summary and Demand Analysis demonstrates the water supply is sufficient and thus meets the requirements of this standard.

1803A.03 The Water Plan is deemed adequate and feasible by the County to ensure that water supply shortage will not occur due to variations in the hydrologic cycle.

Staff Comment: PWSD has been determined to be an Established District pursuant to Section 1811A.10 and thus the water supply meets the requirements of this standard. The Water Supply Summary and Demand Analysis demonstrates the water supply is sufficient and thus meets the requirements of this standard.

1803A.04 The Water Plan is sufficient to meet the demand applicable to the project based on the minimum water demand standards in Section 1805A herein.

Staff Comment: The will-serve letter from PWSD provided sufficient information to conclude that PWSD can meet the demand for the 68 single-family residential lots in the Ramblewood Development. The application also provided a basis for the estimated water supply demand for the two agricultural lots that will be served by individual wells and a letter from a qualified attorney stating ownership of water rights.

X. STAFF ASSESSMENT

Staff has evaluated the planned development rezoning in accordance with Section 15 of the DCZR. The application proposes clustered single-family residential with open space buffers and agricultural development. Central water and sewer are proposed for the future residential lots. Should the Board find that the approval criteria for a Planned Development rezoning application are met, the following conditions may be considered for inclusion in the motion:

1. Prior to the Board of County Commissioners public hearing, the applicants shall submit a signed Declaration of Restrictive Covenants in a form acceptable to Douglas County.
2. Prior to recordation, all minor technical corrections will be made to the Planned Development document to the satisfaction of Douglas County.
3. All statements and commitments 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 by 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.

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LAND USE APPLICATION

Please fill in this application form completely. An incomplete application will not be processed.

Note: Neither the Planning Commission nor the Board of County Commissioners should be contacted regarding an open application.

OFFICE USE ONLY		PROJECT FILE #:								
PROJECT NAME: _____										
PROJECT TYPE: <u>Rezoning - Planned Development</u>										
MARKETING NAME: <u>Ramblewood</u>										
SITE ADDRESS: <u>Douglas County Parcel #s: 2347-061-00-001 & 2347-063-00-001</u>										
OWNER(S): <table border="1"><tr><td>Name(s): <u>Hilltop Jam, LLC</u></td><td>Bradley A Whittlesey & Joan V Whittlesey</td></tr><tr><td>Address: <u>2554 Aspen Drive, Park City, UT 84060</u></td><td><u>4700 E Princeton Ave, Englewood, CO 80113</u></td></tr><tr><td>Phone: <u>435-649-6686</u></td><td><u>720-205-6441</u></td></tr><tr><td>Email: <u>jahapc@yahoo.com</u></td><td><u>brad.whittlesey@gmail.com; whittlejv@gmail.com</u></td></tr></table>			Name(s): <u>Hilltop Jam, LLC</u>	Bradley A Whittlesey & Joan V Whittlesey	Address: <u>2554 Aspen Drive, Park City, UT 84060</u>	<u>4700 E Princeton Ave, Englewood, CO 80113</u>	Phone: <u>435-649-6686</u>	<u>720-205-6441</u>	Email: <u>jahapc@yahoo.com</u>	<u>brad.whittlesey@gmail.com; whittlejv@gmail.com</u>
Name(s): <u>Hilltop Jam, LLC</u>	Bradley A Whittlesey & Joan V Whittlesey									
Address: <u>2554 Aspen Drive, Park City, UT 84060</u>	<u>4700 E Princeton Ave, Englewood, CO 80113</u>									
Phone: <u>435-649-6686</u>	<u>720-205-6441</u>									
Email: <u>jahapc@yahoo.com</u>	<u>brad.whittlesey@gmail.com; whittlejv@gmail.com</u>									
AUTHORIZED REPRESENTATIVE (requires notarized letter of authorization if other than owner) <table border="1"><tr><td>Name: <u>Dan Sheldon</u></td></tr><tr><td>Address: <u>6900 E. Bellevue Avenue, Suite 300, Greenwood Village, CO 80111</u></td></tr><tr><td>Phone: <u>303-886-2838</u></td></tr><tr><td>Email: <u>dsheldon@miller-united.com</u></td></tr></table>			Name: <u>Dan Sheldon</u>	Address: <u>6900 E. Bellevue Avenue, Suite 300, Greenwood Village, CO 80111</u>	Phone: <u>303-886-2838</u>	Email: <u>dsheldon@miller-united.com</u>				
Name: <u>Dan Sheldon</u>										
Address: <u>6900 E. Bellevue Avenue, Suite 300, Greenwood Village, CO 80111</u>										
Phone: <u>303-886-2838</u>										
Email: <u>dsheldon@miller-united.com</u>										
PLANNING FEES: _____										
ENGINEERING FEES: _____										
TOTAL FEES: _____										
RELATED PROJECTS: _____										

LEGAL DESCRIPTION:

Subdivision Name: N/A

Filing #: N/A Lot #: N/A Block #: N/A Section #: 6 Township: 7 S Range: 65 W

STATE PARCEL NUMBER(S): Parcel #s: 2347-061-00-001 & 2347-063-00-001

ZONING:

Present Zoning: Agricultural One Proposed Zoning: Planned Development Gross Acreage: 176.794

Gross Site Density (DU per AC): 0.39 DU/AC # of Lots or Units Proposed: 70

SERVICE PROVIDERS:

Fire District: South Metro Fire Rescue Metro District: To be formed Gas: Black Hills Energy

Water: Parker Water & Sanitation (to be included) Sewer: Parker Water & Sanitation (to be included) Electric: CORE

Roads: Public Private (please explain): _____

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.**

Daniel R. Sheldon

Applicant Signature

11/5/24

Date

100 Third Street, Castle Rock, Colorado 80104 • 303.660.7460

Revised 03.04.2021

PREBLE'S MEADOW JUMPING MOUSE

What is the Prebles' meadow jumping mouse?

The Preble's meadow jumping mouse is a rare mouse designated by the United States Fish and Wildlife Service as a "threatened species" under the Endangered Species Act. The federal threatened species designation prohibits the unlawful "take" of the Preble's meadow jumping mouse or its habitat.

Where does the mouse live?

The Preble's meadow jumping mouse lives primarily in heavily vegetated riparian habitats. In Douglas County, the mouse has been located in or near many drainages, including tributaries and the main stream reaches, of East and West Plum Creek. However, **any** stream reach or potential habitat within Douglas County may be subject to the requirements of the Endangered Species Act.

The mouse has also been found in Boulder, Elbert, El Paso, Jefferson and Larimer counties and in parts of Wyoming.

What activities may be considered a violation of the Endangered Species Act?

In its listing decision, the United States Fish and Wildlife Service identified activities that may result in violation of the Endangered Species Act to include:

1. Unauthorized or unpermitted collection, handling, harassing, or taking of the species;

ANY APPROVAL GIVEN BY DOUGLAS COUNTY DOES NOT OBVIATE THE NEED TO COMPLY WITH APPLICABLE FEDERAL, STATE, OR LOCAL LAWS AND/OR REGULATIONS.

2. Activities that directly or indirectly result in the actual death or injury death of the mouse, or that modify the known habitat of the species, thereby significantly modifying essential behavioral patterns (e.g., plowing, mowing, or cutting; conversion of wet meadow or riparian habitats to residential, commercial, industrial, recreational areas, or cropland; overgrazing; road and trail construction; water development or impoundment; mineral extraction or processing; off-highway vehicle use; and, hazardous material cleanup or bioremediation); and;
3. The application or discharge of agrichemicals, or other pollutants, and pesticides, onto plants, soil, ground water, or other surfaces in violation of label directions or any use following Service notification that such use, application or discharge is likely to harm the species; would be evidence of unauthorized use, application or discharge.

How to determine if a proposed activity would violate the Endangered Species Act.

Any questions regarding whether an activity will impact the Preble's meadow jumping mouse or its habitat should be directed to:

Liisa Niva
Fish and Wildlife Biologist
Ecological Services
Colorado Field Office
P.O.Box 25486, DFC (MS 65412)
Denver, CO 80225-0486
303-236-4773

Where to find more information on the Preble's meadow jumping mouse.

More information can be found at the US Fish and Wildlife Service website at:
<https://ecos.fws.gov/ecp/species/4090>



July 2, 2025

Douglas County, Department of Community Development
100 Third Street, #220
Castle Rock, CO 80104

RE: APPLICATION FOR THE REZONING OF THE HILLTOP JAM AND WHITTLESEY PARCELS

Dear Douglas County Department of Community Development,

On behalf of Miller United Real Estate, Norris Design is pleased to submit an application for the Rezoning of the Hilltop JAM LLC and Whittlesey properties, also known as Ramblewood. The subject site is composed of two separate parcels of land: the 16.9-acre Hilltop JAM LLC Parcel (County Parcel: 2347-061-00-001), the 159.2-acre Whittlesey Parcel (County Parcel: 2347-063-00-001) (the “Site”). The Site is bordered by Hilltop Road to the north, Alpine Drive to the southwest, and residential homes to the west, east, and southeast.

This application proposes rezoning these properties to Planned Development (PD) from the current zoning classification of Agricultural One, (A-1) and Rural Residential (RR). The intent of this Rezoning is to allow a portion of the Site to be developed with single-family residential lots through future development processes. The applicant envisions a future subdivision layout, with homes clustered in small residential lots, located towards the center of the Site and two large lots allowing agricultural uses located along the southern half of the Site.

PROJECT TEAM

Owner:

Hilltop JAM LLC
2554 Aspen Springs Drive
Park City, UT 84060
435.649.6686
Contact: James Helfand
jahapc@yahoo.com

Applicant:

Miller United Real Estate, LLC
6900 E. Belleview Avenue, Suite
300
Greenwood Village, CO 80111
303.886.2838
Contact: Dan Sheldon
dsheldon@miller-united.com

Civil Engineer/Surveyor:

LJA Engineering
1765 West 121st Avenue, Suite 300
Westminster, CO 80234
303.421.4224
Contact: Kevin Lovelace, PE
klovelace@lja.com

Owner:

Bradley A. Whittlesey & Joan V.
Whittlesey
4700 E Princeton Ave
Englewood, CO 80113
720.205.6441
Contact: Brad Whittlesey
Brad.whittlesey@gmail.com

Planner and Landscape Architect:

Norris Design
1101 Bannock Street
Denver, Colorado 80204
303.892.1166
Contact: Daniel Jennings
djennings@norris-design.com

Traffic Engineer:

SM Rocha, LLC
8700 Turnpike Drive, Suite 240
Westminster, Colorado 80031
303.458.9798 Ext. 106
Contact: Stephen Simon
stephen@smrocha.com



Parcel # 2347-061-00-001 has water rights which belong to the property owner, Hilltop JAM LLC. Parcel # 2347-063-00-001 has water rights which belong to the property owner, Bradley A. Whittlesey & Joan V. Whittlesey. As for mineral rights interests, a review of the title commitment for both properties and a severed interest search on the Douglas County's Assessor's records reveals no severed mineral interests for either property. Also, no one has filed a request for notification.

REQUEST

Proposed rezoning of roughly 176 acres of land from A-1 and RR to PD.

The following commitments are made with the proposed Ramblewood PD:

- On and Off-Site Improvements
 - The owners and their assigns are responsible for their fair share contribution towards the paving of Alpine Drive in the amount of \$27,554.32 (the "Alpine Drive Contribution") Said payment shall be made prior to the recordation of the final plat for the Ramblewood development. In the event that the County has not completed the paving of Alpine Drive by December 31, 2027, the Owner and/or Assigns may request a refund of the Alpine Drive Contribution and the County agrees to reimburse Owner and/or Assigns within 30 days after such a request is made.
 - The owners and their assigns shall be responsible for the construction of the improvements at the intersection of Hilltop Road and the access into the Ramblewood development.
 - The owners and their assigns shall dedicate public right-of-way for Hilltop Road as determined by the County.
 - The owners and their assigns shall dedicate 80-ft public right-of-way for Alpine Drive.
- Parks and Trails – Local Park and Trail dedication requirements shall meet the criteria provided in Article 10, Section 1003.11.1 and 1003.11.3 of the Douglas County Subdivision Resolution, as amended. Regional Park and Trail dedication requirements shall meet the criteria provided in Article 10, Section 1003.11.2 and 1003.11.4 of the Douglas County Subdivision Resolution.
 - An approximately 1.5-acre public park (to be owned and maintained by the to-be-formed Ramblewood Metropolitan District) will serve the development. The details of this park will be determined at the time of the Subdivision Final Plat process.
 - A network of trails will serve the development. The details of the proposed trails will be determined at the time of the Subdivision Final Plat process.
- Schools – No school land is proposed to be dedicated. Cash-in-lieu of dedication shall be determined with the Subdivision Final Plat process and be paid pursuant to an agreement with the Douglas County School District.
- Water and Sewer – Central Water and Sewer will be provided to all future lots within PA-A through an inclusion agreement with Parker Water and Sanitation District. The applicant will evaluate the option for Pinery Water and Wastewater District to provide sewer service through an Intergovernmental Agreement between Pinery Water and Wastewater District and Parker Water and Sanitation District. Water and sewer will be provided to PA-B through domestic well and septic. While the inclusion will begin processing concurrently with the Rezoning application, it is not expected that the inclusion will be finalized until the Preliminary Plan process and recorded concurrently with the recordation of the Final Plat.



DCZR 1505.09

A PD Rezoning application is processed pursuant to Section 15 of the Douglas County Zoning Resolution (DCZR). Per DCZR Section 1505.09, “The Board shall evaluate the rezoning request, staff report, referral agency comments, applicant responses, the Planning Commission recommendation, and public comment and testimony, and shall approve, approve with conditions, continue, table for further study, remand to the Planning Commission, or deny the rezoning request. The Board’s action shall be based on the evidence presented, compliance with the adopted County standards, regulations, policies, and other guidelines.”

PROJECT DESCRIPTION

The applicant, Miller United Real Estate LLC, requests a rezone for the two Site parcels from Agricultural One and Rural Residential to Planned Development. If approved, the PD will allow up to 70 single family units to infill the site with a use complementary to surrounding neighborhoods.

This Rezoning application involves the creation of the Ramblewood PD which outlines the location and development standards of future land uses allowed on the Site. Keeping in mind the character of the surrounding area, the Site is envisioned as featuring a mix of single-family residential, parks, open space, and agricultural uses. Single-family residential is envisioned for the northern portion of the Site, transitioning to agricultural uses in the southern portion of the Site.

To allow for the Site to develop as envisioned, the Ramblewood PD proposes five Planning Areas: Planning Area A (PA-A), Planning Area B (PA-B), Planning Area C (PA-C), Planning Area D (PA-D), and Planning Area E (PA-E). The primary use for Planning Area A is single-family residential, the primary use for Planning Area B is agricultural uses, the primary use for Planning Area C is agricultural uses, and the primary use for Planning Area D and Planning Area E is open space and trails. The PD does not allow dwelling units to be developed within Planning Areas C, D, or E.

Planning Area A encompasses the northern 93-acres of the Site. Through development standards such as a minimum lot size of 10,000 square feet and by establishing open space buffers along the edges of the Site (Planning Area D and Planning Area E), and pursuant to the Nonurban Land Use Comprehensive Plan Policy 3-2B.1, Planning Area A allows for a smaller lot, clustered residential development. While Planning Area A allows for a smaller lot, clustered residential development, the overall character of the area is not disturbed as all adjacent lots will be adjacent to open space or large ranch lots in the case of lots adjacent to Planning Area B.

As a portion of the Site is adjacent to several neighboring properties and has significant topography, the applicant has committed to restricting development to be internal to the Site. Planning Area D provides a buffer of 300 ft from the western property boundary to the edge of Planning Area A. On the opposite side of Planning Area A is Planning Area E which provides a buffer of 200 ft from the eastern property boundary. Open Space and Trails are the only allowed use within Planning Area D and Planning Area E. These two Planning Areas ensure the preservation of open space and natural topography along the Site’s edges.



The southern portion of the Site is comprised of Planning Area B. This portion of the Site is allowed to retain its agricultural land uses but is subject to additional development standards which restrict buildings from being built within 50 feet of Planning Area A to the north and within 100 feet of external property lines to the west, east, and south. Similar to the buffers in Planning Area A, these setbacks ensure that existing open space is maintained along the edges of the Site. Planning Area B is envisioned as primarily agricultural in terms of use and as such the PD establishes a minimum lot size of 20 acres and allows for the development of only 2 residential dwelling units across the 82.5 acres of the Planning Area.

At the southern end of Planning Area B is Alpine Drive, an unplatted dirt road. The roughly 2.5 acres of the Site located south of Alpine Drive are proposed as Planning Area C. This small parcel is allowed to retain its agricultural land uses. The PD does not allow dwelling units to be developed within this Planning Area.

A maximum of 70 single-family dwelling units are allowed across the entire 176-acre Site, resulting in a density of one dwelling unit per 2.5 acres. This density is consistent with the maximum allowable density of the Northeast Subarea as outlined in the Douglas County 2040 Comprehensive Master Plan (CMP) (Policy 3-3E.1). This density is also aligned with the allowed density of the Estate Residential (ER) Zoning District, of which adjacent properties to the south and east of the Site are zoned.

Attached to this Project Summary are tables (**Exhibit 1**) which compare the proposed development standards of the PD to the zone district requirements of the Zoning Resolution.

The Applicant intends on forming a new Title 32 Special District to be called the Ramblewood Metropolitan District. While the application, service plan and any other supporting documents for the district are not included with this PD application, the Applicant does intend on processing the review and approval of the District, concurrent with the PD Zoning application.

Following approval of this Rezoning-Planned Development application, the development team intends on processing a Preliminary Plan and Final Plat application to develop the Site consistent with the Ramblewood PD. The focus of those applications will be residential development of Planning Area A and the related infrastructure in one phase. The timing of the development of Planning Areas B & C is unknown at this time.

CONTEXT

Background

The Hilltop JAM LLC Parcel, located in the east half of Section 6, Township 7 South, Range 65 West of the 6th principal meridian, County of Douglas, State of Colorado, lies vacant of structures and paved roads. Directly adjacent to the south lies the Whittlesey Parcel, located in the southwest quarter and the southeast quarter of Section 6, Township 7 South, Range 65 West of the 6th principal meridian, County of Douglas, State of Colorado, and is additionally vacant of any structures and paved roads. Both parcels are currently zoned Agricultural One (A-1) and a small portion of the Whittlesey Parcel, roughly 2 acres south of Alpine Drive, is zoned Rural Residential.



DCZR 1507.04 Existing and Adjacent Land Uses

The Ramblewood property is bound by an eclectic mix of residential zoning, densities, and lot sizes dating back to the 1970's when the County Regulations were quite different than today, and there was no Comprehensive Master Plan in existence. At the time of development, adjacent neighborhoods were not required to develop Open Space which resulted in lower densities.

The Ramblewood Planned Development proposes a logical infill development of the site and is consistent with Policy 3-3E.1 of the 2040 CMP, as stated below and depicted on the "Adjacent Property Gross Density Comparison" (**Exhibit 2**), attached to this Project Summary.

79% of the overall Ramblewood Planned Development property boundary is adjacent to lands with approved gross densities consistent with the proposed development. The Ramblewood PD proposes a gross density of one dwelling unit per 2.5 acres, consistent with approved adjacent property densities and as allowed in the Northeast Subarea of the 2040 Comprehensive Master Plan.

- **NORTHEAST:** Adjacent to the northeast of Ramblewood is the Tallman Gulch development, located across Hilltop Road. Tallman Gulch was rezoned in the early 2000's with an approved gross density of one dwelling unit per 2.1 acres, which is a higher density than currently allowed in the 2040 CMP.
- **SOUTH, EAST, and WEST:** Hidden Village was rezoned in the 1970's as "Residential", prior to the current Douglas County Zone Districts classifications. The Hidden Village approved gross density allows for "one dwelling per 3 to 4 acres", densities which are consistent with today's "Estate Residential Zone District" which allows for one dwelling unit per 2.5-4.9 acres. Of note: Douglas County did not have "Zone Districts" or a Comprehensive Master Plan back in the 1970's. Ramblewood's proposed density of one dwelling unit per 2.5 acres is comparable to Hidden Village's approved density. The 1970 Zoning documents for Hidden Village (**Exhibit 3**) are included as an attachment.
- **NORTHWEST CORNER:** To the northwest of Ramblewood's project boundary is an unplattd parcel with A-1 Zoning. This parcel currently has one dwelling unit, giving it a density of one dwelling unit per 53.2 acres which is not consistent with Ramblewood.

Though not adjacent to any existing Planned Developments, the proposed Ramblewood PD allows for single-family residential and agricultural uses which is consistent with the allowed uses of all zoned properties adjacent to the site. The Ramblewood PD is consistent with the current Zoning Resolution and the current 2040 Comprehensive Master Plan and proposes to cluster the residential lots within the center of the property consistent with the 2024 CMP policies. The PD commits to approximately 14 acres of open space (Planning Area D and E) to provide adjacent properties with significant buffer to future development on the Site. Although the PD commits to 14 acres of open space, there will likely be considerably more open space proposed for the Site at the time of Preliminary Plan application. The Ramblewood PD offers public benefits (central services, open space and trails) that many of the adjacent properties do not provide.

DCZR 1507.06 Changes in Character of Neighborhood

The Northeast Subarea of the 2040 CMP supports infill and semi-rural development where there is adequate public infrastructure. Changes in the surrounding neighborhoods since this property was last zoned have taken place as early as 1970 through 2024. The Hidden Village rezone was



approved in 1970. The most recent developments in the area, Vivant (a.k.a. Tallman Gulch) and The Fields were both rezoned from A-1 to allow for residential development. Vivant was built as a cluster residential development with open space buffers located along the Site's edges, similar to the layout of residential development that would be allowed with the proposed Ramblewood PD. The Fields development, located a quarter mile from the Site along Hilltop Road, was rezoned in 2022 to allow for similar cluster residential development at the same density of one dwelling unit per 2.5 acres, that is proposed with the Ramblewood Planned Development.

PHYSICAL SITE CHARACTERISTICS

Site Characteristics and Constraints

The northernmost portion of the Site, (the Hilltop JAM or Helfand Parcel) is generally sloped to the north, towards Hilltop Road. The rest of the Site (the Whittlesey Parcel) has varying topography, but it is generally sloped to the south, towards Alpine Drive.

Access

Access to the Site will be provided through a primary connection from Hilltop Road, at the northern end of the Site lining up with Merryvale Trail (the access into Tallman Gulch/Vivant) and a secondary connection from Alpine Drive at the southern end of the Site. These access points will feed a network of local streets which will provide internal organization and circulation through the Site. The location and alignment of these streets shall be determined at the time of the subdivision Preliminary Plan and Final Plat process.

Soils and Geology

The Site does not include area of known geologic hazard. A Geotech Report for the Site is included with the PD application.

Floodplain and Drainage

A small portion of the southern half of the Site is located within a floodplain. A Phase 1 Drainage Report is included with the PD application. It is the intent of the Ramblewood project not to impact the floodplain.

Wildlife

The CMP Wildlife Resources Map identifies the Site as having a low habitat value. No environmentally hazardous, sensitive, or natural resource areas are found on the Site. An Ecological Resources Survey of the Site was performed and concluded that no threatened or endangered species or their obvious habitat were seen on the property. A report documenting the findings of the Survey is included with this application. It is worth reiterating that the PD proposes standards and buffers to limit the impact of development on the Site so that future development retains significant open space and much of the natural environment remains undisturbed.

The PD makes a commitment to provide Wildlife Friendly Fencing adjacent to open spaces in Planning Area A.

PROVISION OF SERVICES

Schools



The Douglas County School District has provided a Will Serve Letter for the Site. As the land dedication requirement anticipated from the Student Generation is smaller than the District's minimum school site requirement, the District has requested cash-in-lieu of land dedication to be paid pursuant to an agreement with the Douglas County School District.

Fire Protection Service

As the Site is located within the jurisdictional boundaries of South Metro Fire Rescue, the Fire District will provide fire prevention, fire suppression, emergency medical, and special team response services to the property. A Will Serve Letter stating South Metro's commitment is included with the PD application. The Applicant will provide a Wildfire Mitigation Plan with the submittal of the Preliminary Plan.

Water and Sanitation

Parker Water and Sanitation District has provided a Will Serve Letter describing its willingness and ability to serve the development. Central Water and Sewer will be provided to all future lots within PA-A through an inclusion agreement with Parker Water and Sanitation District. The applicant will evaluate the option for Pinery Water and Wastewater District to provide sewer service through an Intergovernmental Agreement between Pinery Water and Wastewater District and Parker Water and Sanitation District. Water and sewer will be provided to PA-B through domestic well and septic. While the inclusion will begin processing concurrently with the Rezoning application, it is not expected that the inclusion will be finalized until the Preliminary Plan process and recorded concurrently with the recordation of the Final Plat.

Utilities

Utility improvements will be provided as the project proceeds through the County's development process. Both on-site and off-site water and sanitary sewer improvements, as well as associated stormwater improvements adjacent to Hilltop Road, if required, will be provided to serve the Site.

AMENITIES

Parks, Trails, and Open Space

An approximately 1.5-acre public park (to be owned and maintained by the to-be-formed Ramblewood Metropolitan District) will be located central to Planning Area A. A network of trails throughout Planning Areas A, D, and E will offer future residents and existing surrounding residents recreation opportunities and provide walkable connections to the public park. The park and trails will be open to the public.

PUBLIC NOTICE AND INPUT

Community engagement is an important part of the development process. Ahead of submitting this application, the project team held a virtual neighborhood meeting via Zoom on Wednesday, October 9, 2024, at 6:00 pm to present and discuss the potential rezoning of the Ramblewood site. Notification of the Neighborhood Meeting (including links to the Zoom Webinar and the project website: www.LiveRamblewood.com) were sent to adjacent property owners two weeks prior to the event.



The meeting was attended by approximately 40 neighbors and 5 members of the project team, including Dan Sheldon with Miller United Real Estate, LLC, the developer of the site. Members of the project team gave an overview of the proposed development application, shared several conceptual plans for how the site might develop, and provided an outline of the development process and timeline. At the conclusion of the presentation, members of the project team spent time answering questions asked by the neighbors in attendance.

Following the meeting, a video recording of the meeting, a copy of the presentation, a summary of the Questions & Answers, a letter from the landowner, and a message from the developer, Dan Sheldon, were posted on the project website. Neighbors who provided their contact information for future correspondence were sent a link to these materials.

Continuing community engagement, the project team held an in-person meeting with the Hidden Village HOA Board on Wednesday, March 12, 2025 at 6:00 pm to present and discuss the potential rezoning of the Ramblewood site. While this meeting was not a requirement, it was organized to continue the mutual relationship between Ramblewood and Hidden Village.

The meeting was attended by approximately 8 neighbors and 2 members of the project team, including Dan Sheldon with Miller United Real Estate, LLC. Members of the project team gave an overview of the proposed development application with attention to concerns previously raised at the first neighborhood meeting, including but not limited to access, trail preservation, water supply, and tree preservation. At the conclusion of the presentation, members of the project team continued dialogue to ensure all concerns were appropriately addressed.

Following the meeting, an email was sent to attendees summarizing takeaways and action items. Neighbors were also provided with the Water Supply Report as included in the application. As a follow-up to the March meeting, members of the project team attended another Hidden Village HOA meeting on Sunday, May 4th to provide project updates and answer questions. This meeting was attended by 3 board members and 27 neighborhood residents.

The project team intends to continue hosting future neighborhood meetings and keeping the community up to date on the project through correspondence and updates posted on the project website: www.LiveRamblewood.com.

COMPLIANCE WITH THE DOUGLAS COUNTY COMPREHENSIVE MASTER PLAN (CMP) AND ZONING RESOLUTION

Douglas County Zoning Resolution Section 124: Interpretation

DCZR states: *“While the approval criteria for many land use applications defined herein require “compliance with”, consistency with”, or “general conformance with” the Comprehensive Master Plan (CMP) or the goals, objectives and policies of the CMP, the individual goals, objectives, and policies are not, themselves, approval criteria. The Board will consider the diversity of community values, application of laws and regulations, private property rights, and unique characteristics of each application when balancing the goals, objectives, and policies set forth in the CMP. A property’s designation on the CMP Land Use Map is the primary basis for establishing future use and density.”*



2040 CMP Section 1: Interpretation: How the Sections Relate To Each Other

2040 CMP states: *“As a guiding document, the CMP uses language different than found in the regulatory and the subdivision resolution. Words like “encourage”, “support”, “promote”, and “ensure” provide flexibility in prioritizing the competing values in the CMP and remind us that the document is not a checklist.”*

Douglas County Comprehensive Master Plan Compliance

Under the Douglas County Comprehensive Master Plan, the Site is identified within the Northeast Subarea and classified under Section 3 – Nonurban Land Use. The proposed development complies with several objectives and policies of the Comprehensive Master Plan, notably:

- Policy 3-1E.1: *Identify and set aside, through the land use and development review processes, important open spaces in tracts or easements, where appropriate.*
 - The Ramblewood PD makes commitments to set aside specific open space areas and proposes significant building setbacks to ensure that ample open space is provided for once the site is developed.
- Objective 3-2A: *Ensure the character and intensity of development is appropriate for the Nonurban Area.*
 - The Ramblewood PD proposes a density of one dwelling unit per 2.5 acres which is consistent with the maximum allowable density of the Northeast Subarea. The proposed density is also consistent with adjacent parcels zoned Estate Residential directly to the east and south of the property. Setbacks and buffers proposed with the PD allow for clustering of residential lots similar to the recent adjacent developments of Vivant and The Fields.
- Policy 3-2A.2: *Where possible, fencing should be wildlife friendly, in accordance with standards recommended by the Colorado Division of Wildlife.*
 - The PD makes a commitment to provide wildlife friendly fencing adjacent to open spaces within Planning Area A will continue to have agricultural uses and therefore shall require wildlife friendly fencing.
- Objective 3-2B: *Design development to conserve and showcase important natural and rural features.*
 - Through commitments to open space buffers and building setbacks, the Ramblewood PD restricts future development design to clustering, which will preserve important natural features along the Site’s edge and reinforce the area’s rural character. Clustering lots ensures minimal natural land is disturbed. While the allowed lot sizes of the PD are smaller than those immediately surrounding the Site, future lots will still be large enough for the homebuilder to site the homes in a manner that will be conscientious to the existing trees and vegetation on the homebuilding sites.
- Policy 3-2B.1: *Use building envelopes, clustering and other site design techniques, where appropriate, to direct building away from environmentally and visually-sensitive lands.*



- The Ramblewood PD encourages clustering through specific open space buffers along the Site's edges and restrictive building setbacks in Planning Area B to direct building away from visually-sensitive lands.
- Policy 3-2D.1: *Require the provision of open space and trail corridors within residential development to promote recreation and exercise opportunities.*
 - Through commitments to open space and trails, the Ramblewood PD ensures that future residential development promotes recreation and exercise opportunities not only for the residents, but for the general public as well.
- Policy 3-3E.1: *A maximum gross density of one dwelling unit per 2.5 acres is supported in the Northeast Subarea where it is logical infill, where approximately 50 percent of the property boundary is adjacent to zoned lands or parcel sizes consistent with the proposed development, and where site characteristics can generally support it.*
 - The Ramblewood PD allows for logical infill development of the Site at a maximum gross density of one dwelling unit per 2.5 acres. The proposed PD allows for single family residential and agricultural uses which is consistent with the allowed uses of all zoned properties adjacent to the Site (Rural Residential, Estate Residential, and Agricultural-One).
 - The Ramblewood property is bound by an eclectic mix of residential zoning, densities, and lot sizes dating back to the 1970's when the County Regulations were quite different than today, and there was no Comprehensive Master Plan in existence. At the time of development, adjacent neighborhoods were not required to develop Open Space which resulted in lower densities.
 - The Ramblewood Planned Development proposes a logical infill development of the site and is consistent with Policy 3-3E.1 of the 2040 CMP, as stated below and depicted on the "Adjacent Property Gross Density Comparison" (**Exhibit 2**), attached to this Project Summary.
 - **79% of the overall Ramblewood Planned Development property boundary is adjacent to lands with approved gross densities consistent with the proposed development.** The Ramblewood PD proposes a gross density of one dwelling unit per 2.5 acres, consistent with approved adjacent property densities and as allowed in the Northeast Subarea of the 2040 Comprehensive Master Plan.
 - NORTHEAST: Adjacent to the northeast of Ramblewood is the Tallman Gulch development, located across Hilltop Road. Tallman Gulch was rezoned in the early 2000's with an approved gross density of one dwelling unit per 2.1 acres, which is a higher density than currently allowed in the 2040 CMP.
 - SOUTH, EAST, and WEST: Hidden Village was rezoned in the 1970's as "Residential", prior to the current Douglas County Zone Districts classifications. The Hidden Village approved gross density allows for "one dwelling per 3 to 4 acres", densities which are consistent with today's "Estate Residential Zone District" which allows for one dwelling unit per 2.5-4.9 acres. Of note: Douglas County did not have "Zone Districts" or a Comprehensive Master Plan back in the 1970's. Ramblewood's proposed density of one dwelling unit per 2.5 acres is comparable to Hidden Village's



approved density. The 1970 Zoning documents for Hidden Village (**Exhibit 3**) are included as an attachment.

- NORTHWEST CORNER: To the northwest of Ramblewood's project boundary is an unplatted parcel with A-1 Zoning. This parcel currently has one dwelling unit, giving it a density of one dwelling unit per 53.2 acres which is not consistent with Ramblewood.
- Policy 3-3E.2: *A maximum gross density of one dwelling unit per 2.5 acres is supported in the Northeast Subarea where there is adequate public infrastructure to support the proposed development and where the other goals, objectives, and policies of the Plan have been met.*
 - Adequate public infrastructure is available to support the Ramblewood PD. A Traffic Impact Study, as well as will serve letters from the Douglas County School District, South Metro Fire and Rescue, and Parker Water and Sanitation are included with this application. The PD outlines the commitment to Public Land Dedication that will be assessed pursuant to agreements with the providers.
- Policy 3-3E.3: *Encourage connections to central water and sewer district systems, when possible.*
 - Central water and sewer will be provided to all future lots within PA-A through an Inclusion to Parker Water and Sanitation District or other central services provider. Water and wastewater will be provided to PA-B through domestic well and septic.
- Policy 3-3E.5: *New development within the Northeast Subarea should be designed to minimize the removal of vegetation and to use trees and landforms to screen development, where possible. Additional trees and vegetation should be planted, where necessary and appropriate, to screen development.*
 - In determining the location of allowable land uses, the project team has considered the view planes of the surrounding properties and the natural topography of the Site. The buffers of the proposed PD (Planning Area D & E) are designed to preserve large swaths of existing trees along the Site's edge to minimize the removal of vegetation and allow the natural landscape to screen future development of the Site.
- Policy 3-3E.6: *Maintain natural drainages for wildlife movement, where possible, and provide open space linkages within and between large-lot developments.*
 - Recognizing the sensitivity of adjacent properties, the Ramblewood PD makes commitments to open space buffers along the Site's edges adjacent to large-lot developments and will provide wildlife friendly fencing where needed.
- Policy 3-3E.7: *Development along existing roads in the Northeast Subarea should be carefully sited and designed to minimize visual impacts, particularly of distant Front Range Mountain views and open meadows.*
 - Primary access to the Site is envisioned from Hilltop Road. The PD restricts development within 100' of Hilltop Road to ensure a visually appealing front door to future development, respecting the views of homes located across Hilltop Road to the north. It should also be noted that the homes along Hilltop Road shall be



designed to front Hilltop Road providing a more visually pleasing view from the north. Secondary access to the Site is envisioned from Alpine Drive to the south.

Douglas County Zoning Resolution Compliance

Per the Douglas County Zoning Resolution (DCZR) Section 15, a Planned Development is intended *“to encourage innovative and creative design and to facilitate a mix of use in the development of a balanced community including residential, business, commercial, recreational, open space, and other selected secondary uses, in accordance with Section 24-67-101, et. seq., C.R.S. Growth should occur in a phased and contiguous manner to save on the costly, premature extension of basic infrastructure.”*

The DCZR outlines the following points, under which the proposed Planned Development's intent is explained.

- *Ensure that provision is made for ample open space;*
 - The PD allows for ample open space through specific buffers and setbacks and through lot standards that ensure cluster residential development. The PD establishes Open Space Planning Areas D & E which only allow Open Space / Trails to be developed within 300 feet of the western property boundary and 200 feet of the eastern property boundary for the portion of Planning Area A adjacent to residential zone districts. This totals to 14 acres of Open Space. As well, Planning Area B is subject to specific building setbacks of 100 feet from external property lines to the east, south, and west. Finally, while not technically considered open space, the two larger agricultural lots will act as private open space as it relates to non-buildable areas. The proposed PD will only allow for minimal structures on the combined 82.5 acres making up Planning Area B hence allowing it to act as private open space.
- *Ensure that environmentally and visually sensitive areas are preserved;*
 - Any environmentally sensitive areas will be preserved. The aforementioned open space buffer and setback standards of the PD serve to promote development that is visually sensitive from the surrounding properties.
- *Promote layout, design and construction of residential development that is sensitive to the natural landform and environmental conditions of the immediate and surrounding area;*
 - The PD proposes buffers and lot standards to cluster development of the Site with the intent of minimal intrusion to natural topography and features.
- *Provide or be located in proximity to employment and activity centers such as shopping, recreational, and community centers, health care facilities, and public transit;*
 - The site's proximity to Hilltop Road offers future residents vehicular connections to the range of employment and activity centers of the nearby Town of Parker and other surrounding areas.
- *Ensure the adequacy of public facilities to accommodate population growth;*
 - The PD application includes an analysis of public facilities to accommodate population growth with the project. A Traffic Impact Study, as well as will-serve



letters from the Douglas County School District, South Metro Fire and Rescue, and Parker Water and Sanitation are included with this application. The PD outlines a commitment to Public Land Dedication that will be assessed pursuant to agreements with the providers.

- *Encourage the provision of dwellings with a range of affordability;*
 - The Ramblewood PD will allow for the development of smaller lot single family residential on a portion of the Site, promoting smaller lots that are rural in nature and in line with market rate demands.

Approval Criteria for Planned Development Rezoning

According to the Douglas County Zoning Resolution the following criteria shall be considered by the Planning Commission and Board in the review of Planned Development rezoning applications.

- 1503.1 Whether the application is in compliance with the requirements of this Resolution and the Douglas County Comprehensive Master Plan;
 - The Ramblewood PD is in compliance with the requirements of the DCZR and the Douglas County Comprehensive Master Plan.
- 1503.02 Whether the application is in compliance with all applicable statutory provisions;
 - The Ramblewood PD is in compliance with all applicable statutory provisions.
- 1503.03 Whether there has been a substantial change in the character of the neighborhood, since the land was last zoned;
 - The Northeast Subarea of the 2040 CMP supports infill and semi-rural development where there is adequate public infrastructure. Changes in the surrounding neighborhoods since this property was last zoned have taken place as early as 1970 through 2024. The Hidden Village rezone was approved in 1970, the Tallman Gulch rezone was approved in the mid 2000's, and the Fields rezone (southeast of the subject property down Hilltop Road) was approved in 2022.
- 1503.04 Whether the application demonstrates public facilities and services necessary to accommodate the proposed development will be available concurrently with the impacts of such development;
 - The Ramblewood PD demonstrates public facilities and services necessary to accommodate the proposed development.
- 1503.05 Whether the roadway capacity necessary to maintain the adopted roadway level-of-service for the proposed development will be available concurrently with the impacts of such development;
 - A Traffic Impact Study included with the Ramblewood PD application demonstrates that the roadway capacity necessary to maintain the adopted roadway level-of-service for the proposed development will be available concurrently with the development.
- 1503.06 Whether the proposed rezoning is compatible with the surrounding land uses;



- The Ramblewood PD allows for single family residential and agricultural uses which is consistent with the surrounding land uses. As well the Ramblewood PD's proposed gross density is compatible with the gross densities of the surrounding subdivisions.
- 1503.07 Whether the subject land is suitable for the intended use and is compatible with the natural environment;
 - The Site of the Ramblewood PD is suitable for the intended PD uses allowing single family residential and agricultural.
- 1503.08 Whether the proposed Development Plan complies with the general requirements in 1502 herein;
 - The Ramblewood PD complies with the general requirements in Sections 1502.
- 1503.09 Whether the planned development provides for unified development control under a unified plan; and
 - The Ramblewood PD provides for unified development control under a unified plan.
- 1503.10 Whether the application is in conformance with Section 18A, Water Supply Overlay District, herein
 - The Ramblewood PD is in conformance with Section 18A, Water Supply Overlay District as seen with the Will Serve and Evidence of Supply.

We believe the proposed Rezoning to Planned Development advances the County's goals and objectives for this particular property and that the Ramblewood PD will allow an appropriate infill of homes, designed to fit in, not stand out, in respect to the established neighborhoods the site lies between. Our team looks forward to continuing our work with Douglas County throughout the review process for this PD. Please contact me at djennings@norris-design.com or 303.892.1166 should you have any questions or concerns.

Thank you,

Daniel Jennings

Daniel Jennings
Senior Associate

Development Standards Comparison Tables

Development Standards Comparison of PA-A to SR of the Douglas County Zoning Resolution (Section 7)		
Standard	Planning Area A	Suburban Residential District
Maximum Gross Density	0.88 du/ac	4.36 du/ac
Minimum Lot Size		
Single-Family Detached	10,000 sq. ft.	9,000 sq. ft.
Minimum Building Setbacks		
Regional or Major Arterial Street	100 ft.	100 ft.
Other Streets	20 ft.	20 ft.
Side	5 ft.	5 ft.
Rear	15 ft.	15 ft.
Maximum Building Height		
Principal Building	35 ft.	35 ft.
Accessory Building	20 ft.	20 ft.

Development Standards Comparison of PA-B and PA-C to A-1 of the Douglas County Zoning Resolution (Section 3)				
Standard	Planning Area B	Agriculture One (Parcels 9-34.9 ac)	Planning Area C	Agriculture One (Parcels <2.3 ac)
Maximum Gross Density	0.03	N/A	0	N/A
Minimum Lot Size				
Single-Family Detached	20 ac	35* ac	1.5 ac	35* ac
Minimum Building Setbacks				
Regional or Major Arterial Street	N/A	100 ft.	N/A	100 ft.
Other Streets	50 ft.	100 ft.	25 ft.	25 ft.
Side	50' from Planning Area-A; 100' from External Property Lines to the West, South, And East	50 ft.	15 ft.	15 ft.**
Rear	50' from Planning Area-A; 100' from External Property Lines to the West, South, And East	50 ft.** ; accessory 25 ft.	15 ft.	25 ft.** ; accessory 15'
Maximum Building Height	35 ft.	35 ft.	35 ft.	35 ft.

*The minimum lot area may be decreased with a clustered design through the exemption process. (DCZR 306)

**Schools and buildings within recreation areas shall be set back 50'

Exhibit 2



RAMBLEWOOD | ADJACENT PROPERTY GROSS DENSITY COMPARISON
03/04/2025

NORRIS DESIGN
PEOPLE + PLACEMAKING

APPLICATION

(Execute in triplicate)

RE-ZONING OF COUNTY ZONING UNDER RESOLUTION NO. 201

To	COUNTY PLANNING COMMISSION	Date
From		November 17, 1970
	Hidden Village Inc.	Address
		Parker, Colorado

A change in the zoning map of Douglas County is being requested.

The location of the proposed change in the County is:

(Describe as to nearest town in miles, and direction)
5 miles southeast of Parker

The legal description is as follows (attach legal description if this space is not adequate)

N $\frac{1}{2}$ Se ction 8 T7S R65W

Area of subject property, acres.	320	Present Zone	Proposed Zone
		Agricultural	Residential

The present uses of the area are Agricultural and the applicant proposes to use the parcel, when rezoned for Residential.

BE SURE TO FURNISH PLAT MAP OF THE AREA (If for business or industrial development also furnish site plan showing proposed construction.)

Residential	Business	Industrial
No. of units proposed 64 Minimum lot area per unit 3 to 4 acres	No. and types of businesses proposed 	No. and types of industries proposed
No. of units Single family All Double Apartments Other	Area to be served 	Features which make area suitable for industry (topography, street pattern, railroad access, etc.):
Utilities available (name) Public Service Mountain Bell	Combined floor area (sq. ft.) Area reserved for off-street parking and loading (sq. ft.) Estimated traffic volume Cars per day caused by proposed business	
Land uses surrounding subject area North Agriculture East Singing Hills South Agriculture West Hidden Village	Land uses surrounding subject area North East South West	Land uses surrounding subject area North East South West

(Use reverse side for further information)

NAMES OF ADJOINING LANDOWNERS	POST OFFICE ADDRESSES
North..... Clarence Wallden	Parker , Colo.
East Residents of Singing Hills	"
South Belmont Bldg. Corp.	1050 Sherman
West Residents of Hidden Village	Denver , Colo. Parker , Colo.

NAMES OF NON-ADJOINING LANDOWNERS WHO ARE WITHIN 500 FEET	POST OFFICE ADDRESSES
Terracor Inc.	Parker , Colo.
Raymond Wallden	"
Emil Wallden	"

ACTION TAKEN
(Set out material listed under (action))

Sign

Hidden Village Inc.
C.B. Taylor Pres.

REVIEW OF PROPOSED SUBDIVISION

Name of

Subdivision: Hidden Village, Filing No. 5

Date January 29, 1971Location: Part of N. 1/2 of Section 8,
T. 7 S., R. 65 W., Douglas
County, ColoradoPreliminary Plat Final Plat Review of this plat indicates the following omissions or variances from the
adopted county subdivision regulations:

Reference	Requirement	This Plat	Correction
2.3(15)	Assurance of Improvements	--	Provide.

RECOMMENDATION:

Approve subject to: Provision of above-noted item.Disapprove because of:Abstain *John A Davis by Wallace Snashke*

Ramblewood Planned Development Rezoning

Project File #1ZR2024-081 KEN R. WHITE COMPANY 3955 East Exposition, Denver 744-1861

Board of County Commissioners' Staff Report - Page 31 of 287

Name of Subdivision: Hidden Village Date May 17, 1971
 Filing No. 6
 Location: N.E. 1/4, Section 8, Preliminary Plat
 T. 7 S., R. 65 W.,
 Douglas County, Colorado Final Plat

Review of this plat indicates the following omissions or variances from the adopted county subdivision regulations:

Reference	Requirement	This Plat	Correction
2.3(1)	Conformance to Preliminary Plat.	Lots have been enlarged which eliminates the need for the north-south street. A short cul-de-sac has been substituted which serves the purpose.	None.
2.3(15)	Assurance of improvements.	---	Provide.

RECOMMENDATION:

Approve subject to: Provision of above-noted item.

Disapprove because of:

Table

John Davis /jhp
 Ramblewood Planned Development - Rezoning
 JOHN A. DAVIS, principal Planner
 Project File # ZR2024-031
 PREPARED BY THE KENNEDY GROUP, INC., 287955 East Exposition, Denver

744-1861

APPLICATION

(Execute in triplicate)

RE-ZONING OF COUNTY ZONING UNDER RESOLUTION NO. 201

To	COUNTY PLANNING COMMISSION	Date	April 15, 1966
From	C. G. Taylor	Address	Parker, Colorado

A change in the zoning map of Douglas County is being requested.

The location of the proposed change in the County is: 4 miles Southeast of Parker
(Describe as to nearest town in miles, and direction)

The legal description is as follows (attach legal description if this space is not adequate)

<u>W$\frac{1}{2}$ of the W$\frac{1}{2}$ Sec. 6 N$\frac{1}{2}$ of Sec. 7 T7S R 65 W of the 6th P.M. Douglas Co.</u>		Present Zone	Proposed Zone
Area of subject property, acres.	480	Agriculture	Residential

The present uses of the area are grazing and the applicant proposes to use the parcel, when rezoned for homesites.

BE SURE TO FURNISH PLAT MAP OF THE AREA (If for business or industrial development also furnish site plan showing proposed construction.)

Hidden Village

Residential	Business	Industrial
No. of units proposed <u>85</u>	No. and types of businesses proposed	No. and types of industries proposed
Minimum lot area per unit <u>3 acres</u>		
No. of units	Area to be served	
Single family <u>85</u>		
Double		
Apartments		
Other	Combined floor area (sq. ft.)	Features which make area suitable for industry (topography, street pattern, railroad access, etc.):
Utilities available (name)	Area reserved for off-street parking and loading (sq. ft.)	
<u>R E A Elec.</u>	Estimated traffic volume	
<u>Eastern Slope Phone</u>	Cars per day caused by proposed business	
Land uses surrounding subject area	Land uses surrounding subject area	Land uses surrounding subject area
North <u>Agriculture</u>	North	North
East <u>"</u>	East	East
South <u>"</u>	South	South
West <u>"</u>	West	West

NAMES OF ADJOINING LANDOWNERS

Robert L. Whittlesey
 Richard L. Crowther
 F. Burr Betts
 Belmont Bldg. Corp.
 Glenn, Catherine Curtis
 Donald Vestal
 Percy Boegel
 F. Burr Betts Jr.
 Clarence Wallden

POST OFFICE ADDRESSES

2775 E. 7th. Ave. Denver
2735 E. 7th. Ave. Denver
Security Life Bldg. Denver
1080 Sherman Denver
7792 So. Vine Littleton Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.

NAMES OF NON-ADJOINING LANDOWNERS
WHO ARE WITHIN 500 FEET

As. Listed above
 Glenn and Catherine Curtis

POST OFFICE ADDRESSES

7792 So. Vine Littleton, Colo.

ACTION TAKEN

(Set out material listed under (action))

Sign

C. G. Taylor

APPLICATION

(Execute in triplicate)

RE-ZONING OF COUNTY ZONING UNDER RESOLUTION NO. 201

To	COUNTY PLANNING COMMISSION	Date
From		APRIL 15, 1974
Address		

A change in the zoning map of Douglas County is being requested.

The location of the proposed change in the County is:
(Describe as to nearest town in miles, and direction).

The legal description is as follows (attach legal description if this space is not adequate)

1/2 of the 1/2 sec. 6 1/2 ac. 7	75 ft. 65 ft.	of the 6th proposed zone
Area of subject property, acres.	Present Zone	Proposed Zone
4.50	Agriculture	Residential

The present uses of the area are residential and the applicant proposes to use the parcel, when rezoned for homesites.

BE SURE TO FURNISH PLAT MAP OF THE AREA (If for business or industrial development also furnish site plan showing proposed construction.)

Mountain Village

Residential	Business	Industrial
No. of units proposed <u>15</u> Minimum lot area per unit <u>2 acres</u>	No. and types of businesses proposed	No. and types of industries proposed
No. of units	Area to be served	
Single family <u>15</u>		
Double		
Apartments		
Other	Combined floor area (sq. ft.)	Features which make area suitable for industry (topography, street pattern, railroad access, etc.):
Utilities available (name)	Area reserved for off-street parking and loading (sq. ft.)	
<u>Electric</u>	Estimated traffic volume	
<u>Gas</u>	<u>Cars per day caused by proposed business</u>	
Land uses surrounding subject area	Land uses surrounding subject area	Land uses surrounding subject area
North <u>residential</u>	North	North
East	East	East
South	South	South
West	West	West

(Use reverse side for further information)

NAMES OF ADJOINING LANDOWNERS

Robert L. Whittlesey
Richard L. Crowther
F. Burr Betts
Belmont Bldg. Corp.
Glenn, Catherine Curtis
Donald Vestal
Percey Boegel
F. Burr Betts Jr.
Clarence Wallden

POST OFFICE ADDRESSES

2775 E. 7th. Ave. Denver
2735 E. 7th. Ave. Denver
Security Life Bldg. Denver
1080 Sherman Denver
7792 So. Vine Littleton Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.

NAMES OF NON-ADJOINING LANDOWNERS
WHO ARE WITHIN 500 FEET

As. Listed above
Glenn and Catherine Curtis

POST OFFICE ADDRESSES

7792 So. Vine Littleton, Colo.

ACTION TAKEN

(Set out material listed under (action))

Sign

C. B. Taylor

APPLICATION

(Execute in triplicate)

RE-ZONING OF COUNTY ZONING UNDER RESOLUTION NO. 201

To	COUNTY PLANNING COMMISSION	Date	April 25, 1966
From	D. J. Taylor, Parker, Colorado		

A change in the zoning map of Douglas County is being requested.

The location of the proposed change in the County is: 4 miles Southeast of Parker
(Describe as to nearest town in miles, and direction)

The legal description is as follows (attach legal description if this space is not adequate)

1/2 of the 1/2 Sec. 6 1/2 of Sec. 7	T7S R 65 W of the 6th P.M. Douglas Co.	
Area of subject property, acres.	Present Zone	Proposed Zone
480	Agriculture	Residential

The present uses of the area are grazing and the applicant proposes to use the parcel, when rezoned for homesites

BE SURE TO FURNISH PLAT MAP OF THE AREA (If for business or industrial development also furnish site plan showing proposed construction.)

Hidden Village

Residential	Business	Industrial
No. of units proposed 35	No. and types of businesses proposed	No. and types of industries proposed
Minimum lot area per unit 3 acres		
No. of units	Area to be served	
Single family 85		
Double		
Apartments		
Other	Combined floor area (sq. ft.)	Features which make area suitable for industry (topography, street pattern, railroad access, etc.):
Utilities available (name)	Area reserved for off-street parking and loading (sq. ft.)	
R. S. A. Rec.	Estimated traffic volume (Cars per day caused by proposed business)	
Western Slope Phone		
Land uses surrounding subject area	Land uses surrounding subject area	Land uses surrounding subject area
North Agriculture	North	North
East	East	East
South	South	South
West	West	West

(Use reverse side for further information)

Ramblewood Planned Development - Rezoning

Project File # ZR2024-031

Board of County Commissioners' Staff Report - Page 37 of 287

NAMES OF ADJOINING LANDOWNERS

POST OFFICE ADDRESSES

Robert L. Shittlesay
Richard L. Crowther
F. Marrotts
Belmont Ridge Corp.
Glen, Katherine Curtis
Donald Westall
Hervey Roggel
F. Marrotts Jr.
Clarence Miller

7/12 So. 7th. Ave. Denver
1725 So. 7th. Ave. Denver
Security Life Bldg. Denver
1880 Sherman Denver
7792 So. Vine Littleton Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.
Parker, Colo.

NAME OF NON-ADJOINING LANDOWNERS
WHO ARE WITHIN 500 FEET

POST OFFICE ADDRESSES

As listed above
Glenn and Catherine Curtis

7792 So. Vine Littleton, Colo.

ACTION TAKEN

(Set out material listed under (action))

Sign



620 Wilcox Street
Castle Rock, Colorado 80104

October 15th, 2024

Daniel R. Sheldon, Principal
Miller United Real Estate
6900 E. Belleview Avenue, Suite 300
Greenwood Village, CO 80111

Cell: (303) 886-2838
Email: dsheldon@miller-united.com
Web: www.miller-united.com

RE: Ramblewood Planned Development

Dear Mr. Sheldon,

It is our understanding that a formal submittal will be made to Douglas County to establish a planned development on approximately 177 acres of land located on the south side of Hilltop Road approximately 3.25 miles east of Parker Road. As per the current draft concept plan (attached), 70 dwelling units are proposed over ~177 acres for an estimated density of .4 du/acre.

The proposed development is located within the [Mountain View/Northeast Elementary Schools](#) attendance area. [Sagewood Middle School](#) and [Ponderosa High School](#) are the neighborhood middle and high schools for this location. Please see the current and projected student enrollment and facility capacity information for these 4 schools.

	2024 Enrollment	2024 Percent of Ideal Facility Capacity	2029 Projected Enrollment	2029 Projected Percent of Ideal Facility Capacity
Mountain View ES	337	81%	289	70%
Northeast ES	327	102%	317	98%
Sagewood MS	817	70%	870	75%
Ponderosa HS	1,410	71%	1,420	72%

While DCSD is forecasting available seats at the schools currently assigned for this area, the anticipated continual growth of the nearby Looking Glass and Tanterra developments, as well as residual enrollment growth from the recently completed Cobblestone Ranch, Trails at Crowfoot, Cielo, Meadowlark, and Stone Creek Ranch developments, is expected to place continual pressure on DCSD school facilities serving these locations. DCSD anticipates needing to implement capacity management strategies in this region over the next 5 years in order to balance enrollment growth amongst district facilities. Please see the current and projected student enrollment and facility capacity information for the schools serving these adjacent residential developments.

	2024 Enrollment	2024 Percent of Ideal Facility Capacity	2029 Projected Enrollment	2029 Projected Percent of Ideal Facility Capacity
Franktown ES	339	105%	322	100%
Legacy Point ES	520	126%	774	187%
Mountain View ES	337	81%	289	70%
Northeast ES	327	102%	317	98%
Sagewood MS	817	70%	870	75%
Ponderosa HS	1,410	71%	1,420	72%

DCSD has calculated the amount of school site land requirement for students generated by the proposed planned development. Student generation and the associated land dedication requirement are shown below. A total of 38 elementary school students, 11 middle school student, and 22 high school students are expected from the development (as proposed) generating a land dedication requirement of 1.646 acres. Since this is smaller than DCSD's minimum school site size, DCSD would request cash-in-lieu of land dedication.

CASH-IN-LIEU CALCULATION STUDENT GENERATION				
PROJECT NAME: RAMBLEWOOD PD-PRESUBMITTAL/WILL SERVE-10.15.2024				
DU/	ACRES		DENSITY	
70	177		0.40	
			Generation	Number
<u>STUDENT GENERATION RATES</u>	<u>No. of DU's</u>		<u>Rate</u>	<u>of Students</u>
ELEMENTARY	70	X	0.54	38
MIDDLE SCHOOL	70	X	0.15	11
HIGH SCHOOL	70	X	0.31	22
			Required	
			School	Land
	Number		Acreage	Dedication
<u>SCHOOL LAND DEDICATION</u>	<u>of Students</u>		<u>Per Student</u>	<u>Acreage</u>
ELEMENTARY	38	X	0.018	0.680
MIDDLE SCHOOL	11	X	0.030	0.315
HIGH SCHOOL	22	X	0.030	0.651
			TOTAL	1.646

As per Article 1004.05.3 of the Douglas County Subdivision Regulations, "The cash-in-lieu fee shall be equivalent to the full market value of the acreage required for school land dedication. Value shall be based on anticipated market value after completion of platting. The applicant shall submit a proposal for the cash-in-lieu fee and supply the information necessary for the Board to evaluate the adequacy of the proposal. This information shall include at least one appraisal of the property by a qualified appraiser." And as per Article 1004.06, "The conveyance of land or payment of fees obtained through the County's dedication requirement shall be required prior to the recordation of the first final plat for the subdivision. The conveyance of dedicated school land to Douglas County shall be by warranty deed and the title shall be free and clear of all liens and encumbrances, including real property taxes prorated to the time of conveyance. The applicant shall provide a title insurance

policy in the County's name and a certified survey at the time of conveyance."

DCSD looks forward to future collaboration with United Miller on this proposal. Please feel free to reach out with any further questions or comments regarding DCSD service to the proposed Ramblewood Planned Development.

Shavon Caldwell, Planning Manager
DCSD Planning & Construction
scaldwell21@dcsdk12.org
desk: 303.387.0417

SOUTH METRO FIRE RESCUE

FIRE MARSHAL'S OFFICE



October 17, 2024

2347-063-00-001 and 2347-061-00-001

Attn: Kevin Lovelace

RE: "Will-Serve" Letter for parcel numbers 2347-063-00-001 and 2347-061-00-001

Kevin,

The purpose of this letter is to confirm that the subject address is within the jurisdictional boundaries of South Metro Fire Rescue, a Special District in the State of Colorado with powers and duties outlined in section 32-1-1002 of the Colorado Revised Statutes. South Metro Fire Rescue provides fire prevention, fire suppression, emergency medical, and special team response services to properties within its jurisdictional boundaries. Any questions regarding our services may be directed to our office at 720-989-2230.

Sincerely,

Roberta Payan

Roberta Payan
Permit Coordinator

cc: file Parcel numbers 2347-063-00-001 and 2347-061-00-001

Comprehensive Master Plan Land Use Reference Map

Comprehensive Master Plan Areas

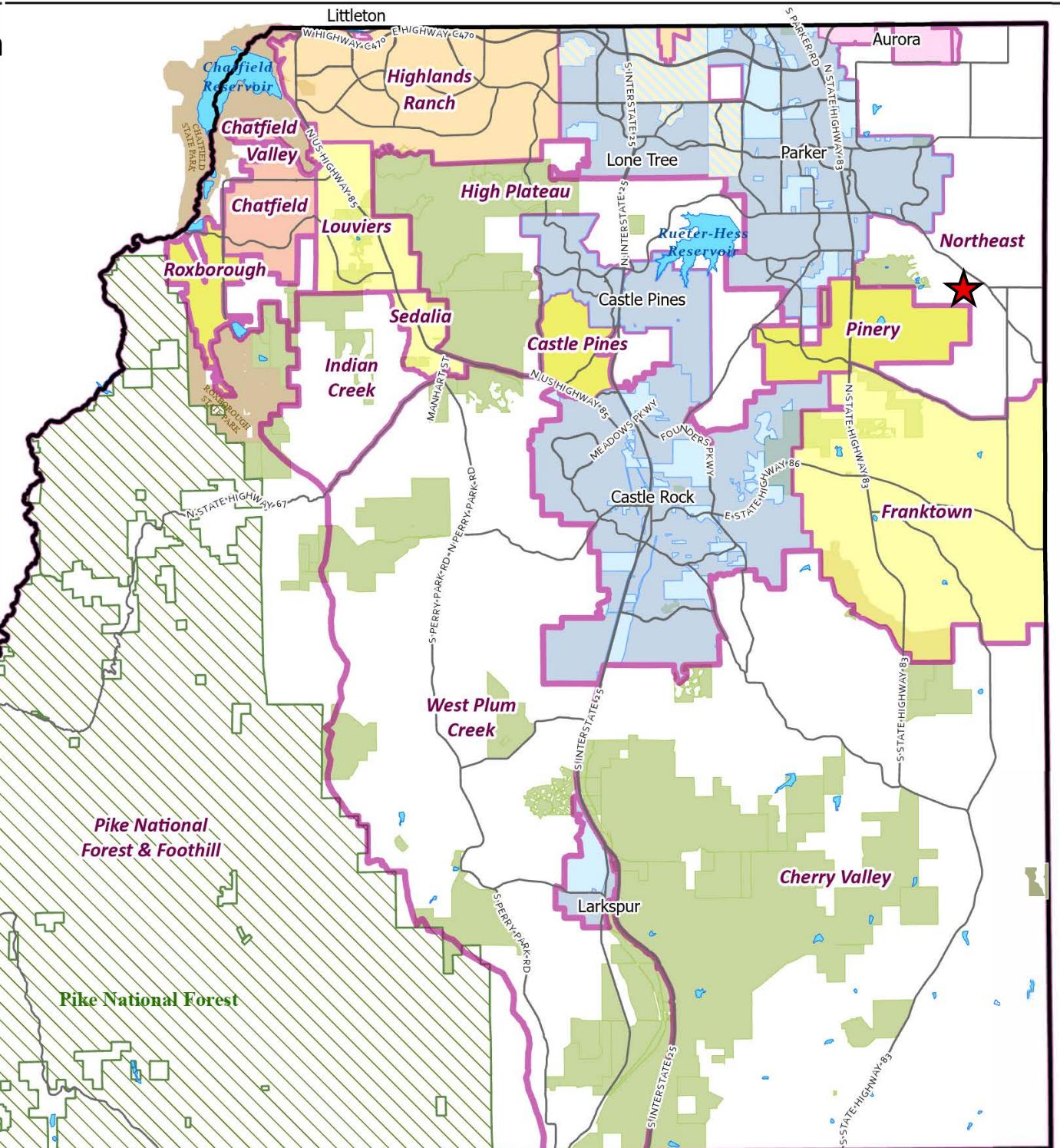
- Primary Urban Area
- Chatfield Urban Area
- Separated Urban Area
- Rural Community
- Nonurban Subarea
- Municipal Planning Area (Incorporated)
- Municipal Planning Area (Unincorporated)
- Municipal Planning Area Inclusive of County PUA / SUA
- Non-Douglas County Based Municipalities
- Douglas County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

Parks

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

Roadways

— Major Roads



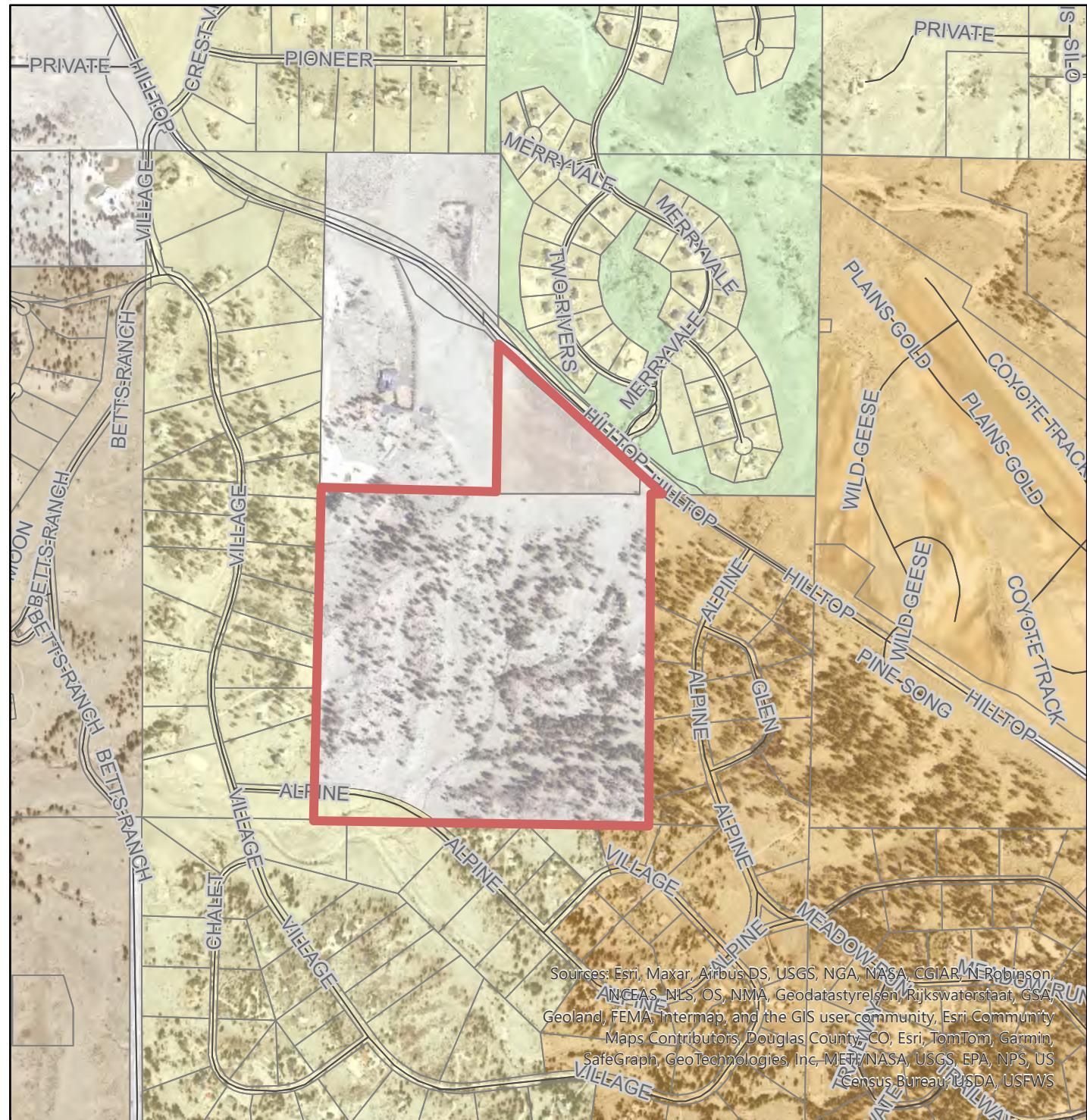
Ramblewood Planned Development

ZR2024-031
Zoning Map



LEGEND

- Roads
- Major Roads
- Parcels - PARCELS
- A1 - AGRICULTURAL ONE
- RR - RURAL RESIDENTIAL
- ER - ESTATE RESIDENTIAL
- PD - PLANNED DEVELOPMENT
- OS - OPEN SPACE CONSERVATION



Ramblewood Planned Development

ZR2024-031
Aerial Map



LEGEND

- Roads
- Major Roads
- Parcels - PARCELS



Referral Agency Response Report**Page 1 of 5****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031**Date Sent:** 03/18/2025**Date Due:** 04/08/2025

Agency	Date Received	Agency Response	Response Resolution
Addressing Analyst	03/20/2025	No Comment:	No response necessary
AT&T Long Distance - ROW		No Response Received:	No response necessary
Black Hills Energy		No Response Received:	No response necessary
Building Services	03/21/2025	No Comment:	No response necessary
CenturyLink	04/03/2025	Received: Qwest Corporation, d/b/a CenturyLink QC ("CenturyLink") has reviewed the request for comment on the project described above and has determined that it has No Comments/No Objections. It is the intent and understanding of CenturyLink that this Letter of No Objection shall not reduce our rights to any existing easement or rights we have on this site or in the area. This Letter of No Comment/No Objection response is submitted WITH THE STIPULATION that if CenturyLink facilities are found and/or damaged within the area as described, the Applicant will notify Lumen and bear the cost of relocation and repair of said facilities. If you have any questions please contact Lumen Engineering at Bobby.Hight@lumen.com or Stephanie Canary at (352) 425-8763 or stephanie.canary@lumen.com.	Applicant acknowledged comments

Referral Agency Response Report**Page 2 of 5****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031**Date Sent:** 03/18/2025**Date Due:** 04/08/2025

Agency	Date Received	Agency Response	Response Resolution
Cherry Creek Basin Water Quality Authority	03/31/2025	<p>Received:</p> <p>The Cherry Creek Basin Water Quality Authority (Authority) acknowledges notification from Douglas County that the proposed development plans for ZR2024-031, Ramblewood Planned Development have been or will be reviewed by Douglas County for compliance with the applicable Regulation 72 construction and post-construction requirements. Based on the Authority's current policy, the Authority will no longer routinely conduct a technical review and instead the Authority will defer to Douglas County's review and ultimate determination that the proposed development plans comply with Regulation 72.</p> <p>If a technical review of the proposed development plan is needed, please contact LandUseReferral@ccbwqa.org. The review may include consultation with the Authority's Technical Manager to address specific questions or to conduct a more detailed Land Use Review, if warranted.</p>	Applicant acknowledged comments
Colorado Division of Water Resources	04/09/2025	<p>Received:</p> <p>See attached letter</p> <p>Summary: CDWR's opinion is that the water supply is adequate.</p> <p>Provided information regarding stormwater facility guidelines.</p>	Applicant acknowledged comments and future stormwater guidelines.
Colorado Geological Survey		No Response Received:	Applicant acknowledged comments
Colorado Parks and Wildlife (East DC - Dist 549)		No Response Received:	Applicant acknowledged comments
Comcast		No Response Received:	Applicant acknowledged comments

Referral Agency Response Report**Page 3 of 5****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031**Date Sent:** 03/18/2025**Date Due:** 04/08/2025

Agency	Date Received	Agency Response	Response Resolution
CORE Electric Cooperative	04/28/2025	Received: CORE Electric Cooperative will require the revised setback language not allowing encroachment into setbacks. Setbacks include utility easements; CORE will not allow encroachments into utility easements. CORE will require a minimum front lot 15-foot setback. CORE will the following require notes added: No improvements that conflict with or interfere with construction, maintenance or access to utilities shall be placed within the utility easements. Prohibited improvements include, but are not limited to, permanent structures, buildings, counterforts, decks, attached porches, attached stairs, window wells, air conditioning units, retaining walls/components and other objects that may interfere with the utility facilities or access, use and maintenance thereof.	Applicant acknowledged comments and will incorporate notes into future Preliminary Plan and Final Plat
Crest View Estates HOA		No Response Received:	No response necessary
Douglas County Conservation District		No Response Received:	No response necessary
Douglas County Health Department	03/19/2025	Received: See attached letter Summary: Noted concerns about fugitive dust during construction and provided information regarding mitigation.	Applicant acknowledged comments.
Douglas County Historic Preservation	03/20/2025	Received: Please see attached letter Summary: Requests a Class II Cultural Resources Survey with future applications. Noted process to follow if artifacts are discovered.	Applicant acknowledged comments and will provide the Cultural Resources Survey with Preliminary Plan application.
Douglas County Parks and Trails	04/29/2025	Received: They would need to follow the Park Land Dedication standards as outlined in Article 10 of the Douglas County Subdivision Resolution, so I believe they are covering that in the plan.	Applicant acknowledged. Land dedication will follow Article 10 of the Douglas County Subdivision Resolution.

Referral Agency Response Report**Page 4 of 5****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031**Date Sent:** 03/18/2025**Date Due:** 04/08/2025

Agency	Date Received	Agency Response	Response Resolution
Douglas County School District RE 1	04/28/2025	Received: See attached letter Summary: Provided information regarding student generation. Requested cash-in-lieu of land dedication.	Applicant will provide cash-in-lieu of land dedication at final plat.
Engineering Services	04/09/2025	Received: See attached letter Summary: Requested commitments for roadway improvements.	Applicant provided commitment to pay for a portion of paving for Alpine Drive prior to recording a final plat.
Hidden Village POA		No Response Received:	No response necessary
Mile High Flood District		No Response Received:	No response necessary
Office of Emergency Management	03/18/2025	Received: OEM has no issues with this project	No response necessary
Open Space and Natural Resources		No Response Received:	No response necessary
Parker Water & Sanitation District	03/18/2025	Received: Please note This Project has not included into the Parker Water district at this time, no reviews will be completed until this project is a part of the Parker Water District.	Applicant provided a will serve letter from Parker Water and Sanitation.
Rural Water Authority of Douglas County		No Response Received:	No response necessary
Sheriff's Office		No Response Received:	No response necessary
Sheriff's Office E911		No Response Received:	No response necessary
South Metro Fire Rescue	04/11/2025	Received: South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed PD Rezoning. Applicants are encouraged to contact SMFR regarding the applicable fire code requirements for the proposed project.	Applicant acknowledged information.
The Pinery HOA	04/08/2025	No Comment:	No response necessary
Town of Parker Development Review		No Response Received:	No response necessary
Town of Parker Public Works	03/18/2025	No Comment:	No response necessary

Referral Agency Response Report**Page 5 of 5****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031**Date Sent:** 03/18/2025**Date Due:** 04/08/2025

Agency	Date Received	Agency Response	Response Resolution
Wildfire Mitigation	04/07/2025	Received: A wildfire hazard assessment has been completed for the property and a wildfire mitigation plan will be required for the development. Please contact the wildfire mitigation and resilience coordinator directly with questions or for consultation regarding expectations and related requirements for plan development and execution.	Applicant will provide a wildfire mitigation plan for review with the Preliminary Plan.
Xcel Energy-Right of Way & Permits	03/31/2025	Received: See attached letter Summary: Requested notes and easements to be shown on preliminary plan and final plat exhibits.	Applicant acknowledged comments and will provide requested notes on preliminary plan and final plat exhibits.

March 19th, 2025

Trevor Bedford
100 Third St.
Castle Rock, CO 80104

RE: ZR2024-031

Dear Mr. Thomas

Thank you for the opportunity to review and comment on the Ramblewood Planned Development project. 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).

Fugitive Dust – Permanent uses

Exposure to air pollution is associated with several health problems including asthma, lung cancer, and heart disease. The Colorado Department of Public Health and Environment Air Pollution Control Division (APCD) regulates air emissions, including fugitive dust. Control measures may be necessary to minimize the amount of fugitive emissions from site activities including haul roads, stockpiles, and erosion. The applicant shall contact the APCD, at (303) 692-3100 for more information. Additional information is available at <https://cdphe.colorado.gov/air-emissions-from-business-and-industry>.

Stormwater Impacts

Development of the subject parcel will potentially result in an increase of stormwater and snowmelt runoff that may contribute significant pollutant loadings. These pollutants include bacteria, nutrients, metals, and oxygen consuming contaminants.

DCHD noted the Phase one drainage report.

Sincerely,

Caden Thompson
Environmental Health Specialist I
Douglas County Health Department

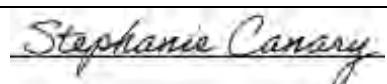
REFERRAL RESPONSE REQUESTDate Sent: March 18, 2025Comments due by: **April 8, 2025****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031

The applicant is proposing a Planned Development (PD) rezoning to establish the Ramblewood PD consisting of up to 70 single-family dwelling units and 14 acres of open space within a total 176 acres. The site is located on the south side of Hilltop Road approximately across from the intersection of Hilltop Road and Merryvale Trail.

Project Summary:

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

 No Comment Please be advised of the following concerns:

 See letter attached for detail.**Agency:** CenturyLink (Lumen)**Phone #:** 352-425-8763**Your Name:** Stephanie Canary**Your Signature:***(please print)***Date:** April 3, 2025

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,

Trevor Bedford, AICP, Project Planner

Enclosure



CenturyLink

April 3, 2025

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

Sent To: tbedford@douglas.co.us
Copied To: Bobby.Hight@lumen.com

P845397
No Reservations/No Objection

No Reservations/No Objection for: Douglas County Project Number ZR2024-031/
Ramblewood Planned Development / 9757 Hilltop Road, Parker, CO / Douglas County PID #
2347-061-00-001 & 2347-063-00-001

Dear Mr. Bedford:

Qwest Corporation, d/b/a CenturyLink QC (“CenturyLink”) has reviewed the request for comment on the project described above and has determined that it has No Comments/No Objections.

It is the intent and understanding of CenturyLink that this Letter of No Objection shall not reduce our rights to any existing easement or rights we have on this site or in the area.

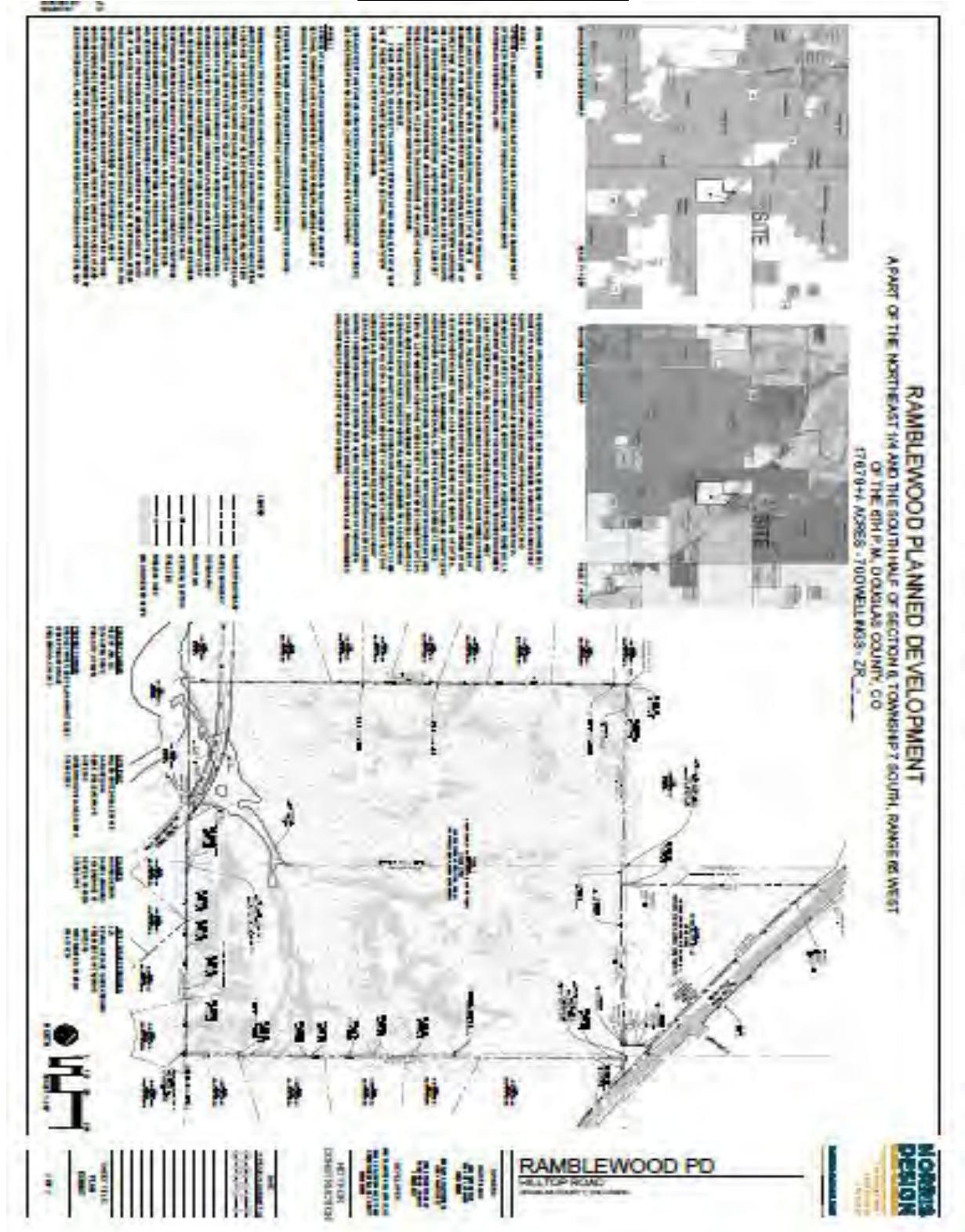
This Letter of No Comment/No Objection response is submitted WITH THE STIPULATION that if CenturyLink facilities are found and/or damaged within the area as described, the Applicant will notify Lumen and bear the cost of relocation and repair of said facilities.

If you have any questions please contact Lumen Engineering at Bobby.Hight@lumen.com or Stephanie Canary at (352) 425-8763 or stephanie.canary@lumen.com.

Sincerely yours,

CenturyLink Right of Way Team

EXHIBIT P865397
RAMBLEWOOD PD



REFERRAL RESPONSE REQUESTDate Sent: March 18, 2025Comments due by: **April 8, 2025****Project Name:** Ramblewood Planned Development**Project File #:** ZR2024-031

Project Summary: The applicant is proposing a Planned Development (PD) rezoning to establish the Ramblewood PD consisting of up to 70 single-family dwelling units and 14 acres of open space within a total 176 acres. The site is located on the south side of Hilltop Road approximately across from the intersection of Hilltop Road and Merryvale Trail.

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

 No Comment Please be advised of the following concerns:

The Phase I Drainage Report is acceptable. Refer to the attached redlines and email from our traffic engineer.

 See letter attached for detail.**Agency:** DC Engineering**Phone #:** 303-660-7490**Your Name:** Chuck Smith**Your Signature:** *Chuck Smith*

(please print)

Date: 4/2/2025

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,

Trevor Bedford, AICP, Project Planner

Enclosure

Trevor Bedford

From: Chris Martin
Sent: Friday, April 4, 2025 3:12 PM
To: Chuck Smith
Cc: Amy Strouthopoulos; Benjamin Pierce; Trevor Bedford
Subject: RE: Ramblewood Subdivision off Hilltop Road - TIA

Chuck,

I have reviewed the TIA for the above project and have the following comments:

Hilltop Rd at Access A/Merryvale Trail

- Future year intersection geometry: per Figure 7 this analysis assumes that the northwest bound left turns from Hilltop Rd will be made from a shared through/left turn lane. This is not typical for higher classification – 4-lane roadways. This study should analyze this approach assuming a dedicated left turn lane for all the future scenarios.
- For the northeast bound approach to Hilltop Rd (Access A) it is assumed in the analysis that left, through, and right turning movements are made from a single lane approach. Although it will likely not make a significant change to the LOS for this approach, this study should assume that there would be a dedicated left turn lane and a shared through/right turn lane.
- This intersection is shown to operate at poor levels of service during both peak hours and in both short (2029) and long term (2044) future horizons. This is due to the delay experience by the stop controlled approaches. As the study indicates, this is not uncommon for stop controlled approaches to operate with noticeable delays. The delay for this approach is:
 - 2029 horizon; 36.2 second per vehicle (sec/v) in the AM peak and 64.3 sec/v in the PM peak.
 - 2044 horizon; 167.7 sec/v in the AM peak and 145.5 sec/v in the PM peak.

County criteria requires that for intersections within the study area with a projected LOS "E" or worse, mitigations measures shall be identified to bring the intersection operation to an acceptable level (this would be LOS D).

The study identifies the potential mitigation for this intersection is conversion of the intersection to signal-control operation. While signal-control of this intersection is likely to improve the side street LOS, this would come at the expense of the free flow movements on Hilltop Rd. Also, traffic-signal operation is not likely to be warranted by volume warrants.

Other potential mitigations would include:

- Roundabout
- Restricting/prohibiting left turn movements.

It is not likely that implementation of any of these mitigation would be needed in the short term horizon.

Percentage of site trips on local roads

Because paving of the area local roads in 2025 is currently planned for by the County, a cost-share percentage has been determined for the two unpaved road segments impacted by the Ramblewood project trips. The Ramblewood project's share is calculated as:

- 45% for Alpine Dr from the proposed site access to Village Rd.
- 21% for Village Rd.

Methodology:

Existing daily volume projections for the unpaved segments of local roads were calculated based on the assumption that the daily volumes would be 10 times the PM peak hour volumes (found on Figure 3 – EXISTING TRAFFIC). The segments and existing projected daily volumes are:

- Alpine Dr from Village Rd to the east (80 tpd) and
- Village Road from Alpine Dr north to the existing end of pavement south of Betts Ranch Rd intersection (250 tpd).

Using the same method as above, the daily site generated trips were calculated for the two segments using the data provided on Figure 6 – SITE- GENERATED TRIPS. The projected site generated trips using Alpine Dr from site access and up Village Rd to the north is 65 tpd.

Using these numbers, the projected total buildout volumes (existing plus site) were determined to be 145 tpd on Alpine Dr and 315 on Village Rd from Alpine Dr to the north.

Summary

The Ramblewood TIA needs to be revised based on the comments provided above for the intersection of Hilltop Rd/Access A/Merryvale Tr.

Improvements related to this project are:

- The south leg of the intersection of Hilltop Rd/Access A/Merryvale Tr, stop controlled with a single southwest bound lane and 2 northbound approach lanes (dedicated left turn lane and combined through/right turn lane at Hilltop Rd).
- A northwest bound left turn lane on Hilltop Rd into the development access.
Note: if Access A is constructed prior to the Hilltop Rd widening project planned by the County, then the Ramblewood development will be responsible to improve Hilltop Rd to include this improvement. Otherwise the improvement would be constructed with the County's project with a fair-share contribution from the development.
- Fair-share contribution (as described above) to the County for the paving of the two local road segments impacted by the development.

Let me know if you have any comments or questions on the above or need any additional information.

Thanks

Chris

From: Chuck Smith <CSmith@douglas.co.us>

Sent: Thursday, February 6, 2025 8:42 AM

To: Chris Martin <CMartin@douglas.co.us>

Subject: Ramblewood Subdivision off Hilltop Road - TIA

Hi Chris – attached is the traffic study for DV 2024-510 - 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

RAMBLEWOOD PLANNED DEVELOPMENT
A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST
OF THE 6TH P.M., DOUGLAS COUNTY, CO
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031

STATEMENT OF COMMITMENTS

THE FOLLOWING SECTIONS DESCRIBE THE REQUIRED DEVELOPMENT COMMITMENTS FOR THE RAMBLEWOOD PLANNED DEVELOPMENT. THE REQUIRED DEVELOPMENT COMMITMENTS MUST BE COMPLETED BY THE OWNER OR ITS SUCCESSORS OR ASSIGNS, AND SHALL BE BINDING UPON ITS HEIRS, SUCCESSORS, AND ASSIGNS WITH RESPECT TO THE LAND WITHIN THE RAMBLEWOOD PLANNED DEVELOPMENT.

1. **DEDICATIONS:** ALL DEDICATIONS OF PUBLIC FACILITIES, INCLUDED BUT NOT LIMITED TO PARK AND OPEN SPACE LANDS, STREETS, DRAINAGE FACILITIES, AND EASEMENTS SHALL BE DEDICATED AT NO COST TO DOUGLAS COUNTY. TITLE INSURANCE SHALL BE PROVIDED FOR ALL COUNTY-DEDICATED LAND. ALL REQUIRED UTILITY EASEMENTS SHALL BE DEDICATED TO THE SERVICE PROVIDER(S). DEDICATIONS SHALL BE MADE AT THE TIME OF FINAL PLAT OR AS REQUIRED BY DOUGLAS COUNTY. IN ACCORDANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION, AS AMENDED, DEDICATED LAND SHALL BE CONVEYED TO DOUGLAS COUNTY AND THE COUNTY MAY FURTHER CONVEY THE LAND TO THE APPROPRIATE AGENCY.
2. **SCHOOL LAND DEDICATION**
 - A. SCHOOL LAND DEDICATION SHALL BE IN COMPLIANCE WITH SECTION 1004 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
 - B. NO LAND SHALL BE DEDICATED FOR SCHOOL CONSTRUCTION ON THE PROPERTY.
 - C. THE OWNERS AND THEIR ASSIGNS SHALL PAY CASH-IN-LIEU OF LAND DEDICATION FOR SCHOOLS PRIOR TO RECORDING THE FIRST FINAL PLAT.
3. **PARK LAND DEDICATION**
 - A. LOCAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.1 AND 1003.11.3 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
 - B. REGIONAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.2 AND 1003.11.4 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION.
4. THE DEVELOPER INTENDS ON FORMING A NEW TITLE 32 SPECIAL DISTRICT TO BE CALLED THE RAMBLEWOOD METROPOLITAN DISTRICT. WHILE THE APPLICATION, SERVICE PLAN, AND ANY OTHER SUPPORTING DOCUMENTS FOR THE DISTRICT ARE NOT INCLUDED WITH THIS PD APPLICATION, THE DEVELOPER DOES INTEND ON PROCESSING THE REVIEW AND APPROVAL OF THE DISTRICT CONCURRENT WITH THE PD ZONING.
5. **ROADWAY IMPROVEMENTS**
ROADWAY IMPROVEMENTS WILL BE MADE AS DETERMINED NECESSARY BY DOUGLAS COUNTY ENGINEERING PUBLIC WORKS.
6. **STORMWATER MANAGEMENT, FLOODPLAIN, AND DRAINAGE IMPROVEMENTS**
STORMWATER MANAGEMENT SHALL ADHERE TO CURRENT STORMWATER MANAGEMENT PRACTICES AS REQUIRED IN THE DOUGLAS COUNTY STORM DRAINAGE AND TECHNICAL CRITERIA MANUAL. DEVELOPMENT WITHIN DESIGNATED FLOODPLAIN AREA IS EXPECTED TO BE AVOIDED.
7. **UTILITY IMPROVEMENTS**
THE PROJECT WILL BE REQUIRED TO COMPLETE BOTH ON-SITE AND OFF-SITE WATER AND SANITARY SEWER IMPROVEMENTS, AS WELL AS ASSOCIATED STORMWATER IMPROVEMENTS ADJACENT TO HILLTOP ROAD IF REQUIRED AND AS NEEDED TO SERVE THE SITE.
8. **WATER AND SEWER**
CENTRAL WATER AND SEWER WILL BE PROVIDED TO ALL FUTURE LOTS WITHIN PA-A THROUGH AN INCLUSION TO PARKER WATER AND SANITATION DISTRICT. WATER AND WASTEWATER WILL BE PROVIDED TO PA-B THROUGH DOMESTIC WELL AND SEPTIC.
9. **FIRE PROTECTION**
FIRE PROTECTION SHALL BE PROVIDED BY SOUTH METRO FIRE RESCUE.
10. **WILDFIRE MITIGATION PLAN**
A WILDFIRE MITIGATION PLAN SHALL BE COMPLETED FOR COMPLIANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION SECTION 17 - WILDFIRE HAZARD OVERLAY DISTRICT, AS AMENDED. OWNER, ITS SUCCESSORS AND ASSIGNS SHALL PROVIDE A WILDFIRE MITIGATION PLAN(S) CONCURRENT WITH PRELIMINARY PLAN AND COMPLETED WITH THE FINAL PLAT. IN PREPARATION OF WILDFIRE MITIGATION PLAN(S) ROADS SHALL MEET DOUGLAS COUNTY ROADWAYS STANDARDS, CUL-DE-SACS SHALL BE PROVIDED ON ALL DEAD-END ROADS, AND SECONDARY ACCESS SHALL BE PROVIDED TO ALLOW FOR EMERGENCY ACCESS AND EVACUATION IF NECESSARY.

6. ON AND OFF-SITE IMPROVEMENTS

A. The owners and their assigns are responsible for their fair share contribution towards the future paving improvements to Alpine Drive and Village Road. The paving improvements on Alpine Drive from the easterly property line to Village Road is estimated at \$86,076.00 and this developments projected daily traffic volumes equals 45% of the projected total traffic on Alpine Drive. This developments fair share contribution towards the paving improvements is \$38,734.00. The paving improvements on Village Road from Alpine Drive to the existing pavement is estimated at \$209,844.00 and this developments projected daily traffic volumes equals 21% of the projected total traffic on Village Road. This developments fair share contribution towards the paving improvements is \$44,067.00. These amounts shall be paid prior to the recordation of the final plat.

B. The owners and their assigns shall be responsible for the construction of the improvements at the intersection of Hilltop Road and the access into the Ramblewood Development.

C. The owners and their assigns shall dedicate public right-of-way for Hilltop Road as determined by the County

D. The owners and their assigns shall dedicate 80-ft. public right-of-way for Alpine Drive.

Maintenance Responsibility	Ownership		
HOA OR METRO DISTRICT	HOA OR METRO DISTRICT		
HOA OR METRO DISTRICT	HOA OR METRO DISTRICT		

11. PROJECT PHASING

THERE SHALL BE NO PHASING RESTRICTIONS.

12. FLOODPLAIN, RIPARIAN, AND WETLANDS PRESERVATION

OWNER, ITS SUCCESSORS AND ASSIGNS SHALL COMPLY WITH REQUIREMENTS OF REGULATORY AGENCIES DURING THE PRELIMINARY PLAN, FINAL PLATTING AND SUBSEQUENT PROCESSES.

13. WILDLIFE PRESERVATION

- A. WILDLIFE FRIENDLY FENCING IS REQUIRED ADJACENT TO OPEN SPACES IN PLANNING AREA A. PLANNING AREAS B, C, D, AND E SHALL NOT REQUIRE WILDLIFE FRIENDLY FENCING, AS AGRICULTURAL AND OPEN SPACE USES ARE ALLOWED AND LIVESTOCK WILL NEED TO BE CONTAINED.
- B. AN ECOLOGICAL RESOURCES SURVEY WAS PREPARED BY WESTERN ENVIRONMENT AND ECOLOGY, INC. ON OCTOBER 17, 2024, TO ESTABLISH PRESENCE OR ABSENCE OF THREATENED AND/OR ENDANGERED SPECIES ON THE PROPERTY, AS WELL AS IDENTIFY ECOLOGICAL SENSITIVE AREAS, AND MAKE RECOMMENDATIONS BASED ON THIS STUDY. METRO DISTRICT OR OWNER SHALL IMPLEMENT AND ENFORCE RECOMMENDATIONS CONTAINED WITHIN THE PLAN AT TIME OF FINAL PLAT.

13. CULTURAL RESOURCES SURVEY

A CULTURAL RESOURCES SURVEY SHALL BE PREPARED AT THE TIME OF PRELIMINARY PLAN. THE FINDINGS OF THE SURVEY WILL BE EVALUATED AND NECESSARY ACCOMMODATIONS WILL BE PROVIDED AT THE TIME OF PRELIMINARY PLAN.

14. NOISE STUDY

A NOISE STUDY SHALL BE PREPARED AT THE TIME OF PRELIMINARY PLAN. THE FINDINGS OF THE STUDY WILL BE EVALUATED AND NECESSARY ACCOMMODATIONS WILL BE PROVIDED AT THE TIME OF PRELIMINARY PLAN.

15. OVERLOT GRADING

LAYOUT OF PROPOSED DEVELOPMENT AND IMPROVEMENTS SHALL BE EVALUATED TO PRESERVE THE NATURAL SITE FEATURES AND TOPOGRAPHY. OVERLOT GRADING SHALL BE EVALUATED AT THE TIME OF SUBDIVISION.

OWNERSHIP CERTIFICATION

PARCEL 2 (COUNTY PARCEL #2347-063-00-001)
BRADLEY A WHITTLESEY

JOAN V WHITTLESEY

STATE OF COLORADO)

COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, 20____ BY _____.

MY COMMISSION EXPIRES _____.

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE _____, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY BRADLEY A WHITTLESEY AND JOAN V WHITTLESEY AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL _____ (DATE) _____

OWNERSHIP CERTIFICATION

PARCEL 1 (COUNTY PARCEL #2347-061-00-001)

HILLTOP JAM, LLC

JAMES HELFAND

STATE OF UTAH)

COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, 20____ BY _____.

MY COMMISSION EXPIRES _____.

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE _____, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY HILLTOP JAM, LLC AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL _____ (DATE) _____

COUNTY CERTIFICATION

THIS REZONING REQUEST TO PLANNED DEVELOPMENT HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH THE APPROVING THE PLANNED DEVELOPMENT AND ALL APPLICABLE DOUGLAS COUNTY REGULATIONS.

CHAIRMAN, BOARD OF COUNTY COMMISSIONERS _____ (DATE) _____

DIRECTOR, COMMUNITY DEVELOPMENT _____ (DATE) _____

DATE:
11/15/2024 SUBMITTAL
12/3/2024 APPROVING THE PLANNED DEVELOPMENT AND ALL APPLICABLE DOUGLAS COUNTY REGULATIONS.

NOT FOR CONSTRUCTION

DATE:
11/15/2024 SUBMITTAL
12/3/2024 APPROVING THE PLANNED DEVELOPMENT AND ALL APPLICABLE DOUGLAS COUNTY REGULATIONS.

CLERK AND RECORDER CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN WAS FILED IN MY OFFICE ON THIS ____ OF _____, 20____, A.D. AT ____ O'CLOCK A.M./P.M., AND WAS RECORDED PER RECEIPT NO. _____.

DOUGLAS COUNTY CLERK AND RECORDER

SHEET TITLE:
COMMITMENTS & PROVISIONS

RAMBLEWOOD PLANNED DEVELOPMENT
A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST
OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, CO
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031

LEGAL DESCRIPTION

PARCEL 1

A PARCEL OF LAND LOCATED IN THE EAST HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST QUARTER CORNER OF SAID SECTION 6; THENCE N89°37'37"W ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 6, 1401.02 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON A LINE 63.72 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 6; THENCE S00°17'50"W ALONG SAID LINE, 10.98 FEET;

THENCE S89°37'54"W, 1148.45 FEET; THENCE N00°01'01"W, 25.84 FEET TO THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 6, SAID POINT BEING S89°37'37"E, 123.96 FEET FROM THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 6;

THENCE CONTINUING N00°01'01"W, 1175.26 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF HILLTOP ROAD; THENCE ALONG SAID SOUTH RIGHT-OF-WAY LINE THE FOLLOW TWO (2) COURSES:

1. THENCE S36°30'00"E, 180.00 FEET;
2. THENCE S50°03'47"E, 1359.35 FEET TO A LINE 63.72 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 6; THENCE S00°17'50"W ALONG SAID LINE, 165.42 FEET TO THE POINT OF BEGINNING,

LESS AND EXCEPT THAT PORTION CONVEYED BY SPECIAL WARRANTY DEED RECORDED OCTOBER 3, 2023 UNDER RECEPTION NO. 2023042659,

COUNTY OF DOUGLAS, STATE OF COLORADO.

PARCEL 2

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

(THE BASIS OF BEARINGS FOR THIS DESCRIPTION IS SOUTH 00 DEGREES 00 MINUTES 27 SECONDS WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 6)

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 6; THENCE SOUTH 88 DEGREES 58 MINUTES 23 SECONDS EAST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 6 A DISTANCE OF 1426.97 FEET TO A POINT ON THE EAST BOUNDARY LINE OF HIDDEN VILLAGE FILING NUMBER ONE, A SUBDIVISION FILED WITH THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED APRIL 29, 1966 AT RECEPTION NO. 125234; THENCE SOUTH 01 DEGREES 03 MINUTES 11 SECONDS WEST ALONG THE EAST BOUNDARY LINE OF SAID HIDDEN VILLAGE FILING NUMBER ONE A DISTANCE OF 12.62 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED DECEMBER 26, 1995 AT RECEPTION NO. 9561360 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE, SAID POINT BEING THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 07 SECONDS EAST ALONG THE SOUTH LINE OF THE PARCEL DESCRIBED AT SAID RECEPTION NO. 9561360 A DISTANCE OF 1408.26 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED DECEMBER 26, 1995 AT RECEPTION NO. 9561359 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE; THENCE SOUTH 89 DEGREES 42 MINUTES 56 SECONDS EAST ALONG THE SOUTH LINE OF THE PARCEL OF LAND DESCRIBED BY DEED RECEPTION NO. 9561359 AND THE SOUTH LINE OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED JUNE 8, 1995 AT RECEPTION NO. 9525595 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE A DISTANCE OF 1148.46 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF

LAND DESCRIBED BY DEED RECORDED MAY 5, 1995 AT RECEPTION NO. 9519762 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 57 MINUTES 00 SECONDS EAST ALONG THE WEST LINE OF THE PARCEL OF LAND DESCRIBED AT SAID RECEPTION NO. 9519762 AND THE WEST LINE OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED MAY 5, 1995 AT RECEPTION NO. 9519760 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE A DISTANCE OF 176.40 FEET, SAID POINT ALSO BEING ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF HILLTOP ROAD; THENCE SOUTH 49 DEGREES 24 MINUTES 37 SECONDS EAST ALONG THE SOUTHWESTERLY RIGHT OF WAY LINE OF HILLTOP ROAD AS DESCRIBED AT SAID RECEPTION NO. 9519760 (AND ALONG SAID DESCRIBED COURSE EXTENDED SOUTHEASTERLY) A DISTANCE OF 272.68 FEET TO A POINT ON THE NORTH LINE OF LOT 98, HIDDEN VILLAGE FILING NO. 4, A SUBDIVISION FILED WITH THE DOUGLAS COUNTY CLERK AND RECORDER AND RECORDED NOVEMBER 12, 1968 AT RECEPTION NO. 131583; THENCE NORTH 89 DEGREES 42 MINUTES 56 SECONDS WEST ALONG THE NORTH LINE OF SAID LOT 98 A DISTANCE OF 118.17 FEET TO THE NORTHWEST CORNER OF SAID LOT 98; THENCE SOUTH 01 DEGREES 16 MINUTES 51 SECONDS WEST ALONG THE WEST LINE OF SAID HIDDEN VILLAGE FILING NO. 4 A DISTANCE OF 2633.91 FEET TO THE SOUTHWEST CORNER OF LOT 102 OF SAID HIDDEN VILLAGE FILING NO. 4, SAID POINT ALSO BEING ON THE NORTH LINE OF LOT 58-A, HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED APRIL 13, 2005 AT RECEPTION NO. 2005032337; THENCE NORTH 89 DEGREES 04 MINUTES 32 SECONDS WEST ALONG THE NORTH LINE OF SAID HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT A DISTANCE OF 950.95 FEET TO THE NORTHWEST CORNER OF LOT 59-A OF SAID HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT; THENCE NORTH 89 DEGREES 01 MINUTES 58 SECONDS WEST ALONG THE NORTH LINE OF HIDDEN VILLAGE FILING NUMBER TWO, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED FEBRUARY 20, 1966 AT RECEPTION NO. 127014 A DISTANCE OF 1686.96 FEET TO THE SOUTHEAST CORNER OF TRACT B OF HIDDEN VILLAGE FILING NUMBER ONE AMENDED, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED AUGUST 2, 1966 AT RECEPTION NO. 125878; THENCE NORTH 01 DEGREES 03 MINUTES 11 SECONDS EAST ALONG THE EAST BOUNDARY OF SAID HIDDEN VILLAGE FILING NUMBER ONE AMENDED AND THE EAST LINE OF SAID HIDDEN VILLAGE FILING NUMBER ONE A DISTANCE OF 2634.49 FEET TO THE POINT OF BEGINNING.

OWNERS:
HILLTOP JAM, LLC
2554 ASPEN SPRINGS DRIVE
PARK CITY, UT 84060
435.649.6686
BRADLEY A WHITTLESEY &
JOAN V WHITTLESEY

4700 E PRINCETON AVE
ENGLEWOOD, CO 80113
720.205.6441

DEVELOPER:
MILLER UNITED REAL ESTATE, LLC
6090 E BELLEVUE AVE, STE 300
GREENWOOD VILLAGE, CO 80111
303.886.2838

NOT FOR
CONSTRUCTION

DATE:
11/15/2024 SUBMITTAL
12/03/2025 UPD. SUBMITTAL
13/12/2025 J.F. MITT. AL

SHEET TITLE:
DEVELOPMENT
STANDARDS

LOT STANDARDS

MINIMUM SETBACKS FROM ^{1,2,3} :			MAXIMUM BUILDING HEIGHT ⁴
	SIDE LOT LINE	REAR LOT LINE	
	5'	15'	PRINCIPAL: 35' ACCESSORY: 20'
	50' FROM PLANNING AREA-A; 100' FROM EXTERNAL PROPERTY LINES TO THE WEST, SOUTH, AND EAST	50' FROM PLANNING AREA-A; 100' FROM EXTERNAL PROPERTY LINES TO THE WEST, SOUTH, AND EAST	35'
	15'	15'	35'

THE SETBACK IS MEASURED FROM THE LOT LINE TO THE WALL OF THE STRUCTURE HORIZONTALLY AND PERPENDICULAR TO THE LOT LINE.

A CORNICE, CANOPY, EAVE, FIREPLACE, WING WALL OR SIMILAR ARCHITECTURAL FEATURE MAY EXTEND 3 FEET INTO A REQUIRED SETBACK.
A COVERED OR UNCOVERED DECK OR PORCH MAY EXTEND 6 FEET INTO A REQUIRED SETBACK, EXCEPT FOR A SIDE SETBACK.

FOUNDATION ANCHORING AND FOUNDATION REPAIR SYSTEMS MAY BE LOCATED WITHIN A REQUIRED SETBACK.

A BUILDING PERMIT SHALL NOT BE ISSUED FOR ANY STRUCTURE WHICH IS TO BE LOCATED WITHIN AN EASEMENT UNLESS WRITTEN APPROVAL BY THE EASEMENT HOLDER(S) IS PROVIDED.
UTILITY DISTRIBUTION LINES AND RELATED EQUIPMENT COMMONLY LOCATED ALONG PROPERTY LINES MAY BE LOCATED WITHIN A REQUIRED SETBACK. A NEIGHBORHOOD SUBSTATION OR GAS REGULATOR/METER STATION SHALL MEET THE

, STRUCTURES THAT DO NOT REQUIRE BUILDING PERMITS MAY ENCROACH INTO A REAR SETBACK. ANY ENCROACHMENT INTO AN EASEMENT REQUIRES PERMISSION FROM THE EASEMENT HOLDER.
THE MAXIMUM BUILDING HEIGHT SHALL NOT APPLY TO Belfries, CUPOLAS, PENTHOUSES OR DOMES NOT USED FOR HUMAN OCCUPANCY, ROOF-MOUNTED CHURCH SPIRES, CHIMNEYS, SKYLIGHTS, VENTILATORS, WATER TANKS, SILOS, PARAPET WALLS, CORNICES, ANTENNAS, UTILITY POLES, AND NECESSARY MECHANICAL APPURTENANCES USUALLY CARRIED ABOVE THE ROOF LEVEL.

RAMBLEWOOD PD

HILLTOP ROAD

DOUGLAS COUNTY, COLORADO

OWNERS:
HILLTOP JAM, LLC
2554 ASPEN SPRINGS DRIVE
PARK CITY, UT 84060
435.649.6686
BRADLEY A WHITTLESEY &
JOAN V WHITTLESEY
4700 E PRINCETON AVE
ENGLEWOOD, CO 80113
720.205.6441

DEVELOPER:
MILLER UNITED REAL ESTATE, LLC
6009 E BELLEVUE AVE, STE 300
GREENWOOD VILLAGE, CO 80111
303.886.2838

NOT FOR
CONSTRUCTION

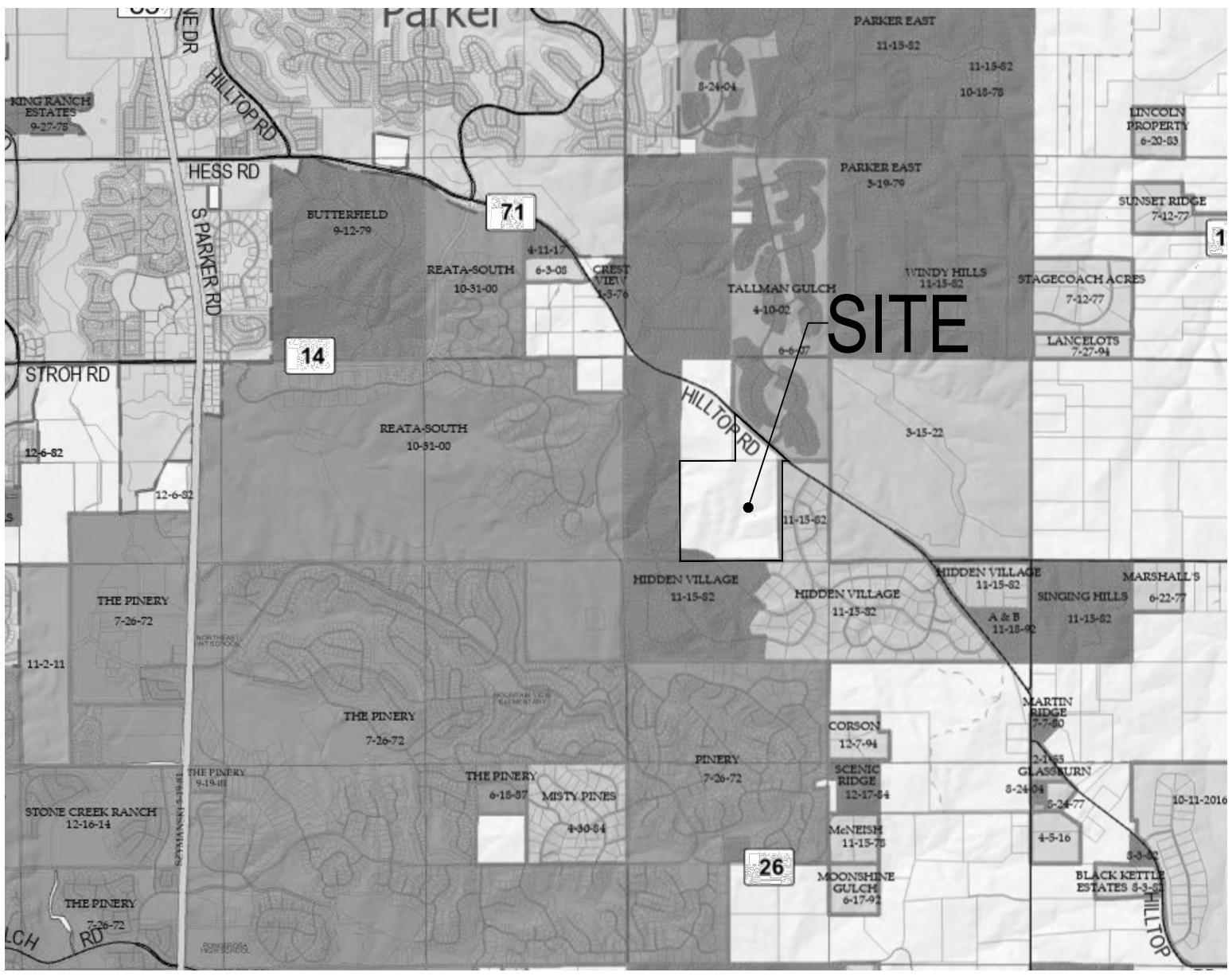
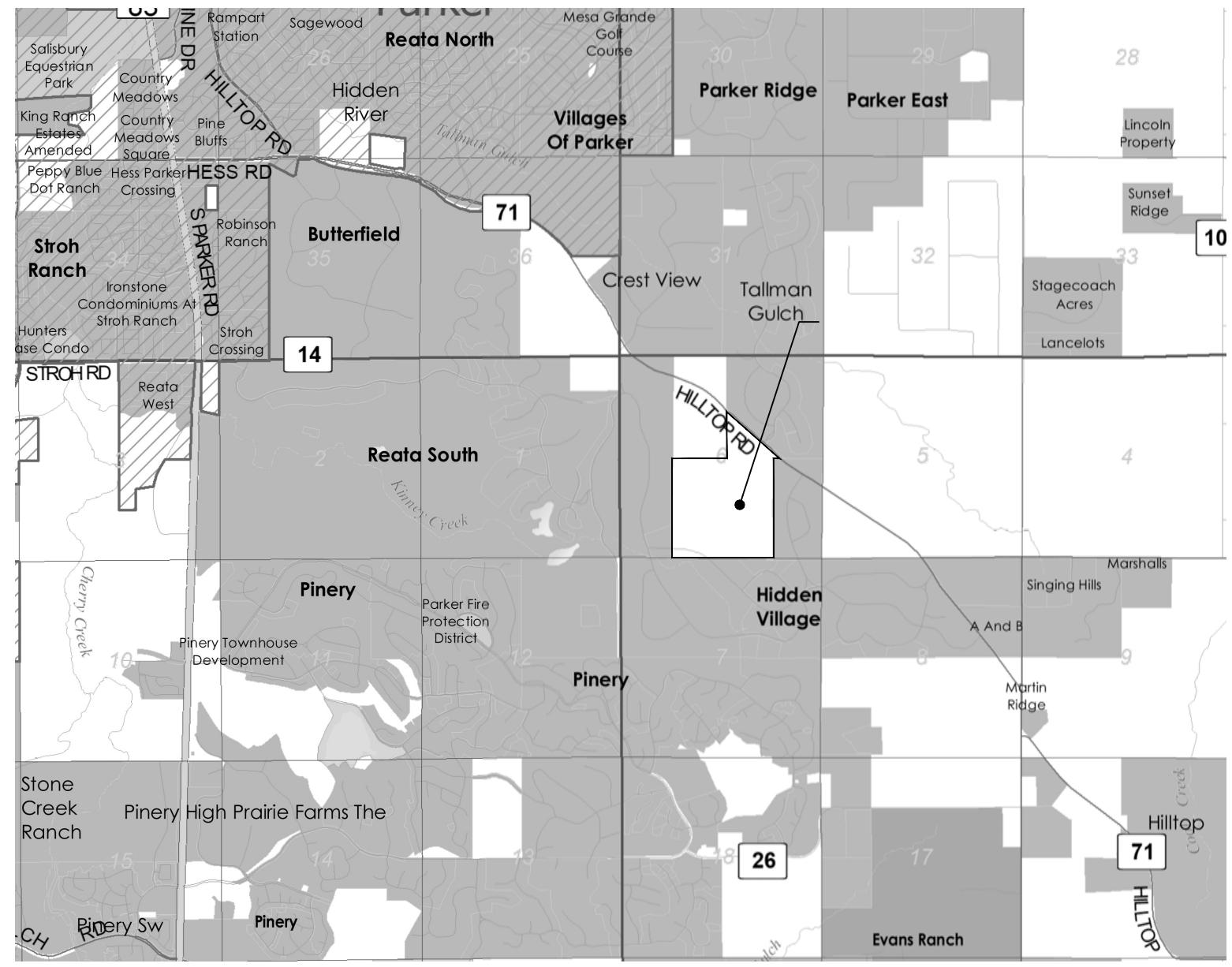
DATE:
11/15/2024 SUBMITTAL
12/03/25 UPD AL
13/2/25 JI MITT AL

SHEET TITLE:
DEVELOPMENT
PLAN

3 OF 3

RAMBLEWOOD PLANNED DEVELOPMENT

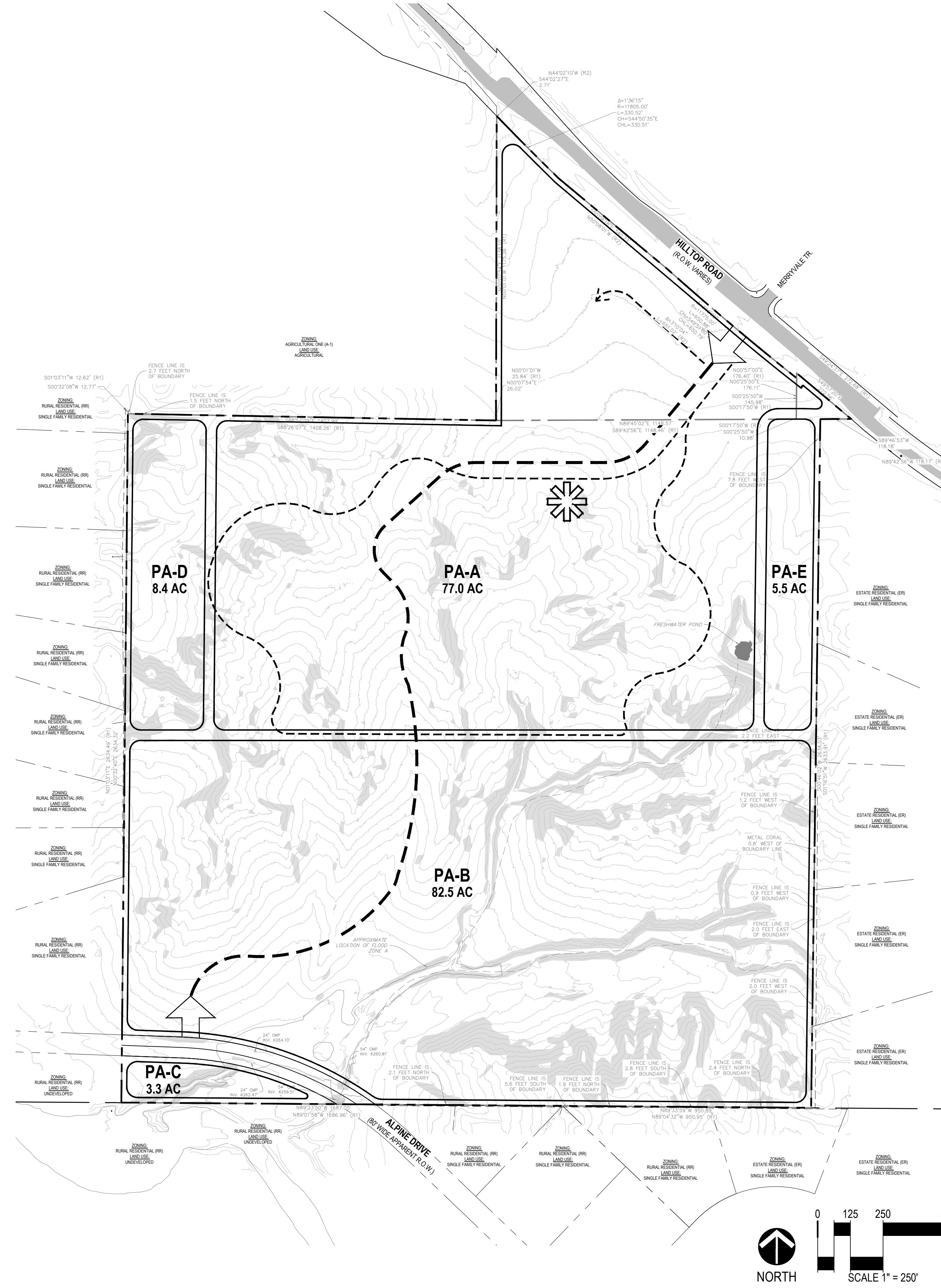
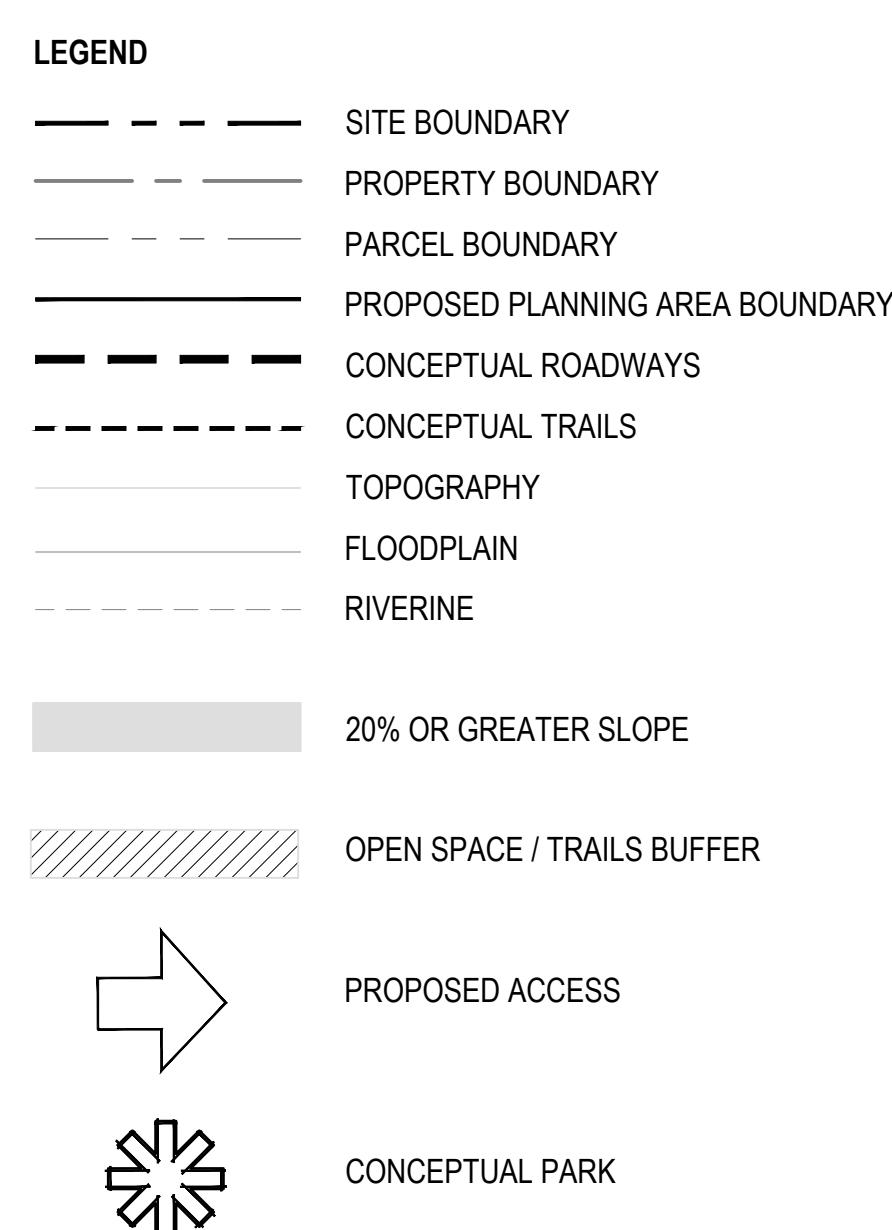
A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST
OF THE 6TH P.M., DOUGLAS COUNTY, CO
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031



	GROSS DENSITY	DWELLING UNITS
	0.88 DU / AC	68
	0.02 DU / AC	2
	0 DU / AC	0
	0 DU / AC	0
	0 DU / AC	0
	0.39 DU / AC	70

ACCESS POINTS SHOWN ARE CONCEPTUAL. FINAL ALIGNMENTS AND CIRCULATION WILL BE DETERMINED THROUGH THE SUBDIVISION FINAL PLAT

THIS PLAN DEPICTS THE GENERAL LOCATION AND SIZE OF PARKS, TRAILS, AND OPEN SPACE AREAS. FINAL SIZE, LOCATION, ALIGNMENT, AND



RAMBLEWOOD PLANNED DEVELOPMENT

A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST
OF THE 6TH P.M., DOUGLAS COUNTY, CO
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031

STATEMENT OF COMMITMENTS

THE FOLLOWING SECTIONS DESCRIBE THE REQUIRED DEVELOPMENT COMMITMENTS FOR THE RAMBLEWOOD PLANNED DEVELOPMENT. THE REQUIRED DEVELOPMENT COMMITMENTS MUST BE COMPLETED BY THE OWNER OR ITS SUCCESSORS OR ASSIGNS, AND SHALL BE BINDING UPON ITS HEIRS, SUCCESSORS, AND ASSIGNS WITH RESPECT TO THE LAND WITHIN THE RAMBLEWOOD PLANNED DEVELOPMENT.

1. **DEDICATIONS:** ALL DEDICATIONS OF PUBLIC FACILITIES, INCLUDED BUT NOT LIMITED TO PARK AND OPEN SPACE LANDS, STREETS, DRAINAGE FACILITIES, AND EASEMENTS SHALL BE DEDICATED AT NO COST TO DOUGLAS COUNTY. TITLE INSURANCE SHALL BE PROVIDED FOR ALL COUNTY-DEDICATED LAND. ALL REQUIRED UTILITY EASEMENTS SHALL BE DEDICATED TO THE SERVICE PROVIDER(S). DEDICATIONS SHALL BE MADE AT THE TIME OF FINAL PLAT OR AS REQUIRED BY DOUGLAS COUNTY. IN ACCORDANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION, AS AMENDED, DEDICATED LAND SHALL BE CONVEYED TO DOUGLAS COUNTY AND THE COUNTY MAY FURTHER CONVEY THE LAND TO THE APPROPRIATE AGENCY.
2. **SCHOOL LAND DEDICATION**
 - A. SCHOOL LAND DEDICATION SHALL BE IN COMPLIANCE WITH SECTION 1004 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
 - B. NO LAND SHALL BE DEDICATED FOR SCHOOL CONSTRUCTION ON THE PROPERTY.
 - C. THE OWNERS AND THEIR ASSIGNS SHALL PAY CASH-IN-LIEU OF LAND DEDICATION FOR SCHOOLS PRIOR TO RECORDING THE FIRST FINAL PLAT.
3. **PARK LAND DEDICATION**
 - A. LOCAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.1 AND 1003.11.3 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
 - B. REGIONAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.2 AND 1003.11.4 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION.
4. THE DEVELOPER INTENDS ON FORMING A NEW TITLE 32 SPECIAL DISTRICT TO BE CALLED THE RAMBLEWOOD METROPOLITAN DISTRICT. WHILE THE APPLICATION, SERVICE PLAN, AND ANY OTHER SUPPORTING DOCUMENTS FOR THE DISTRICT ARE NOT INCLUDED WITH THIS PD APPLICATION, THE DEVELOPER DOES INTEND ON PROCESSING THE REVIEW AND APPROVAL OF THE DISTRICT CONCURRENT WITH THE PD ZONING.
5. **ROADWAY IMPROVEMENTS**

ROADWAY IMPROVEMENTS WILL BE MADE AS DETERMINED ENGINEERING PUBLIC WORKS.

The Owners and their Assigns are responsible for their fair share contribution towards the paving of Alpine Drive (32% of the total cost is \$27,544.32. They also are responsible for their fair share contribution towards the paving of Village Road (14% of the total cost is \$29,378.16.
6. **ON AND OFF-SITE IMPROVEMENTS**
 - A. THE OWNERS AND THEIR ASSIGNS ARE RESPONSIBLE FOR NEGOTIATING THEIR FAIR SHARE CONTRIBUTIONS TOWARDS THE FUTURE PAVING IMPROVEMENTS TO ALPINE DRIVE AND VILLAGE ROAD.
 - B. THE OWNERS AND THEIR ASSIGNS SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE IMPROVEMENTS AT THE INTERSECTION OF HILLTOP ROAD AND THE ACCESS INTO THE RAMBLEWOOD DEVELOPMENT.
 - C. THE OWNERS AND THEIR ASSIGNS SHALL DEDICATE PUBLIC RIGHT-OF-WAY FOR HILLTOP ROAD AS DETERMINED BY THE COUNTY.
 - D. THE OWNERS AND THEIR ASSIGNS SHALL DEDICATE 80-FT. PUBLIC RIGHT-OF-WAY FOR ALPINE DRIVE.
7. **STORMWATER MANAGEMENT, FLOODPLAIN, AND DRAINAGE IMPROVEMENTS**

STORMWATER MANAGEMENT SHALL ADHERE TO CURRENT STORMWATER MANAGEMENT PRACTICES AS REQUIRED IN THE DOUGLAS COUNTY STORM DRAINAGE AND TECHNICAL CRITERIA MANUAL. DEVELOPMENT WITHIN DESIGNATED FLOODPLAIN AREA IS EXPECTED TO BE AVOIDED.
8. **UTILITY IMPROVEMENTS**

THE PROJECT WILL BE REQUIRED TO COMPLETE BOTH ON-SITE AND OFF-SITE WATER AND SANITARY SEWER IMPROVEMENTS, AS WELL AS ASSOCIATED STORMWATER IMPROVEMENTS ADJACENT TO HILLTOP ROAD IF REQUIRED AND AS NEEDED TO SERVE THE SITE.
9. **WATER AND SEWER**

CENTRAL WATER AND SEWER WILL BE PROVIDED TO ALL FUTURE LOTS WITHIN PA-A THROUGH AN INCLUSION AGREEMENT WITH PARKER WATER AND SANITATION DISTRICT. THE APPLICANT WILL EVALUATE THE OPTION FOR PINERY WATER AND WASTEWATER DISTRICT TO PROVIDE SEWER SERVICE THROUGH AN INTERGOVERNMENTAL AGREEMENT BETWEEN PINERY WATER AND WASTEWATER DISTRICT AND PARKER WATER AND SANITATION DISTRICT. WATER AND SEWER WILL BE PROVIDED TO PA-B THROUGH DOMESTIC WELL AND SEPTIC.

		Maintenance Responsibility	Ownership
		HOA OR METRO DISTRICT	HOA OR METRO DISTRICT
		HOA OR METRO DISTRICT	HOA OR METRO DISTRICT

10. FIRE PROTECTION

FIRE PROTECTION SHALL BE PROVIDED BY SOUTH METRO FIRE RESCUE.

11. WILDFIRE MITIGATION PLAN

A WILDFIRE MITIGATION PLAN SHALL BE COMPLETED FOR COMPLIANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION SECTION 17 - WILDFIRE HAZARD OVERLAY DISTRICT, AS AMENDED. OWNER, ITS SUCCESSORS AND ASSIGNS SHALL PROVIDE A WILDFIRE MITIGATION PLAN(S) CONCURRENT WITH PRELIMINARY PLAN AND COMPLETED WITH THE FINAL PLAT. IN PREPARATION OF WILDFIRE MITIGATION PLAN(S) ROADS SHALL MEET DOUGLAS COUNTY ROADWAYS STANDARDS. CUL-DE-SACS SHALL BE PROVIDED ON ALL DEAD-END ROADS, AND SECONDARY ACCESS SHALL BE PROVIDED TO ALLOW FOR EMERGENCY ACCESS AND EVACUATION IF NECESSARY.

12. PROJECT PHASING

THERE SHALL BE NO PHASING RESTRICTIONS.

13. FLOODPLAIN, RIPARIAN, AND WETLANDS PRESERVATION

OWNER, ITS SUCCESSORS AND ASSIGNS SHALL COMPLY WITH REQUIREMENTS OF REGULATORY AGENCIES DURING THE PRELIMINARY PLAN, FINAL PLATTING AND SUBSEQUENT PROCESSES.

14. WILDLIFE PRESERVATION

A. WILDLIFE FRIENDLY FENCING IS REQUIRED ADJACENT TO OPEN SPACES IN PLANNING AREA A. PLANNING AREAS B, C, D, AND E SHALL NOT REQUIRE WILDLIFE FRIENDLY FENCING, AS AGRICULTURAL AND OPEN SPACE USES ARE ALLOWED AND LIVESTOCK WILL NEED TO BE CONTAINED.
B. AN ECOLOGICAL RESOURCES SURVEY WAS PREPARED BY WESTERN ENVIRONMENT AND ECOLOGY, INC. ON OCTOBER 17, 2024, TO ESTABLISH PRESENCE OR ABSENCE OF THREATENED AND/OR ENDANGERED SPECIES ON THE PROPERTY, AS WELL AS IDENTIFY ECOLOGICAL SENSITIVE AREAS, AND MAKE RECOMMENDATIONS BASED ON THIS STUDY. METRO DISTRICT OR OWNER SHALL IMPLEMENT AND ENFORCE RECOMMENDATIONS CONTAINED WITHIN THE PLAN AT TIME OF FINAL PLAT.

15. CULTURAL RESOURCES SURVEY

The Owners and their Assigns are responsible for their fair share contribution towards the paving of Alpine Drive (32% of the total cost is \$27,544.32. They also are responsible for their fair share contribution towards the paving of Village Road (14% of the total cost is \$29,378.16.

A NOISE STUDY SHALL BE PREPARED AT THE TIME OF PRELIMINARY PLAN. THE FINDINGS OF THE STUDY WILL BE EVALUATED AND NECESSARY ACCOMMODATIONS WILL BE PROVIDED AT THE TIME OF PRELIMINARY PLAN.

17. OVERLOT GRADING

LAYOUT OF PROPOSED DEVELOPMENT AND IMPROVEMENTS SHALL BE EVALUATED TO PRESERVE THE NATURAL SITE FEATURES AND TOPOGRAPHY. OVERLOT GRADING SHALL BE EVALUATED AT THE TIME OF SUBDIVISION.

OWNERSHIP CERTIFICATION

PARCEL 1 (COUNTY PARCEL #2347-061-00-001)

HILLTOP JAM, LLC
JAMES HELFAND

STATE OF UTAH

COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, 20____ BY _____

MY COMMISSION EXPIRES _____

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE _____, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY HILLTOP JAM, LLC AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL (DATE)

OWNERSHIP CERTIFICATION

PARCEL 2 (COUNTY PARCEL #2347-063-00-001)

BRADLEY A WHITTLESEY

JOAN V WHITTLESEY

STATE OF COLORADO)

COUNTY OF _____)

ACKNOWLEDGED BEFORE ME THIS ____ DAY OF _____, 20____ BY _____

MY COMMISSION EXPIRES _____

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE _____, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY BRADLEY A WHITTLESEY AND JOAN V WHITTLESEY AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL (DATE)

COUNTY CERTIFICATION

THIS REZONING REQUEST TO PLANNED DEVELOPMENT HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH THE APPROVING THE PLANNED DEVELOPMENT AND ALL APPLICABLE DOUGLAS COUNTY REGULATIONS.

CHAIRMAN, BOARD OF COUNTY COMMISSIONERS (DATE)

DIRECTOR, COMMUNITY DEVELOPMENT (DATE)

CLERK AND RECORDER CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN WAS FILED IN MY OFFICE ON THIS ____ OF _____, 20____, A.D. AT ____ O'CLOCK A.M./P.M., AND WAS RECORDED PER RECEIPT NO. _____.

DOUGLAS COUNTY CLERK AND RECORDER

SHEET TITLE:
COMMITMENTS
& PROVISIONS

1 OF 3

All other comments have
been addressed

Trevor Bedford

From: Chuck Smith
Sent: Tuesday, July 1, 2025 9:25 AM
To: Dan Sheldon
Cc: Trevor Bedford; Daniel Jennings; Sarah Tengen
Subject: RE: (External) Ramblewood - Paving Cost Share

Thanks Dan

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

From: Dan Sheldon <dsheldon@miller-united.com>
Sent: Tuesday, July 1, 2025 9:23 AM
To: Chuck Smith <CSmith@douglas.co.us>
Cc: Trevor Bedford <tbedford@douglas.co.us>; Daniel Jennings <djennings@norris-design.com>; Sarah Tengen <stengen@norris-design.com>
Subject: RE: (External) Ramblewood - Paving Cost Share

Chuck:

Ok, that's fine. We'll pay it concurrent with the final plat recordation. Meaning, the plat recordation will not occur without the payment being made. We're in agreement.

Thanks.

Daniel & Sarah: let's simply change the language in the PD to say the following:

“The Owners and their Assigns are responsible for their fair share contribution towards the paving of Alpine Drive in the amount of \$27,554.32 (the “**Alpine Drive Contribution**”). Said payment shall be made ~~within 30 days after~~ prior to the recordation of the final plat for the Ramblewood development. In the event that the County has not completed the paving of Alpine Drive by December 31, 2027, the Owner and/or Assigns may request a refund of the Alpine Drive Contribution and the County agrees to reimburse Owner and/or Assigns within 30 days after such a request is made.”

Please get Trevor the updated sheet or entire submittal (whichever is easier and/or he prefers).

Thanks all!



Daniel R. Sheldon
Principal
Miller United Real Estate
Email: dsheldon@miller-united.com

From: Chuck Smith <CSmith@douglas.co.us>
Sent: Tuesday, July 1, 2025 8:36 AM
To: Dan Sheldon <dsheldon@miller-united.com>
Cc: Trevor Bedford <tbedford@douglas.co.us>
Subject: FW: (External) Ramblewood - Paving Cost Share

Good Morning Dan – based on our attorney review, we would like the monies paid prior to the recordation of the final plat - 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

From: Christopher Pratt <cpratt@douglas.co.us>
Sent: Monday, June 30, 2025 2:57 PM
To: Trevor Bedford <tbedford@douglas.co.us>; Chuck Smith <CSmith@douglas.co.us>
Subject: RE: (External) Ramblewood - Paving Cost Share

My only thought is that AFTER the plat is recorded we have no leverage to make any pay anything so it would probably be preferable to have them deposit those funds PRIOR to recordation. I believe that is normally when we would ask for it anyway – but if I am wrong let me know. Otherwise no legal issues.

From: Trevor Bedford <tbedford@douglas.co.us>
Sent: Monday, June 30, 2025 9:49 AM
To: Christopher Pratt <cpratt@douglas.co.us>; Chuck Smith <CSmith@douglas.co.us>
Subject: FW: (External) Ramblewood - Paving Cost Share

Chris,

Can you look at the language suggested by Dan Sheldon below about roadway contributions and let us know if you are ok with it?

If you have any questions about the intent of it, please check with Chuck as I haven't been involved in the meetings to discuss this.

Thank you,

Trevor Bedford, AICP | Senior Planner
Douglas County Department of Community Development
Planning Services Division
Address | 100 Third St., Castle Rock, CO 80104
Direct | 303.814.4372 **Main** | 303.660.7460
Email tbedford@douglas.co.us

From: Chuck Smith <CSmith@douglas.co.us>
Sent: Monday, June 30, 2025 9:33 AM
To: Dan Sheldon <dsheldon@miller-united.com>; Chris Martin <CMartin@douglas.co.us>; Trevor Bedford <tbedford@douglas.co.us>
Cc: Stephen Simon <stephen@smrocha.com>; Mike Rocha <mike@smrocha.com>; Kevin Lovelace <klovelace@lja.com>;

Daniel Jennings <djennings@norris-design.com>; Sarah Tengen <stengen@norris-design.com>

Subject: RE: (External) Ramblewood - Paving Cost Share

Good Morning Dan – I'm good with the proposed language – I'm sure Trevor will run this past our attorney's as well - 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

From: Dan Sheldon <dsheldon@miller-united.com>

Sent: Monday, June 30, 2025 9:15 AM

To: Chuck Smith <CSmith@douglas.co.us>; Chris Martin <CMartin@douglas.co.us>; Trevor Bedford <tbedford@douglas.co.us>

Cc: Stephen Simon <stephen@smrocha.com>; Mike Rocha <mike@smrocha.com>; Kevin Lovelace <klovelace@lja.com>; Daniel Jennings <djennings@norris-design.com>; Sarah Tengen <stengen@norris-design.com>

Subject: RE: (External) Ramblewood - Paving Cost Share

Chuck:

Per our conversation on Friday afternoon, we are in agreement with your proposal below. To that end, I'm requesting that Daniel & Sarah from Norris Design resubmit a page (or the whole submittal if desired) to Trevor with the following revised commitment under #6A in the PD:

“The Owners and their Assigns are responsible for their fair share contribution towards the paving of Alpine Drive in the amount of \$27,554.32 (the “**Alpine Drive Contribution**”). Said payment shall be made within 30 days after the recordation of the final plat for the Ramblewood development. In the event that the County has not completed the paving of Alpine Drive by December 31, 2027, the Owner and/or Assigns may request a refund of the Alpine Drive Contribution and the County agrees to reimburse Owner and/or Assigns within 30 days after such a request is made.”

Please let us know if this language is acceptable before we resubmit this page back to Trevor to include as the final PD Zoning document in the upcoming Planning Commission and Board of County Commissioners packets. I believe his deadline to submit is one week from today.

Thank you for your cooperation on this matter.



Daniel R. Sheldon

Principal

Miller United Real Estate

Email: dsheldon@miller-united.com

From: Chuck Smith <CSmith@douglas.co.us>

Sent: Friday, June 27, 2025 2:06 PM

To: Dan Sheldon <dsheldon@miller-united.com>; Chris Martin <CMartin@douglas.co.us>; Trevor Bedford <tbedford@douglas.co.us>

Cc: Stephen Simon <stephen@smrocha.com>; Mike Rocha <mike@smrocha.com>; Kevin Lovelace <klovelace@lja.com>; Daniel Jennings <djennings@norris-design.com>; Sarah Tengen <stengen@norris-design.com>
Subject: RE: (External) Ramblewood - Paving Cost Share

Hi Dan,

I talked with Janet Herman & Dan Roberts and they are willing to remove the requirement of paving Village Road since it is currently budgeted for next year, however Alpine Drive is currently not in the budget for paving next year. The plan is to pave Alpine Drive in 2026 or 2027. The County would require the commitment from this developer to pay their fair share for the paving of Alpine Drive – per the redlines below. The County would be willing to include language in the PD that if the paving of Alpine Drive is not complete by the end of year 2027, the developer could request their money back.

Let me know if this would be acceptable.

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

From: Dan Sheldon <dsheldon@miller-united.com>
Sent: Friday, June 13, 2025 11:14 AM
To: Chris Martin <CMartin@douglas.co.us>; Chuck Smith <CSmith@douglas.co.us>; Trevor Bedford <tbedford@douglas.co.us>
Cc: Stephen Simon <stephen@smrocha.com>; Mike Rocha <mike@smrocha.com>; Kevin Lovelace <klovelace@lja.com>; Daniel Jennings <djennings@norris-design.com>; Sarah Tengen <stengen@norris-design.com>
Subject: Ramblewood - Paving Cost Share

Chris & Chuck:

Good morning. I hope this finds you both well.

I wanted to thank you both for your assistance over the past few years on my Elora project in Elbert County. We were able to finalize all of our entitlements and have now broken ground on construction. As you know, that was a complicated deal as it sits at the intersection of County Line Road and Delbert/Monahan straddled by Elbert/Douglas/Arapahoe counties as well as the City of Aurora. We were pleased that we were able to work with Douglas County on various intersection issues and we look forward to seeing that intersection be dramatically improved.

We're working with Trevor Bedford to get our Ramblewood PD ready for Planning Commission and BoCC hearings on 7/21 and 8/26 respectively. The requested note below (screenshot) from you is still an outstanding item that needs to be finalized. It is my belief that the County's request for us to make a contribution towards the Alpine Road and Village Road paving projects is unreasonable for the following reasons:

1. Are you sending a bill to all the other property owners along Village Road and Alpine Drive for their "fair share"? The answer is "no", you are not. The County is paying for it out of taxpayer

money. My property is a taxpayer as well and is current on its tax bill. Why would we get what's essentially a special assessment?

2. If there was no pending application for zoning on this my property, would you be hitting up the current underlying property owner for his "fair share"? He drives the roads to get to his horses several days a week.
3. There are undeveloped lots within Hidden Village that will eventually have a house on it and therefore generate 8-10 vehicle trips per day onto Alpine and Village Roads. Are you sending those owners a special assessment for their fair share? Of course you aren't. My site is no different.
4. Because you're asking for me to pay my "fair share" of Alpine and Village Road paving based on the premise that our future residents will use those roads, should I then assume that the County is going to pay its fair share of the construction of the roads in my Ramblewood development? It's just as reasonable of an assumption that the existing Hidden Village residents will use our new roads. That would only be fair wouldn't it?
5. We aren't even zoned yet. As a result, we certainly don't have a preliminary plan or final plat done yet for our project. So even if we were willing to pay our fair share of Alpine and Village Roads paving, how on earth could we accurately determine what our fair share is? Just because we're seeking zoning for a certain number of lots, the preliminary plan and final plat are a year and a half away respectively. We won't know whether we'll have 68 lots there or 12 lots there. A good example is The Fields. They had zoning for twice the number of lots that they eventually got approved at preliminary and final plat. It's impossible to set a number today.
6. If the County paved the roads this past spring, would they be asking for a reimbursement? My point is that at what point is a project far enough along to request such a contribution. In addition to all my other arguments above, I'm concerned over the still speculative nature of my project. We have nothing yet at this point, yet I'm being asked to commit to a \$57K contribution that but for our request for a PD being submitted to the County, you wouldn't be otherwise requesting.
7. Finally, the County must have had this budgeted to be 100% a County expense. There's no way that the County could have predicted that my site would come in for entitlements. Point being that the County has the full funding for this project in place and this appears to be simply an attempt to recoup some of those costs at the expense of a developer.

I know you've already discussed this topic internally and with my traffic engineers from SM Rocha, but until now I don't think anyone has provided any of the common sense reasons why this doesn't make any sense. I'd respectfully ask that you reconsider your position on this. Otherwise, I think we should start looking at what the County's fair share of the cost of constructing my new roads will be. Please discuss and get back to me ASAP.

Thanks, and have a great weekend.

5. ROADWAY IMPROVEMENTS

ROADWAY IMPROVEMENTS WILL BE MADE AS DETERMINED ENGINEERING PUBLIC WORKS.

The Owners and their Assigns are paving of Alpine Drive (32% of the their fair share contribution toward \$29,378.16.

6. ON AND OFF-SITE IMPROVEMENTS

- A. THE OWNERS AND THEIR ASSIGNS ARE RESPONSIBLE FOR NEGOTIATING THEIR FAIR SHARE CONTRIBUTIONS TOWARDS THE FUTURE PAVING IMPROVEMENTS TO ALPINE DRIVE AND VILLAGE ROAD.
- B. THE OWNERS AND THEIR ASSIGNS SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE IMPROVEMENTS AT THE INTERSECTION OF HILLTOP ROAD AND THE ACCESS INTO THE RAMBLEWOOD DEVELOPMENT.



Daniel R. Sheldon

Principal

Miller United Real Estate

6900 E. Belleview Avenue, Suite 300

Greenwood Village, CO 80111

Cell: (303) 886-2838

Email: dsheldon@miller-united.com

Web: www.miller-united.com



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.285.6612**
violeta.ciocanu@xcelenergy.com

March 31, 2025

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

Attn: Trevor Bedford

Re: Ramblewood Planned Development, Case # ZR2024-031

Public Service Company of Colorado's (PSCo) Right of Way and Permits Referral Desk has reviewed the documents for **Ramblewood Planned Development**. As always, thank you for the opportunity to take part in the review process. For these *single-family residential* lots and to ensure that adequate utility easements are available within this development and per state statutes, Public Service Company requests that the following language or plat note is placed on the preliminary and final plats for the subdivision:

Six-foot (6') wide dry utility easements are hereby dedicated on private property adjacent to each front lot line of each lot. In addition, eight-foot (8') wide dry utility easements are hereby dedicated around the perimeter of tracts, parcels and/or open space areas. These easements are dedicated to the County of Douglas for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities). Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

Public Service Company also requests that all utility easements are depicted graphically on the preliminary and final plats. While these easements should accommodate the majority of utilities to be installed in the subdivision, some additional easements may be required as planning and building progresses.

The property owner/developer/contractor must complete the application process for any new natural gas service via xcelenergy.com/InstallAndConnect. It is then the responsibility of the

developer to contact the Designer assigned to the project for approval of design details.

Additional easements may need to be acquired by separate document. The Designer must contact the appropriate Right-of-Way Agent.

As a safety precaution, PSCo would like to remind the developer to contact Colorado 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



April 8, 2025

Trevor Bedford

Douglas County Planning Services

Transmission via email: tbedford@douglas.co.us

Re: Ramblewood Subdivision - Planned Development Rezone

Case Number: ZR2024-031

Applicants: Hilltop Jam, LLC and Bradley & Joan Whittlesey

Part of Sec. 6, Twp. 7S, Rng. 65W, 6th P.M., Douglas County

Water Division 1, Water District 8

Dear Trevor Bedford,

We have received your March 18, 2025 proposal to rezone and subdivide 176.794 +/- acres located in Sec. 6, Twp. 7S, Rng. 65W, 6th P.M., Douglas County (Parcel ID No. 234706100001 and 234706300001). This application proposes rezoning from Agricultural-1 to Planned Development and subdividing the 176.794 +/- acres into seventy lots of varying size, with the remaining 60 +/- acres being open space. Two of the lots will be primarily agricultural in use, with Ranch Lot 1 being 25 acres in size and Ranch Lot 2 being 58 acres in size.

Water Supply Demand

68 Lots in area PA-A



The annual water demand per single family equivalent (SFE) for the 68 lots located in area PA-A of the proposed subdivision is 92.4 acre-feet/year as shown in the table below:

Use	Demand (af/yr/sfe)	No. Units	Total Demand (af/yr)
Indoor/Outdoor residential	1.1	68	74.8
Outdoor non-residential (irrigation of 6.86 acres)	-	-	17.6
-	-	Total	92.4

2 Lots in area PA-B

Water demands for the two lots (Ranch Lot 1 and Ranch Lot 2) located in area PA-B of the proposed subdivision are unknown. The application documents indicate these two lots will be mainly used for agricultural purposes, with an allowance for up to two residential dwelling units in area PA-B.

Source of Water Supply

68 Lots in area PA-A

The proposed water supplier for the 68 single-family lots located in area PA-A of the proposed subdivision is service provided by the Parker Water and Sanitation District (District). A conditional “will-serve” letter dated January 17, 2025 indicates that the District is willing to serve the proposed subdivision, conditioned upon compliance with all the District Rules and Regulations, Standard and Specifications, and/or conditions specific to the property; including payment of the appropriate fees and any charges related to water and/or sanitation service, as established from time to time by the District Directors. Service from the District is also conditional upon successful completion of the property inclusion into the District service area.

According to the “will-serve” letter, the District has a combination of decreed Denver Basin supplies, junior and senior tributary water rights, and storage rights in Rueter-Hess Reservoir totaling 71,920 af/yr. The anticipated yield of these rights in an average or dry year is 41,134 af/yr, which exceeds the estimated buildout demand of 23,500 af/yr.

The majority of the District’s supply is water from Denver Basin bedrock aquifers. 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 in the District’s decrees 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.

The Applicant has indicated that a portion of the Denver Basin groundwater underlying the Southern 160 acres that was decreed in case no. 07CW0107 by the Division 1 Water Court will be conveyed to the District in return for providing water service. Similarly, a portion of the Denver Basin groundwater (which has not yet been decreed or claimed) underlying the 17 acres to the North will also be conveyed to the District. The Applicant intends to convey an estimated total 92.4 af/year of Denver Basin groundwater from the Lower Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers to the District in order to offset the anticipated demand from the subdivision.

The groundwater underlying the 160 acre property was adjudicated in case no. 07CW0107 for domestic, industrial, commercial, irrigation, stock watering,

recreational, fire protection, and augmentation purposes, both on and off the subject property. Table 1 summarizes the amounts quantified in each aquifer in case no. 07CW0107, the amount estimated underlying the undecreed 17 acres, and the amounts estimated to be conveyed to the District:

Aquifer	Annual amount from 07CW0107 underlying 160 acres (100 year aquifer allocation)	Annual amount available estimated by Applicant underlying 17 acres (100 year aquifer allocation)	Annual amount estimated to be conveyed to the District from 07CW01007 ¹ and the undecreed 17 acres ²	Type
Lower Dawson	32.0	3.6	- 1.8 ²	NT*
Denver	70.7	8.5	35.4 ¹ 4.3 ²	NT*
Arapahoe	68.0	7.2	51.0 ¹ 5.4 ²	NT*
Laramie Fox-Hills	46.8	5.0	- 2.5 ²	NT*
Total	217.5	24.3	86.4 ¹ 14.0 ²	-

*Nontributary

2 Lots in area PA-B

The proposed water supply for the 2 lots located in area PA-B are on-lot domestic wells. It is unclear what specific aquifer source will supply these 2 lots.

A review of our records does not show any permitted wells located on the subject property. However, well permit no. 31958 (located on an adjacent property) was decreed in case no. W-5628 by the Division 1 Water Court as Bowman Well No. 31958

for domestic, stock watering, and agricultural irrigation uses on approximately 80 acres in the E ½ of the NW ¼ of Sec. 6, Twp. 7S, Rng. 65W. Well no. 31958 has an appropriation based on the law as it existed before the enactment of Senate Bill 73-213 and is known as a “Pre-213 Well” and the well currently claims all Upper Dawson groundwater underlying the subject property.

State Engineer’s Office Opinion

Based upon the above and pursuant to section 30-28-136(1)(h)(l), this office has not received information sufficient to render an opinion regarding whether the proposed water supply is adequate and can be provided without causing injury to decreed water rights. Prior to further review of the subdivision water supply plan, the following information is required:

1. Clarify the proposed uses and aquifer source for Ranch Lots 1 and 2.

Additional Comments

The applicant should be aware that any proposed detention pond for this development, must meet the requirements of a “storm water detention and infiltration facility” as defined in section 37-92-602(8), Colorado Revised Statutes, otherwise the structure may be subject to administration by this office. The applicant should review DWR’s [Administrative Statement Regarding the Management of Storm Water Detention Facilities and Post-Wildland Fire Facilities in Colorado](#) to ensure that the notification, construction and operation of the proposed structure meets statutory and administrative requirements. The applicant is encouraged to use Colorado Stormwater Detention and Infiltration Facility Notification Portal, located at <https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>, to meet the notification requirements.

Please contact Mike Matz at 303-866-3581 x8241 or at michael.matz@state.co.us with any questions.

Sincerely,



Ioana Comaniciu, P.E.
Water Resources Engineer
Ec: Referral no. 33884



May 12, 2025

Trevor Bedford

Douglas County Planning Services

Transmission via email: tbedford@douglas.co.us

Re: Ramblewood Subdivision - Planned Development Rezone (2nd Letter)

Case Number: ZR2024-031

Applicants: Hilltop Jam, LLC and Bradley & Joan Whittlesey

Part of Sec. 6, Twp. 7S, Rng. 65W, 6th P.M., Douglas County

Water Division 1, Water District 8

Dear Trevor Bedford,

We have received your March 18, 2025 proposal and additional information provided on May 1, 2025 to rezone and subdivide 176.794 +/- acres located in Sec. 6, Twp. 7S, Rng. 65W, 6th P.M., Douglas County (Parcel ID No. 234706100001 and 234706300001). This application proposes rezoning from Agricultural-1 to Planned Development and subdividing the 176.794 +/- acres into seventy lots of varying size, with the remaining 60 +/- acres being open space. Two of the lots will be primarily agricultural in use, with Ranch Lot 1 being 25 acres in size and Ranch Lot 2 being 58 acres in size.

Our office previously provided comments in a letter dated April 8, 2025. The comments contained in this 2nd letter supersede those that were previously provided.



Water Supply Demand

68 Lots in area PA-A

The annual water demand per single family equivalent (SFE) for the 68 lots located in area PA-A of the proposed subdivision is 92.4 acre-feet/year as shown in the table below:

Use	Demand (af/yr/sfe)	No. Units	Total Demand (af/yr)
Indoor/Outdoor residential	1.1	68	74.8
Outdoor non-residential (irrigation of 6.86 acres)	-	-	17.6
-	-	Total	92.4

2 Lots in area PA-B

The application documents indicate that Ranch Lot 1 and Ranch Lot 2 will be mainly used for agricultural purposes, with an allowance for up to two residential dwelling units in area PA-B. The annual water demand for Ranch Lot 1 and Ranch Lot 2 located in area PA-B of the proposed subdivision is estimated to be 3.5 acre-feet/year as shown in the table below:

Use	Demand (af/yr/lot)	No. Lots	Total Demand (af/yr)
Indoor residential	0.2	2	0.4
Residential irrigation (30,000 SF)	1.5	2	3.0
Domestic animal watering (4 animals)	0.05	2	0.1
-	-	Total	3.5

Source of Water Supply

68 Lots in area PA-A

The proposed water supplier for the 68 single-family lots located in area PA-A of the proposed subdivision is service provided by the Parker Water and Sanitation District (District). A conditional “will-serve” letter dated January 17, 2025 indicates that the District is willing to serve the proposed subdivision, conditioned upon compliance with all the District Rules and Regulations, Standard and Specifications, and/or conditions specific to the property; including payment of the appropriate fees and any charges related to water and/or sanitation service, as established from time to time by the District Directors. Service from the District is also conditional upon successful completion of the property inclusion into the District service area.

According to the “will-serve” letter, the District has a combination of decreed Denver Basin supplies, junior and senior tributary water rights, and storage rights in Rueter-Hess Reservoir totaling 71,920 af/yr. The anticipated yield of these rights in an average or dry year is 41,134 af/yr, which exceeds the estimated buildout demand of 23,500 af/yr.

The majority of the District’s supply is water from Denver Basin bedrock aquifers. 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 in the District’s decrees 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.

The Applicant has indicated that a portion of the Denver Basin groundwater underlying the Southern 160 acres that was decreed in case no. 07CW0107 by the Division 1 Water Court will be conveyed to the District in return for providing water service. Similarly, a portion of the Denver Basin groundwater (which has not yet been decreed or claimed) underlying the 17 acres to the North will also be conveyed to the District. The Applicant intends to convey an estimated total 92.4 af/year of Denver Basin groundwater from the Lower Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers to the District in order to offset the anticipated demand from the subdivision.

The groundwater underlying the 160 acre property was adjudicated in case no. 07CW0107 for domestic, industrial, commercial, irrigation, stock watering, recreational, fire protection, and augmentation purposes, both on and off the subject property. Table 1 summarizes the amounts quantified in each aquifer in case no. 07CW0107, the amount estimated underlying the undecreed 17 acres, and the amounts estimated to be conveyed to the District:

Aquifer	Annual amount from 07CW0107 underlying 160 acres (100 year aquifer allocation)	Annual amount available estimated by Applicant underlying 17 acres (100 year aquifer allocation)	Annual amount estimated to be conveyed to the District from 07CW01007 ¹ and the undecreed 17 acres ²	Type
Lower Dawson	32.0	3.6	- 1.8 ²	NT*
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Arapahoe	68.0	7.2	51.0 ¹ 5.4 ²	NT*
Laramie Fox-Hills	46.8	5.0	-	NT*

			2.5 ²	
Total	217.5	24.3	86.4 ¹ 14.0 ²	-

*Nontributary

2 Lots in area PA-B

The proposed water supply for the 2 lots located in area PA-B are on-lot domestic wells. According to the additional information provided by the Applicant on May 1, 2025, 2 acre-feet per year of Lower Dawson ground water decreed under Water Court Division 1 case no. 07CW0107 will be conveyed to each lot (Ranch Lot 1 and Ranch Lot 2). The Lower Dawson aquifer under the subject property is considered to be non-tributary.

Applications for on lot well permits, submitted by an entity other than the original decree 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

Based upon the above and pursuant to section 30-28-136(1)(h)(I) and section 30-28-136(1)(h)(II), 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, so long as the District is committed to serving the 68 lots.

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 water rights, 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.

Additional Comments

The applicant should be aware that any proposed detention pond for this development, must meet the requirements of a “storm water detention and infiltration facility” as defined in section 37-92-602(8), Colorado Revised Statutes, otherwise the structure may be subject to administration by this office. The applicant should review DWR’s [Administrative Statement Regarding the Management of Storm Water Detention Facilities and Post-Wildland Fire Facilities in Colorado](#) to ensure that the notification, construction and operation of the proposed structure

meets statutory and administrative requirements. The applicant is encouraged to use Colorado Stormwater Detention and Infiltration Facility Notification Portal, located at <https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>, to meet the notification requirements.

Please contact Mike Matz at 303-866-3581 x8241 or at michael.matz@state.co.us with any questions.

Sincerely,



Ioana Comaniciu, P.E.

Water Resources Engineer

Ec: Referral no. 33884

March 20, 2025

Trevor Bedford, AICP
Douglas County Department of Community Development
Planning Services Division
100 Third St., Castle Rock, CO 80104

Re: ZR2024-031 Ramblewood Planned Development

Dear Mr. Bedford,

This letter provides comments regarding the request for approval for a Planned Development (PD) rezoning to establish the Ramblewood PD consisting of up to 70 single-family dwelling units and 14 acres of open space within a total 176 acres. The site is located on the south side of Hilltop Road approximately across from the intersection of Hilltop Road and Merryvale Trail.

After reviewing the property there has been no previous cultural surveys performed. At this time the Curator has no further recommendations, but 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

SOUTH METRO FIRE RESCUE

FIRE MARSHAL'S OFFICE



Trevor Bedford, AICP, Project Planner
Douglas County Department of Community Development, Planning Services
100 Third St
Castle Rock Co 80104
303.660.7460
303.660.9550 Fax

Project Name: Ramblewood Planned Development
Project File #: **ZR2024-031**
S Metro Review #: REFXRP25-00067

Review date: April 11, 2025

Plan reviewer: Aaron Miller
720.989.2246
aaron.miller@southmetro.org

Project Summary: The applicant is proposing a Planned Development (PD) rezoning to establish the Ramblewood PD consisting of up to 70 single-family dwelling units and 14 acres of open space within a total 176 acres. The site is located on the south side of Hilltop Road approximately across from the intersection of Hilltop Road and Merryvale Trail.

Code Reference: Douglas County Fire Code, 2018 International Fire Code, and 2021 International Building Code with amendments as adopted by Douglas County.

South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed PD Rezoning. Applicants are encouraged to contact SMFR regarding the applicable fire code requirements for the proposed project.



620 Wilcox Street
Castle Rock, Colorado 80104

April 28th, 2025

Trevor Bedford, AICP | Senior Planner
Douglas County Department of Community Development
Planning Services Division
Address | 100 Third St., Castle Rock, CO 80104
Direct | 303.814.4372 Main | 303.660.7460
Email tbedford@douglas.co.us

RE: Ramblewood Planned Development (ZR2024-031)

Dear Mr. Bedford,

It is our understanding that the applicant is requesting to rezone approximately 176 acres of land from A1 and RR to Planned Development (PD) for future subdivision and residential development. It is our understanding that the applicant is proposing 70 single family residential units. The property is generally located south of Hilltop Road at the intersection of Hilltop Road and Merryvale Trail.

DCSD has calculated the amount of school site land requirement for students generated by the proposed planned development. A total of 38 elementary school students, 11 middle school students, and 22 high school students are expected from the development (as proposed) generating a land dedication requirement of 1.646-acres. Since this is smaller than DCSD's minimum school site size, and since the applicant has stated in their project summary that no school land dedication is proposed and they propose meeting school obligations with cash in lieu, DCSD requests cash-in-lieu of land dedication.

**CASH-IN-LIEU CALCULATION
STUDENT GENERATION**

PROJECT NAME: RAMBLEWOOD PLANNED DEVELOPMENT (ZR2024-031)				
DU/	ACRES	DENSITY		
70	176.1	0.40		
			Generation	Number
<i>STUDENT GENERATION RATES</i>	No. of DU's		Rate	of Students
ELEMENTARY	70	X	0.54	38
MIDDLE SCHOOL	70	X	0.15	11
HIGH SCHOOL	70	X	0.31	22
			TOTAL	70
			Required	
			School	Land
	Number		Acreage	Dedication
<i>SCHOOL LAND DEDICATION</i>	of Students		Per Student	Acreage
ELEMENTARY	38	X	0.018	0.680
MIDDLE SCHOOL	11	X	0.030	0.345
HIGH SCHOOL	22	X	0.030	0.651
			TOTAL	1.646

As per Article 1004.05.3 of the Douglas County Subdivision Regulations, “The cash-in-lieu fee shall be equivalent to the full market value of the acreage required for school land dedication. Value shall be based on anticipated market value after completion of platting. The applicant shall submit a proposal for the cash-in-lieu fee and supply the information necessary for the Board to evaluate the adequacy of the proposal. This information shall include at least one appraisal of the property by a qualified appraiser.” And as per Article 1004.06, “The conveyance of land or payment of fees obtained through the County's dedication requirement shall be required prior to the recordation of the first final plat for the subdivision. The conveyance of dedicated school land to Douglas County shall be by warranty deed and the title shall be free and clear of all liens and encumbrances, including real property taxes prorated to the time of conveyance. The applicant shall provide a title insurance policy in the County's name and a certified survey at the time of conveyance.”

Granted neither the applicant nor Douglas County object to these fees DCSD has no objection to the proposed project. DCSD looks forward to future collaboration with the applicant and Douglas County on this proposal.

Shavon Caldwell, Planning Manager
DCSD Planning & Construction
scaldwell21@dcsdk12.org
303.387.0417



July 2, 2025

Trevor Bedford
Department of Community Development
100 Third Street
Castle Rock, CO 80104

Re: Referral Submittal Review (ZR2024-031) for a Planned Development (PD) for Ramblewood

Dear Mr. Bedford,

Thank you for your comments for the referral submittal review of a Planned Development (PD) application for the property known as Ramblewood (formerly known as Hilltop 117). We are pleased to make our third submittal for a Planned Development, addressing the comments provided by the County. Please see below for the responses provided to all written County comments.

We look forward to continuing to work with the County during the review and approval process for this application. Please contact us if you have any questions or if you need additional information.

Sincerely,
Norris Design

Daniel Jennings

Daniel Jennings
Senior Associate



ADDRESSING ANALYST

- No comment.

Response: Thank you for your review.

BUILDING SERVICES

- No comment.

Response: Thank you for your review.

CENTURY LINK

- Qwest Corporation, d/b/a CenturyLink QC (“CenturyLink”) has reviewed the request for comment on the project described above and has determined that it has No Comments/No Objections.

Response: Thank you for your review.

CHERRY CREEK BASIN WATER QUALITY AUTHORITY

- The Cherry Creek Basin Water Quality Authority (Authority) acknowledges notification from Douglas County that the proposed development plans for ZR2024-031, Ramblewood Planned Development have been or will be reviewed by Douglas County for compliance with the applicable Regulation 72 construction and post-construction requirements. Based on the Authority's current policy, the Authority will no longer routinely conduct a technical review and instead the Authority will defer to Douglas County's review and ultimate determination that the proposed development plans comply with Regulation 72. If a technical review of the proposed development plan is needed, please contact LandUseReferral@ccbwa.org. The review may include consultation with the Authority's Technical Manager to address specific questions or to conduct a more detailed Land Use Review, if warranted.

Response: Thank you for your response.

COLORADO DIVISION OF WATER RESOURCES

- Based upon the above and pursuant to section 30-28-136(1)(h)(I), this office has not received information sufficient to render an opinion regarding whether the proposed water supply is adequate and can be provided without causing injury to decreed water rights. Prior to further review of the subdivision water supply plan, the following information is required:

- Clarify the proposed uses and aquifer source for Ranch Lots 1 and 2.

Response: Clarification has been provided in the attached Supplemental Water Supply Summary, dated May 1, 2025 from Juhn Water Consultants, Inc.

- The applicant should be aware that any proposed detention pond for this development, must meet the requirements of a “storm water detention and infiltration facility” as defined in section 37-92-602(8), Colorado Revised Statutes, otherwise the structure may be subject to administration by this office. The applicant should review DWR's Administrative Statement Regarding the Management of Storm Water Detention Facilities and Post-Wildland Fire Facilities in Colorado to ensure that the notification, construction and operation of the proposed structure meets statutory and administrative requirements. The applicant is encouraged to use Colorado Stormwater Detention and Infiltration Facility Notification Portal, located at



<https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>, to meet the notification requirements. Please contact Mike Matz at 303-866-3581 x8241 or at michael.matz@state.co.us with any questions.

Response: Noted, the standard practices and procedures for EDB's will be adhered to in future design submittals of this project's technical application process.

CORE ELECTRIC COOPERATIVE

- CORE Electric Cooperative will require the revised setback language not allowing encroachment into setbacks. Setbacks include utility easements; CORE will not allow encroachments into utility easements. CORE will require a minimum front lot 15-foot setback.
- **Response: Noted, these will be incorporated in the Preliminary Plat (and Final Plat) for review.**
- CORE will require the following notes to be added:
 - No improvements that conflict with or interfere with construction, maintenance or access to utilities shall be placed within the utility easements. Prohibited improvements include, but are not limited to, permanent structures, buildings, counterforts, decks, attached porches, attached stairs, window wells, air conditioning units, retaining walls/components and other objects that may interfere with the utility facilities or access, use and maintenance thereof.

Response: This note will be added on the Preliminary and Final Plats and is not applicable to the PD Document.

DOUGLAS COUNTY HEALTH DEPARTMENT

- Exposure to air pollution is associated with several health problems including asthma, lung cancer, and heart disease. The Colorado Department of Public Health and Environment Air Pollution Control Division (APCD) regulates air emissions, including fugitive dust. Control measures may be necessary to minimize the amount of fugitive emissions from site activities including haul roads, stockpiles, and erosion. The applicant shall contact the APCD, at (303) 692-3100 for more information. Additional information is available at <https://cdphe.colorado.gov/air-emissions-from-business-and-industry>.

Response: Comment noted, thank you.

DOUGLAS COUNTY HISTORIC PRESERVATION

- After reviewing the property there has been no previous cultural surveys performed. At this time the Curator has no further recommendations, but if there are future development plans that involve any ground disturbance a Class II survey will need to be performed to evaluate cultural resources before any disturbance occurs.
- **Response: A Cultural Resources Survey shall be prepared at the time of Preliminary Plan. The findings of the survey will be evaluated and necessary accommodations will be provided at the time of Preliminary Plan.**
- 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 the completion of the appropriate Colorado Office of Archaeology and Historic Preservation (OAH) 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.

Response: Understood, thank you.

DOUGLAS COUNTY HEALTH DEPARTMENT

- Exposure to air pollution is associated with several health problems including asthma, lung cancer, and heart disease. The Colorado Department of Public Health and Environment Air Pollution Control Division (APCD) regulates air emissions, including fugitive dust. Control measures may be necessary to minimize the amount of fugitive emissions from site activities including haul roads, stockpiles, and erosion. The applicant shall contact the APCD, at (303) 692-3100 for more information. Additional information is available at <https://cdphe.colorado.gov/air-emissions-from-business-and-industry>.

Response: Comment noted, thank you.

- Development of the subject parcel will potentially result in an increase of stormwater and snowmelt runoff that may contribute significant pollutant loadings. These pollutants include bacteria, nutrients, metals, and oxygen consuming contaminants.

Response: Stormwater Management shall adhere to current stormwater management practices as required in the Douglas County Storm Drainage and Technical Criteria Manual to mitigate consumption of contaminants.

- DCHD noted the Phase one drainage report.

Response: Thank you. Acknowledged.

DOUGLAS COUNTY ENGINEERING

- The Phase I Drainage Report is acceptable. Refer to the attached redlines and email from our traffic engineer.

Response: LJA Acknowledges the conditional approval of the Phase 1 Drainage report. See responses to traffic items below.

- Hilltop Rd at Access A/Merryvale Trail

- Future year intersection geometry: per Figure 7 this analysis assumes that the northwest bound left turns from Hilltop Rd will be made from a shared through/left turn lane. This is not typical for higher classification – 4-lane roadways. This study should analyze this approach assuming a dedicated left turn lane for all the future scenarios.

Response: Noted. Auxiliary lane analysis added.

- For the northeast bound approach to Hilltop Rd (Access A) it is assumed in the analysis that left, through, and right turning movements are made from a single lane approach. Although it will likely not make a significant change to the LOS for this approach, this study should assume that there would be a dedicated left turn lane and a shared through/right turn lane.



Response: Noted. Study updated to assume Access A geometry will include a dedicated left turn lane, and a shared through and right turn lane.

- This intersection is shown to operate at poor levels of service during both peak hours and in both short (2029) and long term (2044) future horizons. This is due to the delay experience by the stop controlled approaches. As the study indicates, this is not uncommon for stop controlled approaches to operate with noticeable delays. The delay for this approach is:
 - 2029 horizon; 36.2 second per vehicle (sec/v) in the AM peak and 64.3 sec/v in the PM peak.
 - 2044 horizon; 167.7 sec/v in the AM peak and 145.5 sec/v in the PM peak.

County criteria requires that for intersections within the study area with a projected LOS "E" or worse, mitigations measures shall be identified to bring the intersection operation to an acceptable level (this would be LOS D).

The study identifies the potential mitigation for this intersection is conversion of the intersection to signal-control operation. While signal-control of this intersection is likely to improve the side street LOS, this would come at the expense of the free flow movements on Hilltop Rd. Also, traffic-signal operation is not likely to be warranted by volume warrants.

Other potential mitigations would include:

- Roundabout
- Restricting/prohibiting left turn movements.

It is not likely that implementation of any of these mitigation would be needed in the short term horizon.

Response: Comments acknowledged. Additional discussion of long-term mitigation options added.

- Because paving of the area local roads in 2025 is currently planned for by the County, cost-share percentage has been determined for the two unpaved road segments impacted by the Ramblewood project trips. The Ramblewood project's share is calculated as:
 - 45% for Alpine Dr from the proposed site access to Village Rd.
 - 21% for Village Rd.

Response: The need for contribution to paving projects is to be further coordinated with the County, as it is not considered to be applicable to this application. However, it is noted that in discussion with County Staff, an alternative method for calculating a potential contribution is proposed based on the collected ADT on the northern end of Village Road of 3,340 vpd. Utilizing the summation of total peak hour volumes passing through the intersection at Village Road and Betts Ranch Road, the percent split of volumes that use Village Road can be calculated and applied to this ADT. From this method the following values are derived:

- ***ADT on Village Road: 401***
- ***ADT on Alpine Drive: 129***
- ***Total ADT's with addition of site-traffic (65 vpd): 466 and 194, respectively***
- ***Percent contribution to total volume: 14% on Village Rd, and 34% on Alpine Dr.***



- Summary
 - The south leg of the intersection of Hilltop Rd/Access A/Merryvale Tr, stop controlled with a single southwest bound lane and 2 northbound approach lanes (dedicated left turn lane and combined through/right turn lane at Hilltop Rd).

Response: Noted. Auxiliary lane analysis added and geometry updated.
 - A northwest bound left turn lane on Hilltop Rd into the development access.
 - Note: if Access A is constructed prior to the Hilltop Rd widening project planned by the County, then the Ramblewood development will be responsible to improve Hilltop Rd to include this improvement. Otherwise the improvement would be constructed with the County's project with a fair-share contribution from the development.

Response: Noted. Auxiliary lane analysis added and geometry updated.
 - The Owners and their Assigns are responsible for their fair share contribution towards the paving of Alpine Drive (32% of the total cost is \$27,544.32). They also are responsible for their fair share contribution towards the paving of Village Road (14% of the total cost is \$29,378.16).

Response: Applicant worked with County to reach the following agreement. "The Owners and their assigns are responsible for their fair share contribution towards the paving of Alpine Drive in the amount of \$27,554.32 (the "Alpine Drive Contribution"). Said payment shall be made prior to the recordation of the Final Plat for the Ramblewood Development. In the event that the County has not completed the paving of Alpine Drive by December 31, 2027, the Owner and/or assigns may request a refund of the Alpine Drive Contribution and the County agrees to reimburse Owner and/or assigns within 30 days after such a request is made."

DOUGLAS COUNTY PARKS AND TRAILS

- They would need to follow the Park Land Dedication standards as outlined in Article 10 of the Douglas County Subdivision Resolution, so I believe they are covering that in the plan.

Response: Park Land Dedication standards shall be followed as outlined in Article 10.

DOUGLAS COUNTY SCHOOL DISTRICT

- DCSD has calculated the amount of school site land requirement for students generated by the proposed planned development. A total of 38 elementary school students, 11 middle school students, and 22 high school students are expected from the development (as proposed) generating a land dedication requirement of 1.646-acres. Since this is smaller than DCSD's minimum school site size, and since the applicant has stated in their project summary that no school land dedication is proposed and they propose meeting school obligations with cash in lieu, DCSD requests cash-in-lieu of land dedication.

Response: Comment noted. Thank you.

OFFICE OF EMERGENCY MANAGEMENT

- OEM has no issues with this project.



Response: Thank you for your review.

PARKER WATER & SANITATION DISTRICT

- Please note this Project has not included into the Parker Water district at this time, no reviews will be completed until this project is a part of the Parker Water District.

Response: Noted

RESPEC

- 1803A.01 - The will-serve letter from PWSD demonstrates that the water rights owned by PWSD can be used for the proposed use since the Ramblewood Development is within the PWWD service area which already includes significant residential development. The Water Supply Summary and Demand Analysis and the Supplemental Water Supply Summary demonstrate that the groundwater rights under the 160-acres are decreed for proposed uses.

Response: Thank you for your review.

- 1803A.02 - The PWSD has been determined to be an Established District pursuant to Section 1811A.10 and thus the water supply meets the requirements of this standard. The Water Supply Summary and Demand Analysis demonstrates the water supply is sufficient and thus meets the requirements of this standard.

Response: Thank you for your review.

- 1803A.03 - The PWSD has been determined to be an Established District pursuant to Section 1811A.10 and thus the water supply meets the requirements of this standard. The Water Supply Summary and Demand Analysis demonstrates the water supply is feasible and shortages will not occur and thus meets the requirements of this standard.

Response: Thank you for your review.

- 1803A.04 - The application in this case provided a basis for the estimated water supply demand for the 68 SFE lots and the will-serve letter provided sufficient information to conclude PWSD can meet the demand for the 68 lots in the Ramblewood Development. The application also provided a basis for the estimated water supply demand for the two larger plots that will be served by individual wells. The Water Supply Summary and Demand Analysis and the Supplemental Water Supply Summary provided sufficient information to conclude that the Lower Dawson aquifer can meet the demand for the two larger lots. Douglas County Zoning Resolution Section 1806A provides the required documentation standards to be used to determine if the application meets the provisions of Section 18A. Section 1806A.02 is the required standard for the 68 SFE lots since they will be served for a District entity. Section 1806.01.4 through 1806.01.7 are the required standard for the two larger lots since they will be served with individual wells.

Response: Thank you for your review.

- 1806A.02.1 - The application included a will-serve letter from PWSD and a Water Supply Report from the District. The will-serve letter stated District's intent and ability to serve the development, the conditions under which the District will commit to serving the development, proposed uses, the allowed uses of the District's water rights, and that the proposed uses correspond to the allowed



uses of the District's water rights, and the feasibility of extending service to the development. The will-serve letter included the estimated demand of the 68 SFE lots in the development based on the water demand standards as established in Section 1805A. Therefore, the application did fulfill all requirements of 1806A.02.1 for rezoning applications.

Response: Thank you for your review.

- 1806A.01.4- The application in this case did not include a letter from a qualified attorney stating ownership by the applicant of, or an executed contract granting rights to the applicant for, adjudicated water rights and a copy of the court decree adjudicating the water rights. Therefore, the application did not fulfill all requirements of 1806A.01.4

Response: Water Supply Letter stating ownership was provided on June 13, 2025 from McGeady Becher Cortese Williams P.C.

- 1806A.01.5 - In this application there was not enough information for the State Engineer to decide on whether the proposed water supply is adequate and can be provided without causing injury to decreed water rights. Therefore, it is unclear if an augmentation plan is required by the State Engineer, and it cannot be determined if 1806A.01.5 is fulfilled.

Response: Since all the water rights being utilized for the project are nontributary ground water rights, they do not require an augmentation plan. 1806A.01.5 does not apply to this project.

- 1806A.01.6 - The application in this case did not include proof that the water rights in all Denver Basin aquifers have been reserved in perpetuity, for the benefit of future landowners within the proposed development, pursuant to a declaration of restrictive covenants in a form prescribed by the county. Therefore, the application did not fulfill all requirements of 1806A.01.06 for rezoning applications.

Response: Within the second comment letter from the State dated 5/12/2025, the State provided their opinion that the water rights are adequate for the project.

- 1806A.01.6 - Water Plan - In this application, the Water Supply Summary and Demand Analysis and the Supplemental Water Supply Summary provide which water rights from the Denver Basin aquifers will be dedicated to PWSD and which will be available for the two ranch plots. Therefore, all requirements for 1806A.01.7 were fulfilled. If you have any questions regarding our review of the water supply availability and demand, please do not hesitate to give us a call.

Response: Thank you for your review.

SOUTH METRO FIRE RESCUE

- South Metro Fire Rescue (SMFR) has reviewed the provided documents and has no objection to the proposed PD Rezoning. Applicants are encouraged to contact SMFR regarding the applicable fire code requirements for the proposed project.

Response: Comment noted, thank you.

THE PINERY HOA

- No comment.

Response: Thank you for your review.



TOWN OF PARKER PUBLIC WORKS

- No comment.

Response: Thank you for your review.

WILDFIRE MITIGATION

- A wildfire hazard assessment has been completed for the property and a wildfire mitigation plan will be required for the development. Please contact the wildfire mitigation and resilience coordinator directly with questions or for consultation regarding expectations and related requirements for plan development and execution.

Response: Noted. A Wildfire Mitigation Plan will be completed at the time of Preliminary Plan.

XCEL ENERGY

- Public Service Company of Colorado's (PSCo) Right of Way and Permits Referral Desk has reviewed the documents for Ramblewood Planned Development. As always, thank you for the opportunity to take part in the review process. For these single-family residential lots and to ensure that adequate utility easements are available within this development and per state statutes, Public Service Company requests that the following language or plat note is placed on the preliminary and final plats for the subdivision: Six-foot (6') wide dry utility easements are hereby dedicated on private property adjacent to each front lot line of each lot. In addition, eight-foot (8') wide dry utility easements are hereby dedicated around the perimeter of tracts, parcels and/or open space areas. These easements are dedicated to the County of Douglas for the benefit of the applicable utility providers for the installation, maintenance, and replacement of electric, gas, television, cable, and telecommunications facilities (Dry Utilities).

Response: This note will be added on the Preliminary and Final Plats and is not applicable to the PD Document.

- Utility easements shall also be granted within any access easements and private streets in the subdivision. Permanent structures, improvements, objects, buildings, wells, water meters and other objects that may interfere with the utility facilities or use thereof (Interfering Objects) shall not be permitted within said utility easements and the utility providers, as grantees, may remove any Interfering Objects at no cost to such grantees, including, without limitation, vegetation. Public Service Company of Colorado (PSCo) and its successors reserve the right to require additional easements and to require the property owner to grant PSCo an easement on its standard form.

Response: Noted, standard expectations and practices will be followed.

- Public Service Company also requests that all utility easements are depicted graphically on the preliminary and final plats. While these easements should accommodate the majority of utilities to be installed in the subdivision, some additional easements may be required as planning and building progresses. The property owner/developer/contractor must complete the application process for any new natural gas service via xcelenergy.com/InstallAndConnect. It is then the responsibility of the developer to contact the Designer assigned to the project for approval of design details. Additional easements may need to be acquired by separate document. The Designer must contact the appropriate Right-of-Way Agent. As a safety precaution, PSCo would like to remind the developer to contact Colorado 811 for utility locates prior to construction.



Response: All easements will be shown on the Preliminary and Final Plats and is not applicable to the PD Document.

End of response to comments

Trevor Bedford

From: Cynthia Zimpfer <czimpfer@earthlink.net>
Sent: Friday, April 18, 2025 10:35 AM
To: Trevor Bedford
Subject: Ramblewood Planned Development, Project File # ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Bedford,

I am sorry I am late in replying to your email dated March 18 concerning an application for a development of 70 houses under the name of the Ramblewood Planned Development as I was out of the US on business.

I am a resident of Hidden Village and own Lot 13 directly behind the proposed development. I moved from New Jersey and spent 5 years building my house on this property which was completed in December 2020. I wanted to be in a location that had low density...and a rural quality of life. This development will significantly lower the value of my 5.9 acre property and change the quality of life in Hidden Village.

Here are my specific concerns:

1. WATER.

How will the water be accessed for these homes? Will each home have its own well? And if so, I am concerned that they will be connecting into the Hidden Village aquifer. We, in Hidden Village, each have our own well.

2. FENCING AROUND PROPOSED DEVELOPMENT.

What kind of fence is proposed which would abut to my property and how would it be maintained? There is a private bridal trail for Hidden Village residents directly behind this proposed development and I can imagine that the residents of this new development would be very enticed to trespass onto these trails which are maintained by Hidden Village residents!!

3. INCREASED TRAFFIC

I understand that the Ramblewood proposal would have the main access onto HillTop road, but that the fire department requires that there also be an exit onto Alpine Road in Hidden Village. A development of 70 homes may add up to 300-400 people who would have access to our community which add lots of traffic and noise.

4. LIGHT AND NOISE POLLUTION.

Part of the attraction of Hidden Village has been the low light and low noise. With an addition of 70 homes abutting to Hidden Village, there will be a significant increase in light and noise pollution.

5. CURBS & SIDEWALKS in the Proposed development.

As you may know, the roads in Hidden Village are dirt roads and are maintained as such for the equestrian asset in our community.

The paved surfaces in this development would cause run off onto the impervious rooftops, roads and other surfaces causing damage..

6. WILDLIFE

There is abundant wildlife in and around Hidden Village and the property under consideration of development.

There is worry about where the animals and birds will be displaced given this extensive development.

I understand that there is always a push and pull with developers who wish to maximize their investments and the homeowners who surround developments, but I just do not understand how Douglas County would allow 70 homes to be built in under 100 acres.

A way to maintain the value of property in and around Hidden Village is to limit the development to 5 or 10 acre lot homesteads.

I will await your comments.

Respectfully yours,

Cynthia Zimpfer
7292 Village Road
Parker, CO 80134
Tel: (862) 250 0159

Trevor Bedford

From: Gus Burkard <gusb Burkard@gmail.com>
Sent: Thursday, April 17, 2025 10:44 AM
To: BOCC
Cc: Trevor Bedford
Subject: Ramblewood PD - ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

April 15, 2025

The Honorable Douglas County Commissioners
100 Third Street
Castle Rock, CO 80104
RE: Ramblewood PD Application – ZR2024-031

Dear Commissioners:

My name is Gus Burkard and I live at 6499 Village Road in Hidden Village. My home abuts the southern property line of the proposed Ramblewood project. I am writing today to express my support of the Ramblewood PD Application.

I have discussed the application in detail with the developer Dan Sheldon of Miller United Real Estate, have attended the neighborhood meetings, and been following the application through the process. Mr. Sheldon's team has paid close attention to the needs of the community by addressing our concerns over buffers, traffic and wildlife amongst others.

I appreciate the thoughtfulness that he and his team have put into their application as it relates to these important design features. I have discussed the application with a number of my neighbors and they too have been happy with the developers proposal. Being that we are on well and septic in Hidden Village, I am specifically pleased that Ramblewood will be connecting to Parker Water & Sanitation District's water and sewer system.

By connecting to PWSD's water system, they will not compete with us existing neighbors for water in our aquifers. Dan has also

committed to installing a hydrant and fire apparatus turnaround location specifically to address the Hidden Village neighbors' concerns over fire protection.

Depending on when the hearings are scheduled for the zoning and subsequent public hearing processes, I hope to be able to attend and provide my in-person testimony to the same effect.

Please let me know if you have any questions.

Sincerely,

Gus Burkard

6499 Village Road

303-841-4456

CC: Trevor Bedford, Senior Planner

Douglas County Department of Community Development

April 30, 2025

The Honorable Douglas County Commissioners
100 Third Street
Castle Rock, CO 80104

RE: Ramblewood PD Application – ZR2024-031

Dear Commissioners:

My name is Joe Liebherr and my partner, Jeanette and I live at 6559 Alpine Dr. in the Hidden Village neighborhood. I have lived in Hidden Village for twenty-one years now and really appreciate the uniqueness of our subdivision. I was dreading the potential development of the adjacent land fearing that it would change the feeling of where we live. I feel that the Ramblewood plan is the best compromise that we could have reached. We sincerely appreciate you taking the time to review our feedback, especially because our home is located adjacent to the proposed Ramblewood community.

Jeanette and I would like to express our support for the Ramblewood PD application for the following reasons:

1. Miller United, led by Dan Sheldon, has meaningfully engaged with our community since the beginning of the entitlement process. He's taken our feedback into consideration and even before meeting with neighbors in the area, he was putting together land plans that sought to preserve setbacks, open space, topography and foliage on the Ramblewood property. Having a developer that respects the beauty of this area is important to us.
2. The Ramblewood plan has a maximum of 70 lots and that proposed density aligns with your Comprehensive Planning documents. We appreciate that Mr. Sheldon did not push the envelop on density, but instead is developing a community that fits in well with its surroundings.
3. The proposed connection to Parker Water & Sanitation means future homes in Ramblewood will not compete with our water supply in the Upper and Lower Dawson aquifers.
4. Miller United is willing, on their own dime, to support our community events and put up additional signage that makes it clear our bridal trails are for Hidden Village resident use only. We appreciate them being a good community partner with these kinds of commitments well before any homes are ever built.

Thank you for taking our feedback into consideration as an adjacent neighbor. We appreciate all you do for the County, and we hope you'll support this thoughtful development project.

Sincerely,

Joe Liebherr / Jeanette White
6559 Alpine Dr in Hidden Village

CC: Trevor Bedford, Senior Planner
Douglas County Department of Community Development
tbedford@douglas.co.us

Trevor Bedford

From: Erick Hahne <erick.hahne@gmail.com>
Sent: Tuesday, May 13, 2025 10:54 AM
To: BOCC; Trevor Bedford
Subject: Ramblewood Development off of Hilltop Application – ZR2024-031

Follow Up Flag: Follow up
Flag Status: Completed

Douglas County Commissioners
100 Third Street
Castle Rock, CO 80104

RE: Ramblewood PD Application – ZR2024-031

Dear Commissioners:

My name is Erick Hahne. My wife Stephanie and I live at 6840 Chalet Circle in Hidden Village, just less than 1,000 feet away from the proposed Ramblewood project. I am writing today to express our support of the Ramblewood PD Application.

We have attended several of the neighborhood meetings that have been hosted by the developer Dan Sheldon of Miller United Real Estate and following the application through the process. We both believe Mr. Sheldon's team has paid close attention to the needs of the Hidden Village community by addressing our concerns over, water, lot sizes, buffers, traffic and wildlife amongst others.

I appreciate the thoughtfulness that he and his team have put into their application as it relates to these important design features. I have discussed the application with a number of my neighbors, and they too have been happy with the developer's proposal. Being that we are on well and septic in Hidden Village, I am specifically pleased that Ramblewood will be connecting to Parker Water & Sanitation District's water and sewer system. By connecting to PWS's water system, they will not compete with us and our existing neighbors for water in our aquifers. Dan has also committed to installing a hydrant and fire apparatus turnaround location specifically to address the Hidden Village neighbors' concerns over fire protection. This new hydrant would be very much appreciated!

I am also pleased with the amount of communication the developer has been providing and the transparency of development plans.

Depending on when the hearings are scheduled for the zoning and subsequent public hearing processes, I hope to be able to attend and provide my in-person testimony to the same effect.

Please let me know if you have any follow up questions.

Thank you for your time,
Erick Hahne
6840 Chalet Circle

Trevor Bedford

From: Holly Wilbur <bass2364@gmail.com>
Sent: Monday, May 12, 2025 11:28 AM
To: BOCC; Trevor Bedford
Subject: Ramblewood PD Application – ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

The Honorable Douglas County Commissioners
100 Third Street
Castle Rock, CO 80104

RE: Ramblewood PD Application – ZR2024-031

Dear Commissioners:

My name is Holly Wilbur and my husband, Brian, and I live at 6511 Village Road in Hidden Village. My home abuts the southern property line of the proposed Ramblewood project. I am writing today to express my support for the Ramblewood PD Application.

We are supportive for the following reasons:

- Dan Sheldon with Miller United Real Estate and his project team have been open and transparent with our community since the first meeting about the project. They've listened to our feedback and have taken it to heart.
 - This includes providing ample setbacks between our homes that border the property and those that may be built in the future as well as providing a fire hydrant on the Ramblewood property to support fire protection efforts in Hidden Village if an emergency were ever to arise.
- Instead of pushing the envelope with more density, Dan and his team came to us with a proposal that aligned with your current comprehensive plan. We appreciate that the plan will also take advantage of the opportunity to cluster homes, thereby increasing buffers, but also creating less disturbance to existing topography/foliage on the site.

As an adjacent neighbor, we hope you'll take our feedback into account and support this thoughtful project.

Please let me know if you have any questions.

Sincerely,

Holly and Brian Wilbur
6511 Village Road
303-564-8604
bass2364@gmail.com

CC: Trevor Bedford, Senior Planner
Douglas County Department of Community Development
tbedford@douglas.co.us

----- Forwarded message -----

From: **Annette Bonner** <annettebonner777@gmail.com>

Date: Sun, Jul 6, 2025, 12:35 PM

Subject: FileZR2024-031 Ramblewood Planned Development Zoning

To: whittlejv@gmail.com <whittlejv@gmail.com>

Our names are James and Annette Bonner, we own, and live at 6541 Alpine Dr., Parker, CO, near the above referenced subject property. I have been following the progress of the PD submitted and wish to submit our position on this land use application for the file. After discussions with the developer and landowner, we have concluded that we are in favor of the proposed Ramblewood Planned Development Zoning. We appreciate that the developer has made considerable efforts to provide buffers to the adjacent Hidden Village community, and minimize invasive land development and operations by designing around the topography and trees, as well as commit to be served, and depend on, domestic water and sanitation services from Parker Water, and sanitation, instead of wells and septic .

-- James and Annette Bonner

Trevor Bedford

From: Ken Evans <gravelkingjr@yahoo.com>
Sent: Tuesday, April 8, 2025 5:03 PM
To: Trevor Bedford
Subject: Fwd: Ramblewood plan development ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

> Good afternoon Mr Bedford
> and Douglas County Planning Services,
>
> As the owner of the A1 property addressed as 9358 Hilltop Rd. I like to point out a few details.
>
> 1) I have not been able to find a copy of the description of the project as listed in the notice. It was not sent to me and it's not online.
>
> 2) It is important when considering the rezone from A1 for this particular application to residential development and PD that the cluster of homes, wherever they may be placed would not be allowed to touch the property line of the A1 9358 property or if allowed would be a minimum of 2.5 acres per lot in size and must have a buffer.
>
> 3) It is important to note that 9358 is a working agricultural facility with cattle, poultry, forage production, dairy facilities, and many days of the year operates on a 24/7 schedule. It is a necessity to understand the Colorado (right to farm laws) and some of the litigation that has ensued with these very same circumstances across the state over the years. Again there must be a buffer.
>
> 4) When considering access it should be important to consider the language that was written into the declaration during the hidden village zoning /plat with regards to the impact of density in traffic on the interior roads of hidden Village.
>
> 5) 3-2A when looking at the appropriateness, it appears that the consideration was for residential to the east and the south of the property and not the larger parcel of A1 address 9358 hilltop a greater consideration needs to be given for the larger less dense property.
>
> 6) 3-2B again understanding the PD and its intentions. It is important to keep the buffering around the entire border of the proposed Ramblewood rezoning.
> Consistent with projects in the Piney and Mountain development projects, it would be prudent to see the large Native Ponderosa, pine trees marked and considered when choosing the foundation site as to avoid unnecessary destruction of the historical trees on this site for multiple reasons, including showcasing, important natural and rural features. With consideration for surrounding property owners and view corridors.
>
> 7) 3-2B.1 again. The minimum requirement needs to be followed through with regards to clustering with open space, buffers along property lines and visually sensitive land i.e. adjacent landowners.
>
> 8) Please provide me Ken Evans property owner 9358 Hilltop Rd. Parker, CO 80134 with notice of all new hearings.
>
>
>

> Thank you,

>

> Ken Evans

Trevor Bedford

From: Atfcoloinc <atfcoloinc@aol.com>
Sent: Tuesday, July 1, 2025 6:06 PM
To: Trevor Bedford
Subject: Ramblewood PD Application #ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Douglas County Planning Commission and Board of County Commissioners

My name is Theodore P Wittmann and with a relative Stanley E Schneider own the property located at 7265 Alpine Drive in the Hidden Village subdivision immediately adjacent to the proposed Ramblewood project. I have attended the developer's neighborhood meetings and am pleased to report that I am satisfied with their proposed rezoning. I appreciate that they are clustering the lots, including dedicated open space, and not having to mass grade the property. I believe that the developer has done a nice job listening to the community feedback and incorporating it into their plans.

This is a pearl of property with hundreds of Ponderosa Pines and views from Longs Peak to Pikes Peak. It deserves proper development and Ramblewood delivers.

In conclusion, I support the Ramblewood PD zoning. We encourage you to approve it at the upcoming hearings.

Sincerely,

Theodore Wittmann and Stanley Schneider

7265 Alpine Drive
LOT # 99
Hidden Village
Parker, CO 80134

May 20, 2025

The Honorable Douglas County Commissioners
100 Third Street
Castle Rock, CO 80104

RE: Ramblewood PD Application – ZR2024-031

Dear Commissioners:

My name is Jim Graham and my wife Darlene and I reside at 6525 Village Rd in the Hidden Village community in unincorporated Douglas County. We are writing to express our support for the proposed Ramblewood PD application that you'll consider in the coming months.

Over the past few months, the developer Dan Sheldon with Miller United Real Estate has actively engaged with the Hidden Village community, listened to our feedback and worked to incorporate it into the Ramblewood project. We sincerely appreciate Mr. Sheldon's collaboration and believe the project will be better for it.

There are a handful of reasons we're supportive of the proposal, but we'd like to take the opportunity to highlight a couple. First, we believe the Ramblewood proposal aligns with the County's comprehensive plan. The proposed density is in accordance with the plan and the decision to cluster homes on the northern portion of the property means greater setbacks for us and our neighbors. The proposal allows new development to occur while making sure that development is symbiotic with the surrounding community.

We also appreciate that Mr. Sheldon is choosing to connect and receive water from Parker Water & Sanitation. This means the new homes will not be competing with our wells in the Upper and Lower Dawson Aquifers.

We thank you very much for your time and consideration. We hope you'll support this thoughtful proposal and take into account our feedback given that we are neighbors adjacent to the project.

Sincerely,


Jim and Darlene Graham
6525 Village Rd

CC: Trevor Bedford, Senior Planner
Douglas County Department of Community Development
tbedford@douglas.co.us

Trevor Bedford

From: Steve Culbertson <spculbertson@comcast.net>
Sent: Thursday, July 10, 2025 3:35 PM
To: Trevor Bedford
Subject: Ramblewood Zoning – File Number: ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Planning Commissioners and County Commissioners:

My name is Steve Culbertson and my wife Sharon and I currently own a home and reside at 6837 Village Road in the Hidden Village neighborhood. We are aware of the proposed Ramblewood project which adjoins the Hidden Village properties and have attended the neighborhood meetings held by the developer, Dan Sheldon of Miller United Real Estate. We do approve the current plan presented to Hidden Village residents for the following reasons.

1. The clustering of homes in the middle of the development, with large open spaces between the new proposed homes and the Hidden Village properties, will maintain the sense of openness the Hidden Village residents adjoining the new development currently enjoy. The two ranch lots on the southern end of the development will also help maintain the openness of Hidden Village.
2. This clustering concept also allows for the wildlife corridors, mature vegetation and rambling topography to remain mostly undisturbed.
3. The fact that Miller United Real Estate is committed to connecting to central water & sewer services is a positive for this development. Whether legitimate or not, our concerns for the longevity of our wells are on the minds of all the residents of Hidden Village. The stated intent to connect to central water & sewer service is a relief to Sharon and I.
4. And finally the fact that the primary access to the Ramblewood development will be off of Hilltop Rd and not through Hidden Village is also viewed as a positive for this proposal.

It is for these reasons that we support the zoning application for Ramblewood and ask that you do too.

Respectfully,

Steve Culbertson
6837 Village Rd

Trevor Bedford

From: Joan Whittlesey <whittlejv@gmail.com>
Sent: Friday, July 11, 2025 9:04 AM
To: Trevor Bedford
Subject: Ramblewood Zoning – File Number: ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

To: Mr. Bedford, Planning Commissioners and County Commissioners -

Dear Planning Commissioners and County Commissioners

Our names are Brad and Joan Whittlesey. We are the owners of the 160 acres located at 9757 Hilltop Road which includes the majority of the 177-acre proposed rezoning and metro district approval for the Ramblewood project being proposed by Dan Sheldon of Miller United Real Estate. When we were contacted by Mr. Sheldon regarding his interest in buying our property, we were impressed with his knowledge of the development process, the County regulations and requirements, and his dedicated team of professionals committed to the project. After careful consideration, and due to the fact he was able to secure a contract for the adjacent 17 acres to the north of our property owned by Hilltop JAM LLC, we went under contract on our property with the intent to assemble both properties into his proposed Ramblewood community.

As long time owners of this land, we have been approached many times with various proposals for development. Ultimately we decided that the proposal brought forth by Dan and Miller United was the best offer we have received for a number of reasons. We are friends with many of our neighboring property owners and understand the desire for the site to be a low impact development to the surrounding community. Part of Dan's plan is to zone and plat the property in such a way that we will retain 2 of the 70 lots, consisting of approximately 80 acres of land that we refer to as the 'ranch lots'. Those two large ranch lots will be a lasting legacy to our family and will also allow us to continue to use the property as it has been for many years for agricultural uses. The last thing we want is for the existing neighbors to be unhappy with us for selling the land for a high impact development. Dan has demonstrated to us and the neighbors this commitment with a significant amount of open space and increased setbacks. His plan takes into consideration the native topography, trees, wildlife, and most importantly the scarcity of the water supply in the area. His plan to connect the residential subdivision portion of the property to a central water & sewer provider's system is very important to us and the surrounding community. We have been approached by other buyers, both before we contracted with Dan, and after, about developing the property into a large lot subdivision, with individual lots on well and septic. In his community meetings and based on all the correspondence we've received, this is a very sensitive topic that Dan's group has thoroughly addressed and we believe should have community support.

With regard to the Ramblewood Metropolitan District application, as you know, most new developments rely on metro district financing for public infrastructure. The additional cost that the developer is bearing to bring water and sewer to the project alone should be reason enough to support their district formation, especially in light of community desire to avoid additional wells.

It is of vital importance to us and the community that this project be successful. We believe this is truly a best case development scenario for the property and our names will be long attached to the success of Ramblewood. For these reasons, we encourage you to vote yes on the Ramblewood PD Zoning application as well as the Ramblewood Metropolitan District formation.

We will be attending the Planning Commission and Board of County Commissioners hearings and intend on providing a similar testimony at that time.

Trevor Bedford

From: james helfand <jahapc@yahoo.com>
Sent: Friday, July 11, 2025 10:39 AM
To: Trevor Bedford
Subject: Ramblewood Zoning & Metro District

Follow Up Flag: Follow up
Flag Status: Flagged

Douglas County Planning Commission and Board of County Commissioners:

Dear Planning Commission and County Commissioners:

My name is Jim Helfand. I am the manager of Hilltop JAM LLC, the owner of 17 acres located off of Hilltop Road that is part of the Ramblewood proposed project. The 17 acres owned by Hilltop JAM LLC, along with the Whittlesey 160 acres, makes up the 177 acre Ramblewood PD and metro district applications scheduled to come before you on July 21st and August 26th respectively.

Please be advised that the members of Hilltop JAM LLC support the proposed zoning and metro district formation and, accordingly, urge you to approve same.

Sincerely,

Jim Helfand
Hilltop JAM LLC
jahapc@yahoo.com

Trevor Bedford

From: Cynthia Zimpfer <czimpfer@earthlink.net>
Sent: Wednesday, July 16, 2025 11:38 AM
To: Trevor Bedford
Subject: Fwd: Ramblewood Planned Development, Project File # ZR2024-031

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Mr. Bedford,

I am contacting you again, in advance of the announced Public Hearings before the Douglas County Planning Commission and Douglas County Commissioners on July 21 and August 26, 2025, where the developer of Ramblewood Development is requesting a Change in Zoning from Agriculture One and Rural Residential to PD-Planned Development.

I am adamantly against this project and believe that it will cause harm to the Hidden Village neighborhood and the surrounding areas.

It does not make sense to add another 70 homes (up to 300+ people) in such a small area, other than for the financial benefits that the owner of the property and the developers will reap.

The developers have made their case by saying that if their project is not approved, then another developer will submit plans for an even larger development—basically, a veiled threat.

They have defended the development's proposed use of water by digging even further into the water table, and when asked about increased traffic on HillTop Road, they said that we, the community, have to talk to Douglas County about traffic mitigation plans.

My property immediately abuts their planned development, and there appears to be no plans for fencing between my property and the development.

I also do not understand why there would need to be a road built that extends from the end of their proposed development through the two 20 acre lots abutting Alpine Road and which would exit out onto Alpine Road. The developer says that this proposed road out of their development onto Alpine Road is required for Fire and Emergency vehicles as they need two exits out of the development. Then why did the developer not plan for a second exit out to Hill top Road?—Most likely, because they would have had to reduce the number of homes planned, meaning less profit. This proposed 'exit' road onto Alpine Road will completely change the Hidden Village community, and in effect extend their development into Hidden Village.

It seems to be that Douglas County ought to be creating more public green spaces and parks, instead of being lured by developer's dollars and influence.

Regards,

Cynthia Zimpfer

Begin forwarded message:

From: Cynthia Zimpfer <czimpfer@earthlink.net>
Subject: Ramblewood Planned Development, Project File # ZR2024-031
Date: April 18, 2025 at 10:34:54 AM MDT
To: tbedford@douglas.co.us

Dear Mr. Bedford,

I am sorry I am late in replying to your email dated March 18 concerning an application for a development of 70 houses under the name of the Ramblewood Planned Development as I was out of the US on business.

I am a resident of Hidden Village and own Lot 13 directly behind the proposed development.

I moved from New Jersey and spent 5 years building my house on this property which was completed in December 2020.

I wanted to be in a location that had low density...and a rural quality of life.

This development will significantly lower the value of my 5.9 acre property and change the quality of life in Hidden Village.

Here are my specific concerns:

1. WATER.

How will the water be accessed for these homes? Will each home have its own well? And if so, I am concerned that they will be connecting into the Hidden Village aquifer. We, in Hidden Village, each have our own well.

2. FENCING AROUND PROPOSED DEVELOPMENT.

What kind of fence is proposed which would abut to my property and how would it be maintained? There is a private bridal trail for Hidden Village residents directly behind this proposed development and I can imagine that the residents of this new development would be very enticed to trespass onto these trails which are maintained by Hidden Village residents!!

3. INCREASED TRAFFIC

I understand that the Ramblewood proposal would have the main access onto HillTop road, but that the fire department requires that there also be an exit onto Alpine Road in Hidden Village.

A development of 70 homes may add up to 300-400 people who would have access to our community which add lots of traffic and noise.

4. LIGHT AND NOISE POLLUTION.

Part of the attraction of Hidden Village has been the low light and low noise. With an addition of 70 homes abutting to Hidden Village, there will be a significant increase in light and noise pollution.

5. CURBS & SIDEWALKS in the Proposed development.

As you may know, the roads in Hidden Village are dirt roads and are maintained as such for the equestrian asset in our community.

The paved surfaces in this development would cause run off onto the impervious rooftops, roads and other surfaces causing damage..

6. WILDLIFE

There is abundant wildlife in and around Hidden Village and the property under consideration of development.

There is worry about where the animals and birds will be displaced given this extensive development..

I understand that there is always a push and pull with developers who wish to maximize their investments and the homeowners who surround developments, but I just do not understand how Douglas County would allow 70 homes to be built in under 100 acres. A way to maintain the value of property in and around Hidden Village is to limit the development to 5 or 10 acre lot homesteads.

I will await your comments.

Respectfully yours,

Cynthia Zimpfer
7292 Village Road
Parker, CO 80134
Tel: (862) 250 0159

Sincerely,

Brad & Joan Whittlesey
9757 Hilltop Road
Parker, CO 80134

Mailing Address of:
4700 E. Princeton Ave
Englewood, CO 80113

General Ecological Resources Survey

**Approximately 176.224 Acres within Section 6,
Township 7 South, Range 65 West
Douglas County, Colorado**



Prepared for:

**Miller United Real Estate, LLC
6900 East Bellevue Avenue, Suite 300
Greenwood Village, Colorado 80111**

Western Environment and Ecology, Inc.
2217 West Powers Avenue
Littleton, Colorado 80120
(303) 730-3452
(303) 730-3461 (fax)
www.westernenvironment.com

General Ecological Resources Survey

**Approximately 176.224 Acres within Section 6,
Township 7 South, Range 65 West
Douglas County, Colorado**

Western Environment and Ecology, Inc.
Project Number: 936-003-01

October 17th, 2024

Prepared for:

Miller United Real Estate, LLC
6900 East Bellevue Avenue, Suite 300
Greenwood Village, Colorado 80111

Prepared by



Brendan Calonge
Senior Staff Scientist

WESTERN ENVIRONMENT AND ECOLOGY, INC.

2217 West Powers Avenue
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1.0 INTRODUCTION

Western Environment and Ecology, Inc. (Western Environment) was retained by Mr. Daniel Sheldon, Principal for Miller United Real Estate, LLC., to conduct a general survey of ecological resources, including threatened and endangered species, wetlands, and other significant habitats, on approximately 176.224 acres in Section 6, Township 7 South, Range 65 West, unincorporated Douglas County, Colorado. Mr. Sheldon indicated that the report was in response to the potential purchase and development of the property.

The objectives of this study were to (1) establish presence/absence and potential habitat of any federal or state threatened and endangered species on the property, (2) identify any wetlands or other ecologically sensitive areas on and adjacent to the property, and (3) make practical recommendations based on the results of the study.



View of the property from the southeast

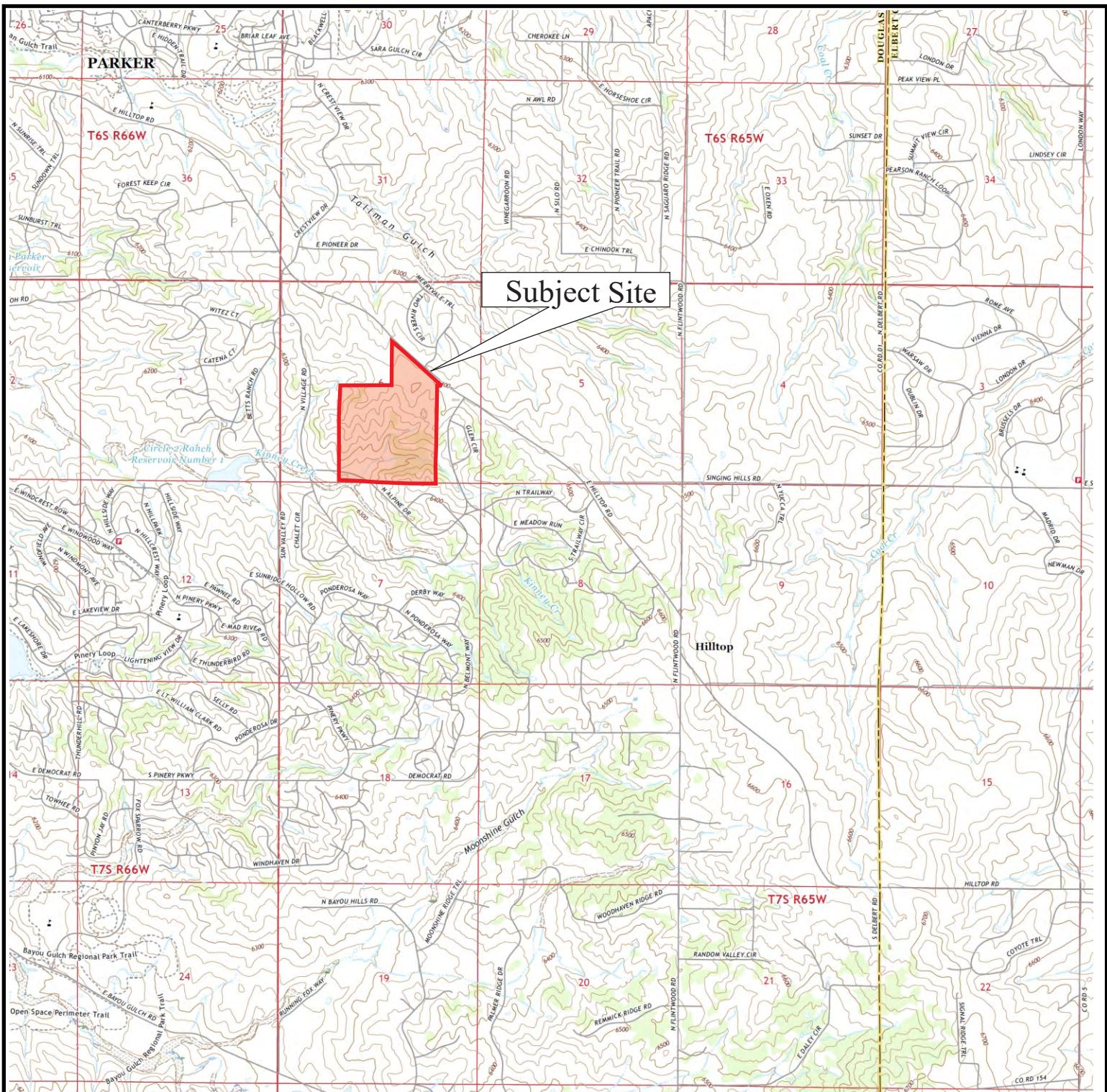
2.0 STUDY AREA

This General Ecological Resource Survey was conducted for approximately 176.224 acres in Section 6, Township 7 South, Range 65 West, unincorporated Douglas County, Colorado (Figure 1). The site is located approximately 3,900 feet east of the intersection of Hilltop Road and Singing Hills Road (Figure 2). According to the Douglas County Assessors Office, the vacant property consists of two adjacent parcels (Douglas County Parcel #'s 2347-061-00-001 and 2347-063-00-001) currently classified as agricultural grazing land. Xcel Energy supplies natural gas, and CORE Electric Cooperative supplies electric services to the area.

Surrounding properties consist of single family residences. The site is bordered to the northeast by Hilltop Road and to southwest by Alpine Drive. Kinney Creek is present along the southwestern property border. Additionally, an unnamed tributary to Kinney Creek originates on and bisects the site, confluencing with the Creek southwest of the property. A stock pond is present in the western portion of the site.

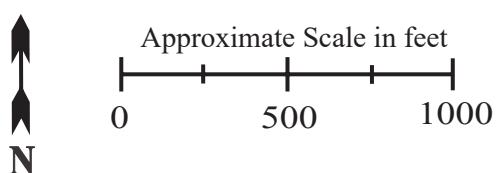
The site occurs at an elevation ranging from 6,260 to 6,400 feet above sea level (USGS Ponderosa Park 7.5 Minute Quadrangle, 2019). Topography of the site is hilly, with a regional slope south and west towards Kinney Creek. The US Resource Conservation Service identifies site soils as Bresser-Truckton sandy loams on 5 to 25 percent slopes, Fondis clay loam on 3 to 9 percent slopes, Fondis-Kutch association, Kutch Sandy loam on 5 to 20 percent slopes, Newlin-Satanta complex on 5 to 20 percent slopes, Sandy alluvial land, and Stapleton-Bresser association. Geology consists of the Tertiary Age Upper Part of the Dawson Arkose (Tweto, 1979). The Federal Emergency Management Agency Flood Maps (attached) indicate that a portion of the unnamed tributary to Kinney Creek in the southern portion of the property is within the 100 year flood plain.

Records maintained by the Colorado Division of Water Resources (DWR) identified a stock well adjacent to the southeast of the subject property. Lithologic logs for the well identified intermittent layers of sand, and sandy clays to a total depth of 250 feet. Static groundwater was encountered at 90 feet below grade with a sustained yield of 15 gallons per minute.



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Littleton, Colorado 80120
Ramblewood Park
Project File # ZR2024-031

Figure 1 - Project Location Map
Approximately 177 Acres within Section 6,
Township 7 South, Range 65 West
Douglas County, Colorado



WESTERN ENVIRONMENT
AND ECOLOGY, INC.
2217 West Powers Avenue
Littleton, Colorado 80120
Ramblewood Apartments
Project File # ZR2024-031

Figure 2 - Site Map
Approximately 177 Acres within Section 6,
Township 7 South, Range 65 West
Douglas County, Colorado

3.0 METHODS

Species that are federally or state listed as threatened or endangered, including federally proposed and candidate species, occurring or having historically occurred in Douglas County were considered for this study (Table 1). The county classification was determined by following the Colorado Field Office of the U.S. Fish and Wildlife Service's county checklist (USFWS, 2018). The list was narrowed based on habitat requirements of the species relative to existing habitats on the project.

The property was surveyed on August 29th, 2024. Information was collected on topography, ecosystems, and species of flora and fauna found on and adjacent to the property. Photographs were taken, and emphasis was placed on potential habitat of threatened and endangered species, and the presence of wetlands.



View of the property from the north

At the time of the inspection, the property was vacant, the northeastern parcel in agricultural production and the southwestern parcel in use as horse pasture. Vegetation in the northeastern parcel consisted primarily of sunflower. The southern parcel consisted of unmanaged native and invasive upland grasses and shrubs including field bindweed, white sage, rabbit brush, Russian thistle, prickly poppy, prickly pear cactus, and yucca. Woody vegetation included eastern plains cottonwood, gambel oak, Ponderosa pine, and pinyon pine. Kinney Creek was present along the southwestern property border. Additionally, several unnamed tributaries to Kinney Creek originated on site, confluencing at the southern portion of the property, conveyed under Alpine Drive though a culvert. The Tributary then confluenced with the Creek southwest of the property. A stock pond was present in the western portion of the site. At the time of the inspection, the stock pond had standing water; however, the unnamed Tributary was dry. Riparian habitat, including bed and bank, and wetland type vegetation were observed within the unnamed tributary to Kinney Creek.

Prairie dog burrows were observed along the eastern border of the property. No prairie dogs were observed; however, recent scat and digging activity was observed at the entrance of several burrows.



View within the unnamed Tributary to Kinney Creek

Table 1. Common name, scientific name, and status of federal and state threatened and endangered species that could occur or historically occurred in the Colorado Piedmont (CPW, 2018; USFWS, 2018).

Common Name	Scientific Name	Status ¹
Birds		
Bald eagle	<i>Haliaeetus leucocephalus</i>	ST
Whooping crane	<i>Grus americana tabida</i>	FE, SE
Least Tern	<i>Sterna antillarum</i>	FE, SE
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FT, ST
Mountain plover	<i>Charadrius montanus</i>	FPT, SC
Piping plover	<i>Charadrius melanotos</i>	FT, ST
Plains Sharp-Tailed Grouse	<i>Tympanuchus phasianellus jamesii</i>	SE
Western burrowing owl	<i>Athene cunicularia</i>	ST
Lesser Prairie Chicken	<i>Tympanuchus pallidicinctus</i>	ST
Ferruginous Hawk	<i>Buteo regalis</i>	SC
Mammals		
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	FT, ST
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	SC
Plants		
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	FT
Western prairie fringed orchid	<i>Platanthera praecox</i>	FT

¹Status Codes: FE = Federally Endangered, FT = Federally Threatened, FPT = Federally Proposed as Threatened, FC = Federal Candidate, SE = State Endangered, ST = State Threatened, SC = State Concerned

4.0 RESULTS AND DISCUSSION

4.1 Wetlands

Kinney Creek was present along the southwestern property border. Additionally, an unnamed tributaries to Kinney Creek originated from on site, from several drainage swales along the northern portion of the southern parcel (Figure 2), confluencing at the southern portion of the property. The Tributary was conveyed under Alpine Drive though a culvert, and then confluenced with the Creek southwest of the property. A stock pond was present in the western portion of the site. At the time of the inspection, the stock pond had standing water; however, the unnamed Tributary was dry. Riparian habitat, including bed and bank, and wetland type vegetation were observed within the unnamed tributary to Kinney Creek.

The U.S. Army Corps of Engineers (Corps) regulates the discharge of dredged or fill materials into Waters of the U.S. under the authority of Section 404 of the Clean Water Act. Waters of the U.S. include ephemeral, intermittent and perennial streams, their surface connected wetlands and adjacent wetlands, certain lakes, ponds, drainage ditches and irrigation ditches that have a nexus to interstate commerce.

Western Environment evaluated, to the best of our ability, based upon site conditions at the time of the survey, the three components of a jurisdictional wetland as defined in the US Army Corp of Engineers, (ACOE) Wetland Delineation Manual (1987). These components are: 1) Vegetation, 2) Soil and 3) Hydrology.

The ACOE Manual defines Nonwetlands as “including upland areas that are neither deepwater aquatic habitats, wetlands, nor other special aquatic sites. They are seldom or never inundated, or if frequently inundated, they have saturated soils for only brief periods during the growing season, and, if vegetated, they normally support a prevalence of vegetation typically adapted for life only in aerobic soil conditions.”

The U.S. Fish and Wildlife Service’s Wetland Mapper identified Kinney Creek as R4SBA (Riverine, Intermittent, Streambed, Temporarily Flooded) and the Unnamed Tributary to Kinney Creek as R4SBC (Riverine, Intermittent, Streambed, Seasonally Flooded). Review of the FEMA flood map (attached) indicated a portion of the unnamed tributary to Kinney Creek in the southern portion of the property is within the 100 year flood plain. Kinney Creek has a nexus with Cherry Creek approximately 3 miles west of the subject property.

On May 25, 2023, the Supreme Court issued a decision in Sackett v. EPA that reinterpreted the scope of federal jurisdiction under the Clean Water Act (the Sackett decision). Ramblewood Planned Development - Rezoning Project File # ZR24-031 Western Environment and Ecology, Inc. Board of County Commissioners' Staff Report - Page 128 of 287

The Court's decision held that the significant nexus test, used by EPA and the Corps to determine the scope of federal Clean Water Act jurisdiction since the *Rapanos v. United States* and *Carabell v. United States* (Dec. 2, 2008) decision, is no longer valid. The Court articulated a new jurisdictional test for adjacent wetlands that extends Clean Water Act jurisdiction to only those wetlands that are as a practical matter indistinguishable from waters of the United States. This requires a party asserting jurisdiction over adjacent wetlands to establish first that the adjacent body of water constitutes "waters of the United States," which the Court defines as "a relatively permanent body of water connected to traditional interstate navigable waters." Second, a party asserting jurisdiction must also show that the wetland has a continuous surface connection with that water, making it difficult to determine where the "water" ends, and the "wetland" begins.

Following the Sackett decision, the Colorado Department of Public Health and Environment, Water Quality Control Division (WQCD) approved Implementation Policy CW-17 on July 6th, 2023. This policy addressed the protections of State Waters under the Colorado Water Quality Control Act that are now outside of federal Clean Water Act jurisdiction as the result of the Sackett decision. These waters, described as Sackett Gap Waters, are under the jurisdiction of the WCD, and any impact to these waters requires consultation with the WQCD.

On May 30th, 2024, House Bill 24-1379 was signed into law. This law directs the WQCD to develop a dredge and fill authorization program and the Water Quality Control Commission to establish permitting and mitigation rules by December 31st, 2025. As such, Implementation Policy CW-17 remains in effect.

Based on the Sackett decision, Kinney Creek and the Unnamed Tributary to Kinney Creek are likely not Jurisdictional Waters of the U.S. subject to regulation under Section 404 of the Clean Water Act. However, based on the nexus with Cherry Creek, Kinney Creek and the Unnamed Tributary to Kinney Creek are likely considered Sackett Gap Waters, subject to requirements described in Implementation Policy CW-17. Any permanent or temporary impact to, or discharge into these aquatic resources will require consultation with the WQCD.



View of the unnamed Tributary to Kinney Creek

4.3 Wildlife Species Eliminated from Consideration as Occurring on the Project

The following threatened and endangered species that have historically been thought to occur in Douglas County were immediately ruled out of serious consideration for this project based on available habitat: Mexican spotted owl, whooping crane, least tern, and western prairie fringed orchid.

The Mexican spotted owl was eliminated because it requires forests that are not present on the project. The whooping crane was also eliminated due to rarity in Colorado, and no known nesting or feeding habitat exists on or adjacent to the property. Less than 20 sightings of whooping cranes along the eastern plains and mountainous regions of Colorado have been recorded since 1931 (Andrews and Righter, 1992). The least tern inhabits sandy shorelines of reservoirs, lakes, and rivers with bare sandy shorelines. This shore bird is a casual to very rare spring and fall migrant on the northeastern plains of Colorado, and is unlikely to occur on the subject project.

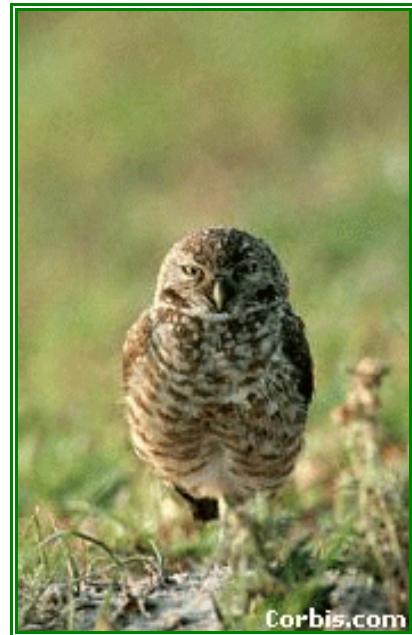
The western prairie fringed orchid is restricted to west of the Mississippi River, however only currently occurs in Iowa, Kansas, Minnesota, Nebraska, North Dakota and in Manitoba, Canada (USFWS, 2001).

4.4 Species Included in Survey

Western Burrowing Owl (*Athene cunicularia*)

State Threatened

The burrowing owl is found primarily in eastern Colorado as a summer resident. Two aspects of the biology of the western burrowing owl appear to influence both its regional and local abundance: 1) it prefers areas of short vegetation, and 2) it rarely, if ever, digs its own burrows. Historically, burrowing owls were common wherever there were prairie dog colonies in northeastern Colorado. During the inspection, prairie dog burrows were observed on the eastern border of the property. (Figure 2). **The Colorado Division of Parks and Wildlife (CPW) recommends that a burrowing owl survey be performed if construction is planned on abandoned or active prairie dog colonies during the owl's nesting season (March 1st to November 1st).** The CPW recommends a 150 foot buffer for development near an observed owl nest. Due to the proximity of the prairie dog burrows, Western Environment recommends performing a **burrowing owl survey prior to construction during the owl's nesting season (March 1st to November 1st).**



Western burrowing owl, photo acquired on www.corbis.com.

Bald Eagle (*Haliaeetus leucocephalus*)

State Threatened

The bald eagle was removed from the Federal Endangered and Threatened Species List on July 9th, 2007. Western Environment reviewed data maintained by the Colorado Division of Parks and Wildlife (CPW 2018), which identified no known bald eagle nests in proximity to the property. No bald eagles or bald eagle nests were observed during the inspection.

Mountain Plover (*Charadrius montanus*)

State Concerned Species

Typical habitat characteristics of the mountain plover are a mixture of short vegetation, bare ground, and a flat topography at both breeding and wintering locations. This small shorebird

breeds in Colorado, and in parts of its breeding range the species commonly shows a preference for prairie dog colonies and sites that are heavily grazed by domestic livestock. Prairie dog grazing promotes the short grasses that the plover prefers, and their digging creates areas of bare soil important for plover nesting. Plovers breed in Eastern Colorado from approximately April 1st through August 1st. Mountain plovers were proposed for federal listing as threatened on February 16th, 1999 (USFWS, 1999b), however the USFWS withdrew the proposal on September 8th, 2003. The Mountain plover is a migratory bird and protected under the Migratory Bird Treaty Act. **Therefore, to ensure avoidance of the species, development within grazed sites or prairie dog colonies should not begin without a pre-construction inspection during plover breeding months from April to November.**

Piping Plover (*Charadrius melanotos*)

Federally Threatened, State Threatened

This small shorebird can be found on very sparsely vegetated beaches, mudflats and sandy areas near water on shores and islands. Piping Plovers usually arrive in Colorado in late April or early May, and leave when the nesting cycle is completed, or by late August. Nesting populations have been documented in eastern Colorado along the South Platte and Arkansas River drainages. Food sources for Piping Plovers include insects, crustaceans and other small aquatic animals. Plovers feed along beaches, especially in areas where waves have washed up debris (CDOW, 1994). **Due to the lack of sandbars or mud-flats in the vicinity of the project, Piping Plover are unlikely to occur.**

Plains Sharp-Tailed Grouse (*Tympanuchus phasianellus jamesii*)

State Endangered

The Plains Sharp-Tailed Grouse historically occurred on Colorado's eastern grasslands. Grouse habitat is characterized by rolling hills with Gambles oak, sage brush, service berries and grassy glades. This grouse is a



Plains Sharp-Tailed Grouse

Western Environment and Ecology, Inc.

resident from Alaska east to the Hudson Bay, and south to northern New Mexico. Currently, Colorado populations are located in Douglas County, northern and eastern Weld County, and Logan County east of Sterling. **No known populations of the Plains Sharp-Tailed Grouse occur in proximity to the subject project (CPW, 2018).**

Lesser Prairie Chicken (*Tympanuchus pallidicinctus*)

State Threatened

Historically, this bird occupied the grasslands of Texas, Oklahoma, New Mexico, Kansas and southeastern Colorado. It prefers sandy grassland areas abundant in midgrasses, sandsage and yucca. The majority of Colorado breeding pairs occur in the southeastern portion of the state in Baca, Prowers, Kiowa and Cheyenne Counties, and for the most part, on the Comanche National Grasslands near Campo. **No known populations of the Lesser Prairie Chicken occur in proximity to the subject project (CPW, 2018).**

Ferruginous Hawk (*Buteo regalis*)

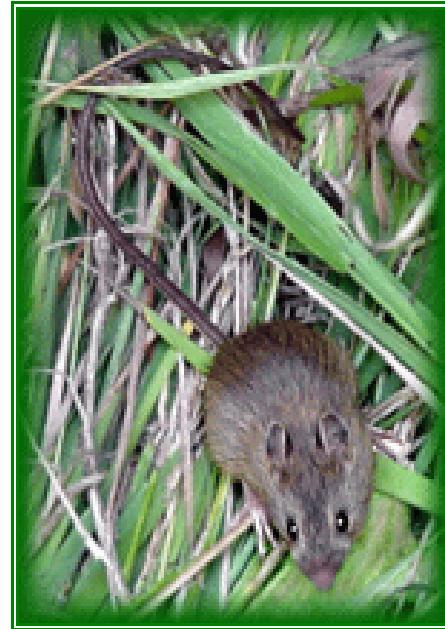
State Concerned

This hawk is known to occur throughout eastern Colorado and in northwestern Colorado. In Colorado, the species is a common winter resident, but is considered an uncommon summer resident on the eastern plains (Andrews and Righter, 1992). Areas that could be potential nesting sites include large trees, rock outcrops, manmade structures such as windmills and power poles, or the ground. These birds often can be seen associated with prairie dog colonies, which they utilize for foraging. This hawk, as are all birds of prey, is federally protected under the Migratory Bird Species Act. **At the time of the survey, no Ferruginous Hawks or nests were observed on or adjacent to the property.**

Preble's Meadow Jumping Mouse (*Zapus hudsonius preblei*)

Federally Threatened, State Threatened

Typical Preble's habitat has been described as "well-developed plains riparian vegetation with relatively undisturbed grassland and a water source in close proximity," and "dense herbaceous vegetation consisting of a variety of grasses, forbs and thick shrubs" (Armstrong et al., 1997). Although any vegetation could offer cover and hibernacula for Preble's, the species is mostly known from habitat containing shrub cover, such as willow or narrow-leaf cottonwood.



Preble's meadow jumping mouse

Preble's are known to regularly range outward into adjacent uplands to feed and hibernate. For this reason, the U.S. Fish and Wildlife Service generally requires a 300 foot development buffer from the edge of the 100 year flood plain. Riparian vegetation, suitable for Preble's was observed adjacent to Kinney Creek. However, there is no critical habitat designated by the USFWS in the area. Western Environment reviewed the Douglas County Habitat Conservation Plan and Environmental Assessment, dated May 2006. This report designated Riparian Conservation Zone (RCZ) containing potential Preble's habitat and included trapping events between 1999 and 2005. Kinney Creek was initially designated as a RCZ; however, its inclusion was eliminated because it does not have permanent water year round. **Therefore, it is the opinion of Western Environment that the proposed project will not affect Preble's habitat. However, we recommend requesting a "Finding of No Significant Impact" from the U.S. Fish and Wildlife Service confirming that development will not impact Preble's.**

Black-tailed Prairie Dog (*Cynomys ludovicianus*)

Former Candidate for Federal Listing, State Concerned

The U.S. Fish and Wildlife Service was petitioned to list the black-tailed prairie dog as a threatened species in July of 1998. The agency determined on February 3rd, 2000, that listing the species was warranted, but it was precluded because other species were in greater need of protection (USFWS, 2000). The black-tailed prairie dog was added to the candidate list, and the species' status was reviewed annually. On August 12th, 2004 the USFWS determined that the black-tailed prairie dog no longer meets the Endangered Species Act definition as threatened, and was removed as a candidate for federal listing. At the time of the inspection, Prairie dog burrows were observed along the eastern border of the property. No prairie dogs were observed; however, recent scat and digging activity was observed at the entrance of several burrows.

The Colorado Parks and Wildlife recommends “humane removal” of prairie dogs immediately prior to development. Removal strategies may include trapping and relocation, or donation to the U.S. Fish and Wildlife Service black-footed ferret recovery program or an approved raptor rehabilitation program as a food source. Additional options include the extermination of the prairie dogs by an approved pest control firm.



View of prairie dog burrows on the property

Ute Ladies'-Tresses Orchid (*Spiranthes diluvialis*)

Federally Threatened

This orchid usually occurs in "...old stream channels, alluvial terraces, wet meadows, and other sites where the soil is saturated to within 18" of the surface at least temporarily during the growing seasons" (USFWS, 1992). The eastern Colorado populations of species are located in mesic riparian meadows in relict tall grass prairie areas near Boulder Creek, South Boulder Creek, and Saint Vrain Creek in Boulder County, Colorado, and in mesic meadows in the riparian woodland under story along Clear Creek in Jefferson County, Colorado (USFWS 50 CFR Part 17).

One population was historically identified in Weld County east of Greeley near Crow Creek in 1856, but is now considered extirpated. Soil conditions and vegetation composition of known *Spiranthes* sites suggest that wetlands regulated by the Corps under the Clean Water Act qualify as potential *Spiranthes* habitat. **No perennial waters occur on the property, nor is *Spiranthes* designated Critical Habitat. It is the opinion of Western Environment that *Spiranthes* does not inhabit the project.**



Ute Ladies'-Tresses Orchid

Other Wildlife

No wildlife was observed on the property during the site visit.

5.0 CONCLUSIONS AND RECOMMENDATIONS

At the time of the survey, no threatened or endangered species or their obvious habitat were seen on the subject property. However, prior to development, the following actions are recommended:

- **Based on the Sackett decision, Kinney Creek and the Unnamed Tributary to Kinney Creek are likely not Jurisdictional Waters of the U.S. subject to regulation under Section 404 of the Clean Water Act. However, based on the nexus with Cherry Creek, Kinney Creek and the Unnamed Tributary to Kinney Creek are likely considered Sackett Gap Waters, subject to requirements described in Implementation Policy CW-17. Any permanent or temporary impact to, or discharge into these aquatic resources will require consultation with the Colorado Water Quality Control Division (WQCD).**
- Riparian vegetation, suitable for Preble's was observed adjacent to Kinney Creek; however, there is no critical habitat designated by the USFWS in the area. It is the opinion of Western Environment that the proposed project will not affect Preble's habitat. **However, we recommend requesting a “Finding of No Significant Impact” from the U.S. Fish and Wildlife Service confirming that development will not impact Preble's.**
- During the site inspection, Prairie dog burrows were observed along the eastern border of the property. No prairie dogs were observed; however, recent scat and digging activity was observed at the entrance of several burrows. The Colorado Parks and Wildlife recommends “humane removal” of prairie dogs immediately prior to development. Removal strategies may include trapping and relocation, or donation to the U.S. Fish and Wildlife Service black-footed ferret recovery program or an approved raptor rehabilitation program as a food source. Additional options include the extermination of the prairie dogs by an approved pest control firm.

- Due to the presence of prairie dogs and prairie dog burrows on the property, Western Environment recommends performing a burrowing owl and mountain plover survey prior to the development of the site.

No other Ecological Issues were found.

6.0 LITERATURE CITED

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9757 HILLTOP RD
PARKER, CO 80134

Ownership Information

BRADLEY A WHITTLESEY & JOAN V WHITTLESEY
4700 E PRINCETON AVE
ENGLEWOOD, CO 80113



Account #: R0622871

State Parcel #: 2347-063-00-001
Account Type: Agricultural
Tax District: 0324
Neighborhood-Ext:

Building Permit Authority

Douglas County
Phone: 303-660-7497

Subdivision

Name: METES AND BOUNDS
Reception No: 0000051

Location Description

TR IN PT E1/2SW1/4 & PT W1/2SE1/4 & PT S1/2NE1/4 & PT S1/2E1/2NW1/4 159.235 AM/L

Public Land Survey System (PLSS)

Quarter: SW; Section: 6
Township: 7; Range: 65

Land and Location

Land Type: Agricultural
Class Code: 4142
Descr.: GRAZING AG
Acreage: 159.235 acres
LEA Code: 9L2

Land Valuation

Actual Value: \$7,153

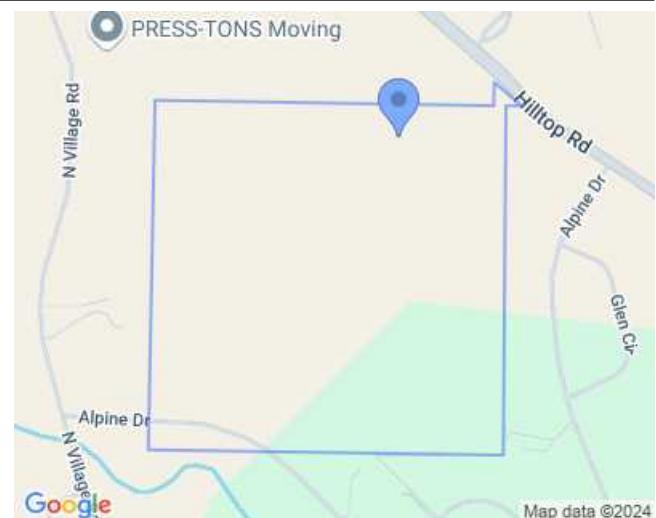
Land Attributes: Arterial Road Proximity, Open Area Local, Open Area Medium Impact, Road Proximity No Impact

Property Type: N/A

Year Built: N/A
Square Footage: 0 sqft
Style: N/A
Quality: N/A
% Complete: N/A

Stories: N/A
Bedrooms: N/A
Bathrooms: N/A
Basement Area: N/A
Finished Bsmt. Area: N/A(0)
Total Finished Area: 0 sqft
Walkout: N/A
Fireplaces: N/A
Porch/Deck Area: N/A
Garage Type: N/A
Attached: N/A
Detached: N/A

Building Use: N/A
Building Use %: N/A
Actual Value: N/A



Valuation Summary

Total Actual Value: \$7,153 Current Tax Rate: 8.4396%
Total Assessed Value: \$1,890 Est. Tax Amount: \$160

No Address

Ownership Information

HILLTOP JAM LLC
2554 ASPEN SPRINGS DR
PARK CITY, UT 84060



Account #: R0620578

State Parcel #: 2347-061-00-001
Account Type: Agricultural
Tax District: 0324
Neighborhood-Ext:

Building Permit Authority

Douglas County
Phone: 303-660-7497

Subdivision

Name: METES AND BOUNDS
Reception No: 0000051

Location Description

TRACT IN SW1/4NE1/4 & N1/2N1/2NW1/4SE1/4 6-7-65 16.989 AM/L

Public Land Survey System (PLSS)

Quarter: NE; Section: 6
Township: 7; Range: 65

Land and Location

Land Type: Agricultural
Class Code: 4123
Descr.: DRY AG
Acreage: 16.989 acres
LEA Code: 9C1

Land Valuation

Actual Value: \$6,374

Land Attributes: Arterial Road Proximity, Road Proximity Medium Impact

Property Type: N/A

Year Built: N/A
Square Footage: 0 sqft
Style: N/A
Quality: N/A
% Complete: N/A

Stories: N/A
Bedrooms: N/A
Bathrooms: N/A
Basement Area: N/A
Finished Bsmt. Area: N/A(0)

Total Finished Area: 0 sqft
Walkout: N/A

Fireplaces: N/A
Porch/Deck Area: N/A
Garage Type: N/A
Attached: N/A
Detached: N/A

Building Use: N/A
Building Use %: N/A
Actual Value: N/A



Valuation Summary

Total Actual Value: \$6,374 Current Tax Rate: 8.4396%
Total Assessed Value: \$1,680 Est. Tax Amount: \$142

National Flood Hazard Layer FIRMette



104°42'42"W 39°28'26"N



Legend

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

SPECIAL FLOOD HAZARD AREAS

Without Base Flood Elevation (BFE)
Zone A, V, A99
With BFE or Depth
Zone AE, AO, AH, VE, AR
Regulatory Floodway

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 Zone X

Future Conditions 1% Annual Chance Flood Hazard Zone X

Area with Reduced Flood Risk due to Levee. See Notes. Zone X

Area with Flood Risk due to Levee Zone D

OTHER AREAS OF FLOOD HAZARD

NO SCREEN Area of Minimal Flood Hazard Zone X

Effective LOMRs

Area of Undetermined Flood Hazard Zone D

OTHER AREAS

Channel, Culvert, or Storm Sewer

Levee, Dike, or Floodwall

20.2 Cross Sections with 1% Annual Chance
17.5 Water Surface Elevation

8 - - - Coastal Transect

~~~~~50~~~~~ Base Flood Elevation Line (BFE)

Limit of Study

Jurisdiction Boundary

Coastal Transect Baseline

Profile Baseline

Hydrographic Feature

### OTHER FEATURES

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 9/25/2024 at 6:18 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.

# National Flood Hazard Layer FIRMette



104°42'51"W 39°28'13"N



## Legend

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

### SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

- 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 Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs

- Area of Undetermined Flood Hazard Zone D

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- 8 Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

- Digital Data Available
- No Digital Data Available
- Unmapped



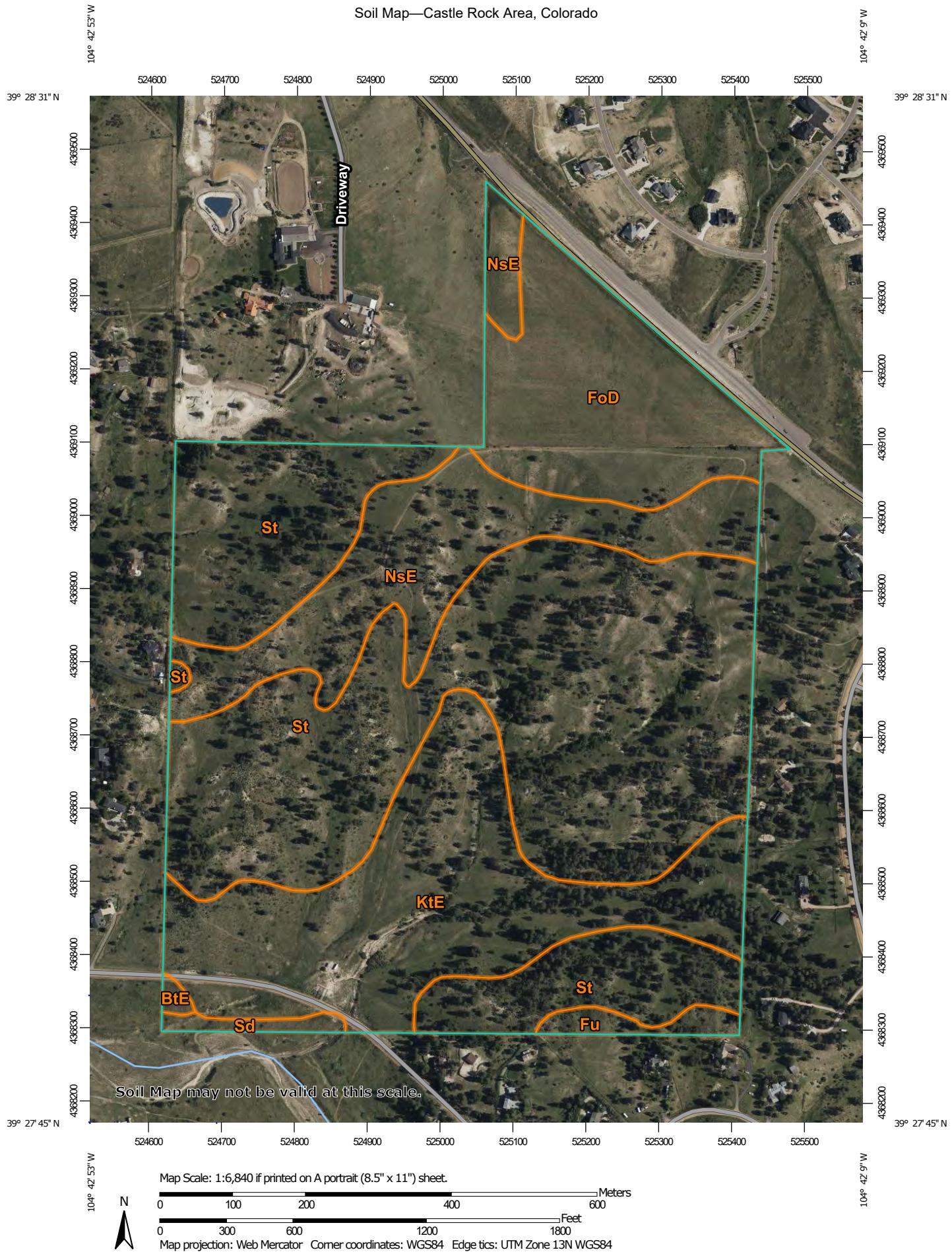
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The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/25/2024 at 6:09 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

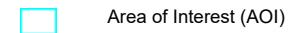
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## Soil Map—Castle Rock Area, Colorado



## 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



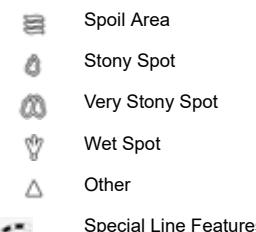
Sinkhole



Slide or Slip



Sodic Spot



## Water Features



Streams and Canals

## Transportation



Rails



Interstate Highways



US Routes

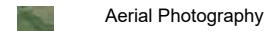


Major Roads



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 16, Aug 24, 2023

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.

## Map Unit Legend

| Map Unit Symbol                    | Map Unit Name                                        | Acres in AOI | Percent of AOI |
|------------------------------------|------------------------------------------------------|--------------|----------------|
| BtE                                | Bresser-Truckton sandy loams, 5 to 25 percent slopes | 0.4          | 0.2%           |
| FoD                                | Fondis clay loam, 3 to 9 percent slopes              | 22.4         | 12.6%          |
| Fu                                 | Fondis-Kutch association                             | 2.0          | 1.1%           |
| KtE                                | Kutch sandy loam, 5 to 20 percent slopes             | 37.5         | 21.1%          |
| NsE                                | Newlin-Satanta complex, 5 to 20 percent slopes       | 24.8         | 14.0%          |
| Sd                                 | Sandy alluvial land                                  | 1.3          | 0.7%           |
| St                                 | Stapleton-Bresser association                        | 89.5         | 50.3%          |
| <b>Totals for Area of Interest</b> |                                                      | <b>177.9</b> | <b>100.0%</b>  |

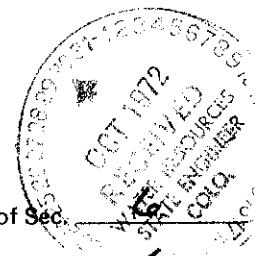


THIS FORM MUST BE SUBMITTED  
WITHIN 60 DAYS OF COMPLETION  
OF THE WORK DESCRIBED HERE-  
ON. TYPE OR PRINT IN BLACK  
INK.

## COLORADO DIVISION OF WATER RESOURCES

101 Columbine Bldg., 1845 Sherman St.  
Denver, Colorado 80203

WELL COMPLETION AND PUMP INSTALLATION REPORT  
PERMIT NUMBER 63488



WELL OWNER Lewis Wiser  
ADDRESS 24 Alpine Dr.  
Parker, Colo 80134

DATE COMPLETED 9-7, 1972

SE 1/4 of the SW 1/4 of Sec.

T. 7 S. 5 R. 65 W. 6 P.M.

## HOLE DIAMETER

10 1/2 in. from 0 to 24 ft.

6 in. from 24 to 250 ft.

\_\_\_\_\_ in. from \_\_\_\_\_ to \_\_\_\_\_ ft.

## CASING RECORD: Plain Casing

Size 6 5/8 & kind Steel from 0 to 24 ft.

Size 4 1/2 & kind Steel from 21 to 209 ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

## Perforated Casing

Size 4 1/2 & kind Steel from 209 to 250 ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

Size \_\_\_\_\_ & kind \_\_\_\_\_ from \_\_\_\_\_ to \_\_\_\_\_ ft.

## GROUTING RECORD

Material Cement

Intervals Top 100 ft

Placement Method Plastered

GRAVEL PACK: Size \_\_\_\_\_

Interval \_\_\_\_\_

## TEST DATA

Date Tested 9-7, 1972

Static Water Level Prior to Test 90' ft.

Type of Test Pump Plastered

Length of Test 10 hours

Sustained Yield (Metered) 15 GPM

Final Pumping Water Level 160'

TOTAL DEPTH 250

Use additional pages necessary to complete log.

# PUMP INSTALLATION REPORT

Pump Make \_\_\_\_\_

Type \_\_\_\_\_

Powered by \_\_\_\_\_ HP \_\_\_\_\_

Pump Serial No. \_\_\_\_\_

Motor Serial No. \_\_\_\_\_

Date Installed \_\_\_\_\_

Pump Intake Depth \_\_\_\_\_

Remarks \_\_\_\_\_

## WELL TEST DATA WITH PERMANENT PUMP

Date Tested \_\_\_\_\_

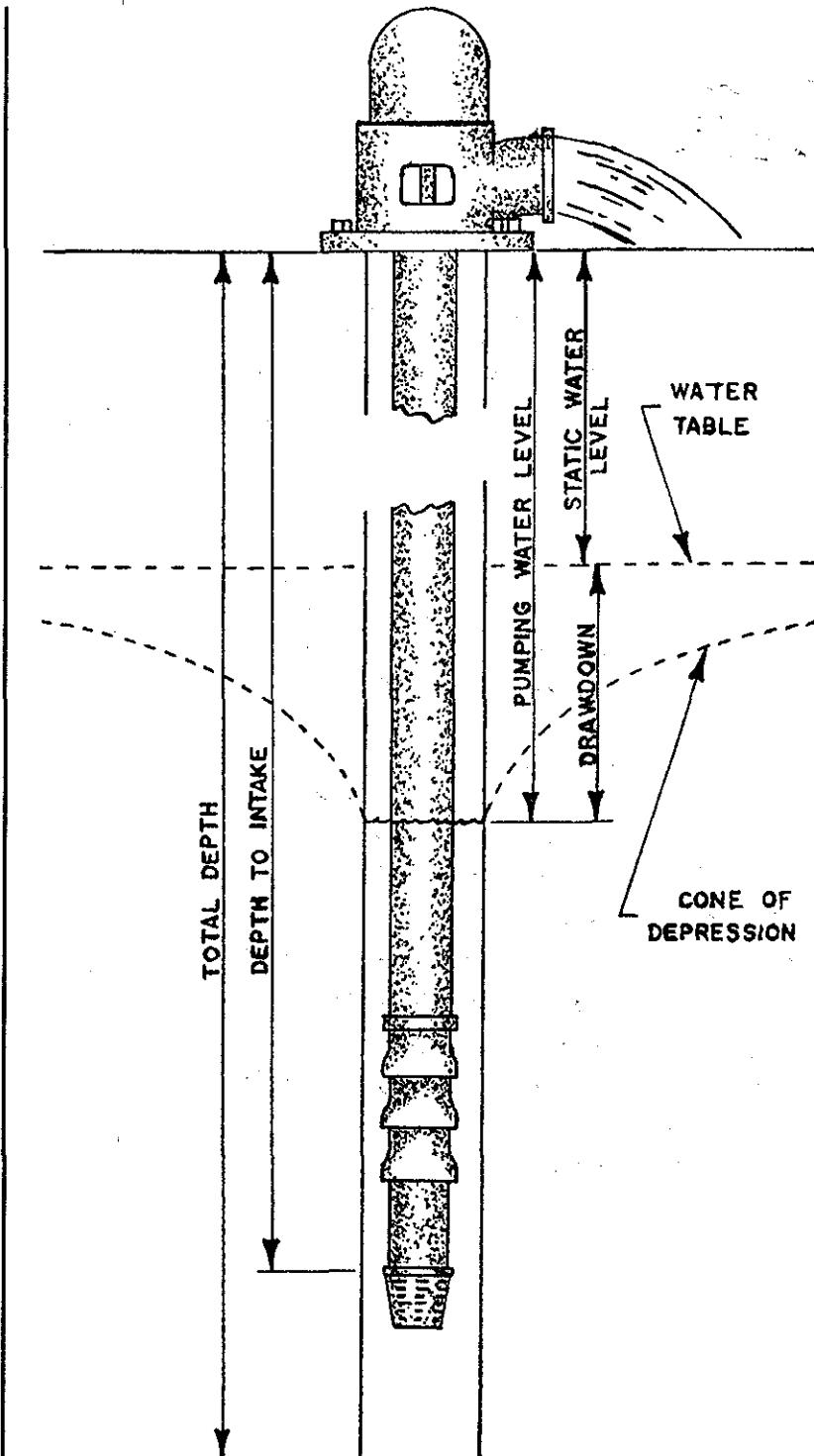
Static Water Level Prior to Test \_\_\_\_\_

Length of Test \_\_\_\_\_ Hours

Sustained yield (Metered) \_\_\_\_\_ GPM

Pumping Water Level \_\_\_\_\_

Remarks \_\_\_\_\_



## CONTRACTORS STATEMENT

The undersigned, being duly sworn upon oath, deposes and says that he is the contractor of the well or pump installation described hereon; that he has read the statement made hereon; knows the content thereof, and that the same is true of his own knowledge.

Signature Paul J. Womelsdorf License No. 709

State of Colorado, County of Douglas SS

Subscribed and sworn to before me this 30<sup>th</sup> day of October, 1972.

My Commission expires: My Commission expires Mar. 12, 1975, 19

Notary Public Connie P. Borell

RECEIVED

JUN 28 '72

TYPE OR PRINT IN BLACK INK. APPLICATION MUST BE COMPLETED BEFORE ACCEPTANCE.

## APPLICATION FOR:

A PERMIT TO USE GROUND WATER  
 A PERMIT TO CONSTRUCT A WELL  
 REPLACEMENT FOR NO. \_\_\_\_\_  
 A PERMIT TO INSTALL A PUMP  
 OTHER \_\_\_\_\_

## GROUND WATER TO BE USED FOR:

DOMESTIC (1) \_\_\_\_\_  
 LIVESTOCK (2) \_\_\_\_\_  
 MUNICIPAL (8) \_\_\_\_\_  
 OTHER \_\_\_\_\_

WATER RESOURCES  
COMMISSIONER (4)  
INDUSTRIAL (5)  
IRRIGATION (6)

## WELL LOCATION

COUNTY DouglasSE  $\frac{1}{4}$  of the SW  $\frac{1}{4}$  of Section 6

T. 7 SOUTH, R. 65 WEST, 6 P.M.  
 IN ADDITION TO THE ABOVE, THE WELL MUST BE  
 LOCATED WITH REFERENCE TO GOVERNMENT SURVEY  
 CORNERS, MONUMENTS OR SECTION LINES BY DISTANCE  
 AND BEARING (DOMESTIC WELLS MAY BE LOCATED BY  
 LOT, BLOCK, & SUBDIVISION.)

350 ft. from SOUTH section lin  
 (North or South)  
1600 ft. from WEST section lin  
 (East or West)

LOT 62 BLOCK \_\_\_\_\_ FILING # 2SUBDIVISION HIDDEN VILLAGE

Ground Water Basin \_\_\_\_\_

Water Mgmt. Dist. \_\_\_\_\_

Anticipated drilling date AUG 15 1977  
 Owner of land on which well  
 is located:

Lewis J. Wiser

Other water rights on this land \_\_\_\_\_

Lewis J. Wiser  
Signature of Applicant

Address

IF WELL IS USED FOR IRRIGATION, BACK SIDE OF THIS APPLICATION MUST BE COMPLETED.

FOR OFFICE USE ONLY

35432 TWO

## CONDITIONS OF APPROVAL

This well shall be used in such a way as to not cause  
 material injury to existing water rights. The issuance  
 of this 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

June 8/18/72

APPLICATION APPROVED: VALID FOR ~~ONE~~ (2) YEARS  
 AFTER DATE ISSUED UNLESS EXTENDED FOR GOOD  
 CAUSE SHOWN TO THE ISSUING AGENCY.

PERMIT NO. 63488DATE ISSUED AUG 21 1972

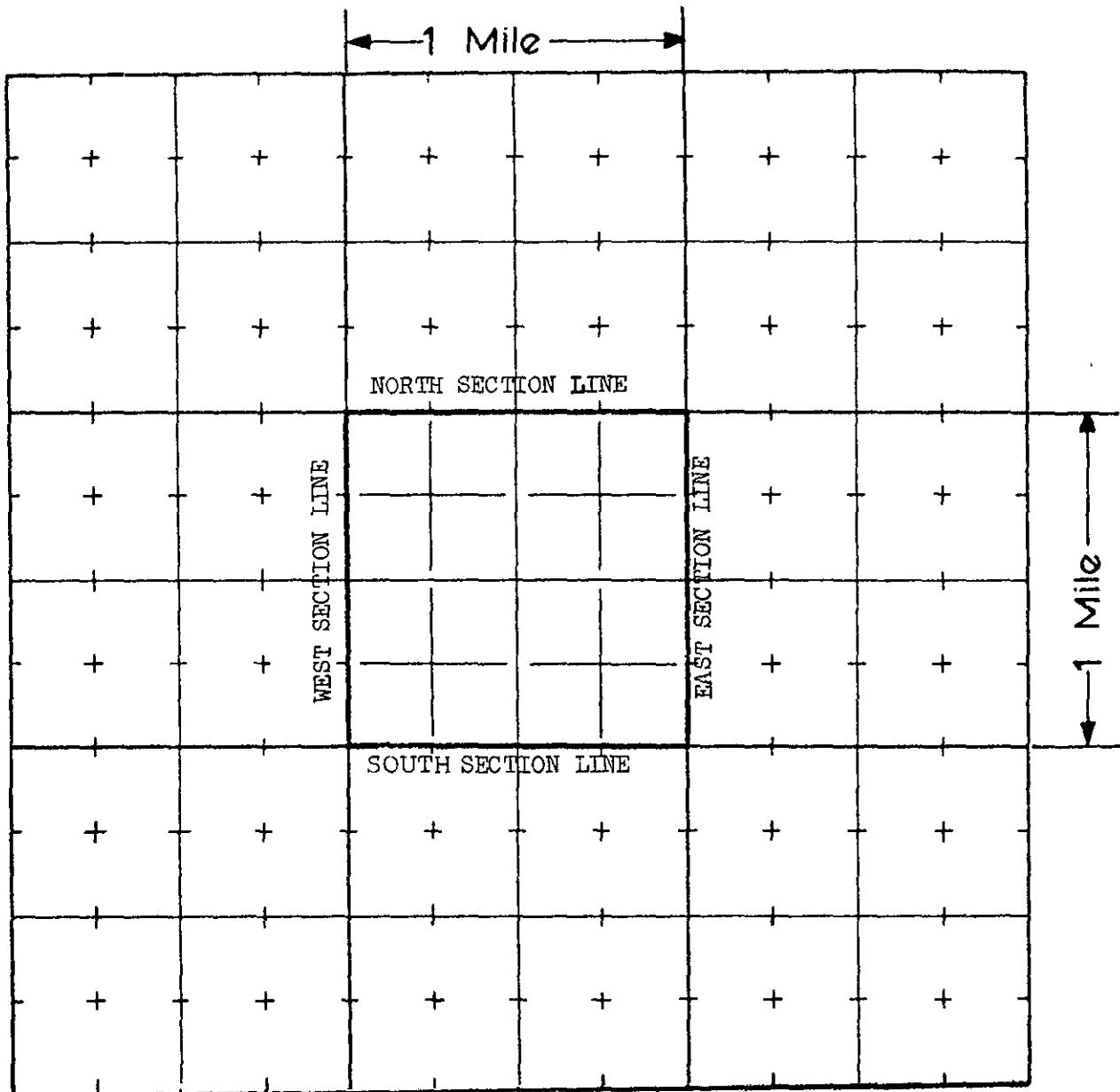
STATE ENGINEER

BY

THE LOCATION OF THE PROPOSED WELL MUST BE SHOWN AND THE AREA TO BE IRRIGATED MUST BE SHADED OR CROSS-HATCHED ON THE DIAGRAM BELOW

This diagram represents nine (9) sections. Use the CENTER SQUARE (one section) to indicate the location of the well, if possible.

N  
A



THE SCALE OF THE DIAGRAM IS TWO INCHES EQUALS ONE-MILE

Owner of  
irrigated land \_\_\_\_\_

Number of acres  
to be irrigated \_\_\_\_\_

Legal description of  
irrigated land \_\_\_\_\_

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

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

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

100 gpm pumped continuously for one year produces 160 acre-feet.

Ramblewood Planned Development Rezoning

Project File # ZR2024-031



U.S. Fish and Wildlife Service

# National Wetlands Inventory

## Wetlands



October 17, 2024

### Wetlands

|                                                                                                                             |                                |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| <span style="background-color: #0072BD; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | Estuarine and Marine Deepwater |
| <span style="background-color: #80CBC4; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | Estuarine and Marine Wetland   |

|                                                                                                                             |                                                               |
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| <span style="background-color: #9E9AC8; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> | Ramblewood Planned Development - Rezoning                     |
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| <span style="background-color: #9E9AC8; border: 1px solid black; display: inline-block; width: 15px; height: 15px;"></span> |                                                               |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

# TRAFFIC IMPACT STUDY

For

**Ramblewood  
Douglas County, Colorado**

October 2024  
Revised May 2025

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24-082230

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## I. Introduction

### Project Overview

This traffic impact study is provided as a planning document and addresses the capacity, geometric, and control requirements associated with the development entitled Ramblewood.

This traffic impact study has been revised to address County review comments made to the October 2024 version regarding updated intersection geometry and additional long-term mitigation methods.

This proposed residential is located to the southwest of Hilltop Road, north of Alpine Drive, and east of Village Road in Douglas County, Colorado.

### Study Area Boundaries

The study area to be examined in this analysis encompasses the area bounded by Hilltop Road from Village Road east to Alpine Drive, Village Road from Betts Ranch Road east to Alpine Drive, and includes proposed site accesses. Site Access Drives internal to the overall development were not included in this analysis as internal intersection operations are expected to be comparable to, or better than, those projected for Hilltop Road and Alpine Drive.

Figure 1 illustrates location of the site and study intersections.

### Site Description

Land for the development is currently vacant and surrounded by residential land uses.

The proposed development is understood to entail the new construction of 70 single-family detached homes.

Proposed access to the development is provided at the following locations: one-full movement access onto Hilltop Road aligning with Merryvale Trail (referred to as Access A) and one full-movement access onto Alpine Drive (referred to as Access B).

For purposes of this study, it is anticipated that development construction would be completed by end of Year 2029.

General site and access locations are shown on Figure 1.

A conceptual site plan, as prepared by Norris Design is shown on Figure 2. This plan is provided for illustrative purposes only.



Not to Scale



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Figure 1  
SITE LOCATION

May 2025  
Page 2



Not to Scale

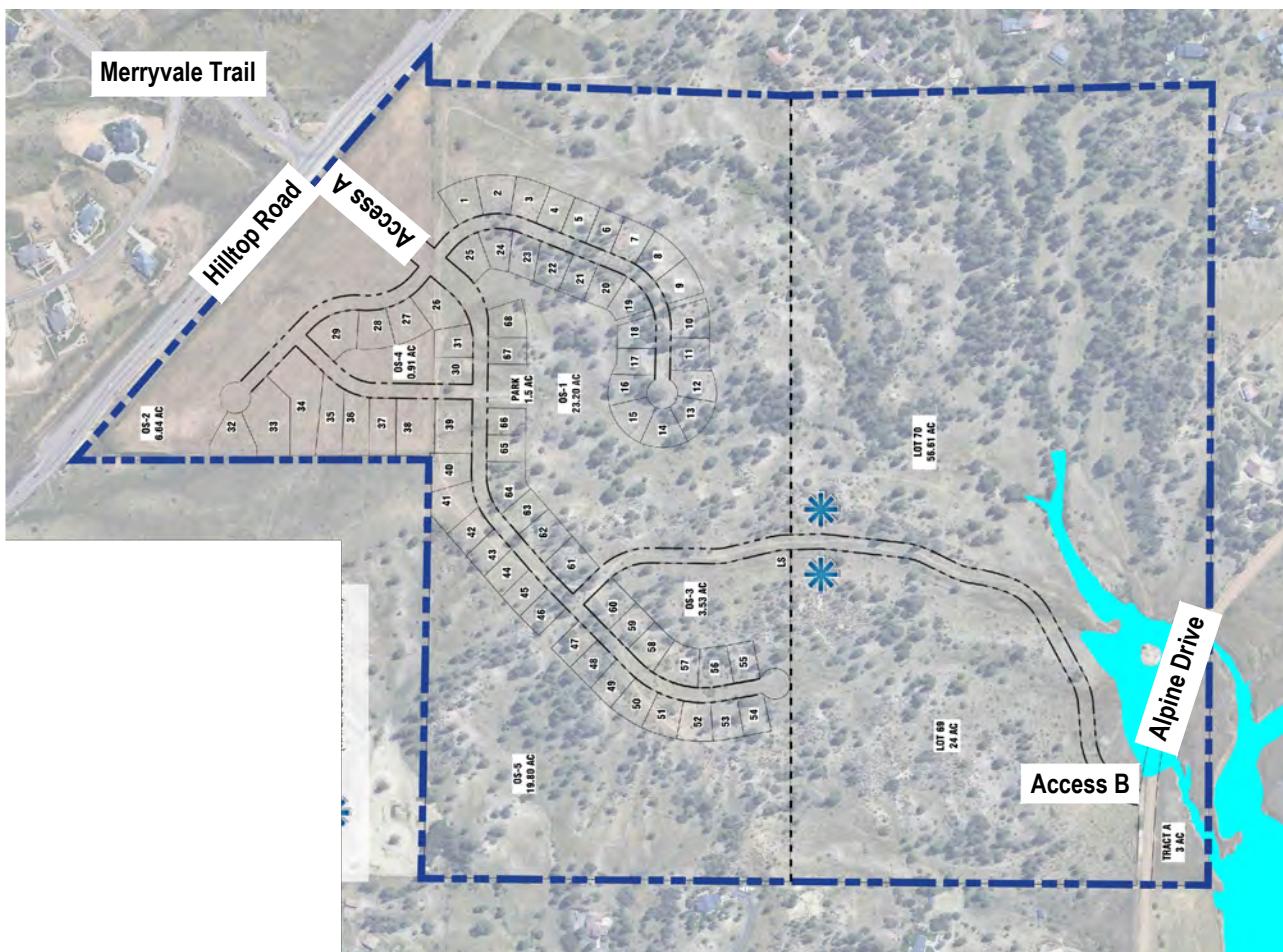


Figure 2  
CONCEPTUAL SITE PLAN

May 2025  
Page 3

## Existing and Committed Surface Transportation Network

Within the study area, Hilltop Road and Alpine Drive are the primary roadways that will accommodate traffic to and from the proposed development. The secondary roadways include Village Road, Merryvale Trail, Crest View Drive, and Betts Ranch Road. A brief description of each roadway, based on the County's 2040 Transportation Master Plan (TMP)<sup>1</sup> and Douglas County Roadway Design & Construction Standards (Roadway Standards)<sup>2</sup>, is provided below:

Hilltop Road is generally a northwest-southeast expressway roadway having two through lanes (one lane in each direction) with a combination of shared and exclusive turn lanes at the intersection within the study area. Hilltop Road provides a posted speed limit of 45 MPH.

Alpine Drive is generally a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersections within the study area. Alpine Drive is unclassified in the County's TMP. However, per Section 4.2 and Table 4-1 and the roadway's estimated right-of-way (ROW) width, Alpine Drive is assumed to be classified as a rural local roadway with a posted speed limit of 25 MPH. Alpine Drive is unpaved.

Village Road is generally a north-south roadway having two through lanes (one lane in each direction) with shared and exclusive turn lanes at the intersections within the study area. Alpine Drive is unclassified in the County's TMP. However, per Section 4.2 and Table 4-1 and the roadway's estimated ROW width, Village Road is assumed to be classified as a rural local roadway with a posted speed limit of 25 MPH. East of Betts Ranch Road, Village Road is unpaved.

Merryvale Trail is a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Merryvale Trail is unclassified in the County's TMP. However, per Section 4.2 and Table 4-1 and the roadway's estimated ROW width, Merryvale Trails is assumed to be classified as a rural local roadway with a posted speed limit of 25 MPH.

Betts Ranch Road is generally a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Betts Ranch Road is unclassified in the County's TMP. However, per Section 4.2 and Table 4-1, the roadway's estimated ROW width, and a posted speed limit of 40 MPH, Merryvale Trails is assumed to be classified as a rural local roadway.

Crest View Drive is generally a north-south roadway having two through lanes (one lane in each direction) with shared turn lanes at the intersection within the study area. Merryvale Trail is unclassified in the County's TMP. However, per Section 4.2 and Table 4-1 and the roadway's estimated ROW width, Merryvale Trails is assumed to be classified as a rural Local roadway with a posted speed limit of 25 MPH.

---

<sup>1</sup> 2040 Douglas County Transportation Plan, David Evans and Associates, Inc., September 2019.

<sup>2</sup> Douglas County Roadway Design and Construction Standards, Douglas County, June 2020.

All study intersections operate under a stop-controlled condition. A stop-controlled intersection is defined as a roadway intersection where vehicle rights-of-way are controlled by one or more “STOP” signs.

Pursuant to the Hilltop Road (Legend High School to Crest View Drive) Improvements Project Webpage<sup>3</sup>, Hilltop Road will be widened and reconstructed in three phases.

- Phase one (Hilltop Road from Legend High School to Crestview Drive/Village Road) – Construction is anticipated to begin in early 2025 with completion of the project taking between 12 to 18 months.
- Phase two (Hilltop Road from Crestview Drive/Village Road to Alpine Drive) - Construction is anticipated to begin in late 2025 or early 2026 with completion taking between nine to 12 months.
- Phase three (Alpine Drive on Hilltop Road to Flintwood Road on Signing Hills Road) - Construction is anticipated to begin in 2027 with completion taking between 12 to 18 months.

For purposes of this analysis, it is assumed that Hilltop Road will be widened from two to four to the east of Alpine Drive and the intersection of Hilltop Road and Village Road will be improved to a roundabout-controlled intersection by Year 2029. Additionally, it is assumed that Hilltop Road will be widened from two to four through lanes west of Alpine Drive by Year 2044.

No regional or specific improvements for the above-described roadways are known to be planned or committed at this time.

---

<sup>3</sup> Hilltop Road (Legend High School to Crest View Drive) Improvements Project, Douglas County, October 7, 2024.

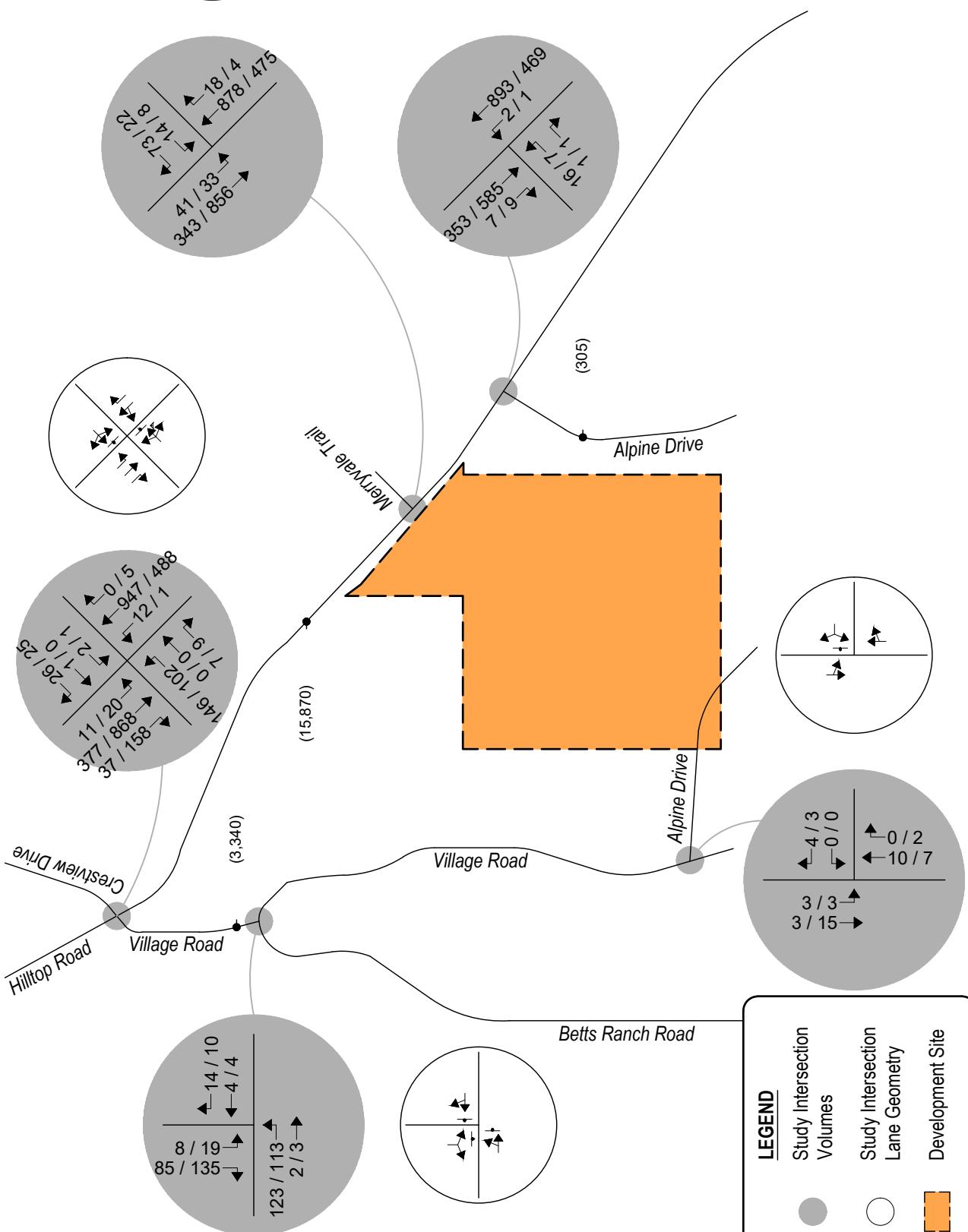
## II. Existing Traffic Conditions

Morning (AM) and afternoon (PM) peak hour traffic counts were collected at the Hilltop Road intersections with Village Road, Merryvale Trail, and Alpine Drive as well as the Village Road intersections with Betts Ranch Road and Alpine Drive. Average daily traffic (ADT) volumes were collected over a 24-hour period on Hilltop Road, Village Road, and Alpine Drive. Counts were collected on Wednesday, September 25, 2024, with AM peak hour counts being collected during the period of 7:00 a.m. to 9:00 a.m. and PM peak hour counts being collected during the period of 4:00 p.m. to 6:00 p.m.

Existing volumes and intersection geometry are shown on Figure 3. Traffic count data is included for reference in Appendix A.



Not to Scale



| <u>LEGEND</u>                    |   |
|----------------------------------|---|
| Study Intersection Volumes       | ● |
| Study Intersection Lane Geometry | ○ |
| Development Site                 | ■ |

## Peak Hour Intersection Levels of Service – Existing Traffic

The Unsignalized Intersection Analysis techniques, as published in the Highway Capacity Manual (HCM), 7<sup>th</sup> Edition, by the Transportation Research Board and as incorporated into the SYNCHRO computer program, was used to analyze the study intersections for existing and future traffic conditions. This nationally accepted technique allows for the determination of intersection level of service (LOS) based on the congestion and delay of each traffic movement.

Level of service is a method of measurement used by transportation professionals to quantify a driver's perception of travel conditions that include travel time, number of stops, and total amount of stopped delay experienced on a roadway network. The HCM categorizes level of service into a range from "A" which indicates little, if any, vehicle delay, to "F" which indicates a level of operation considered unacceptable to most drivers. These levels of service grades with brief descriptions of the operating condition, for unsignalized and signalized intersections, are included for reference in Appendix B and have been used throughout this study.

The level of service analyses results for existing conditions are summarized in Table 1.

Intersection capacity worksheets developed for this study are provided in Appendix C.

**Table 1 – Intersection Capacity Analysis Summary – Existing Traffic**

| INTERSECTION<br>LANE GROUPS                                     | LEVEL OF SERVICE |              |
|-----------------------------------------------------------------|------------------|--------------|
|                                                                 | AM PEAK HOUR     | PM PEAK HOUR |
| Hilltop Road / Village Road / Crest View Road (Stop-Controlled) | B                | A            |
|                                                                 | A                | B            |
|                                                                 | F                | F            |
|                                                                 | C                | B            |
| Hilltop Road / Merryvale Trail (Stop-Controlled)                | B                | A            |
|                                                                 | D                | C            |
| Hilltop Road / Alpine Drive (Stop-Controlled)                   | A                | A            |
|                                                                 | D                | D            |
|                                                                 |                  |              |
| Betts Ranch Road / Village Road (Stop-Controlled)               | A                | A            |
|                                                                 | A                | A            |
|                                                                 | A                | A            |
|                                                                 |                  |              |
| Village Road / Alpine Drive (Stop-Controlled)                   | A                | A            |
|                                                                 | A                | A            |
|                                                                 |                  |              |

Key: Stop-Controlled Intersection: Level of Service

## Existing Traffic Analysis Results

Under existing conditions, operational analysis shows that the unsignalized intersection of Hilltop Road and Village Road has turning movement operations at LOS C or better during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. Exceptions include the northeast turning movement which operates at LOS F during the morning and afternoon peak traffic hours. The LOS F operations are attributed to the through traffic volume along Hilltop Road and the stop-controlled nature of the intersection. However, pursuant to planned and ongoing roadway improvements as discussed in Section I, conversion of the intersection to a roundabout is anticipated to mitigate these operations.

The unsignalized intersection of Hilltop Road and Merryvale Trail has turning movement operations at LOS D or better during the morning peak traffic hours and LOS C or better during the afternoon peak traffic hours.

The unsignalized intersection of Hilltop Road and Alpine Drive has turning movement operations at LOS D or better during the morning and afternoon peak traffic hours.

The unsignalized intersection of Betts Ranch Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The unsignalized intersection of Village Road and Alpine Drive has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

### III. Future Traffic Conditions Without Proposed Development

Background traffic is the traffic projected to be on area roadways without consideration of the proposed development. Background traffic includes traffic generated by development of vacant parcels in the area.

To account for projected increases in background traffic for Years 2029 and 2044, a compounded annual growth rate of approximately two percent was applied to existing traffic volumes.

It is important to note that ingress and egress traffic volumes for some roadways are not subject to annual growth patterns since these roads do not provide connection to other roadways, therefore do not serve regional traffic. The following intersections include:

- The southwest leg of Alpine Drive and Hilltop Road
- The east leg of Betts Ranch Road and Village Road
- The northeast leg of Hilltop Road and Village Road
- The intersection of Village Road and Alpine Drive

To account for projected traffic from adjacent developments not yet built, trip generations from the Fields<sup>4</sup> traffic study were added to background traffic volumes with an updated density as described by County Staff. Trip generation information for the Fields traffic study is included for reference in Appendix D.

Pursuant to the proposed area roadway improvements discussed in Section I, Year 2029 assumes the expansion of Hilltop Road from two to four through lanes from Village Road to Alpine Drive as well as the intersection of Hilltop Road and Village Road being converted to a roundabout-controlled intersection. Year 2044 assumes the expansion of Hilltop Road from two to four through lanes east past Alpine Drive. This assumption provides for a conservative analysis.

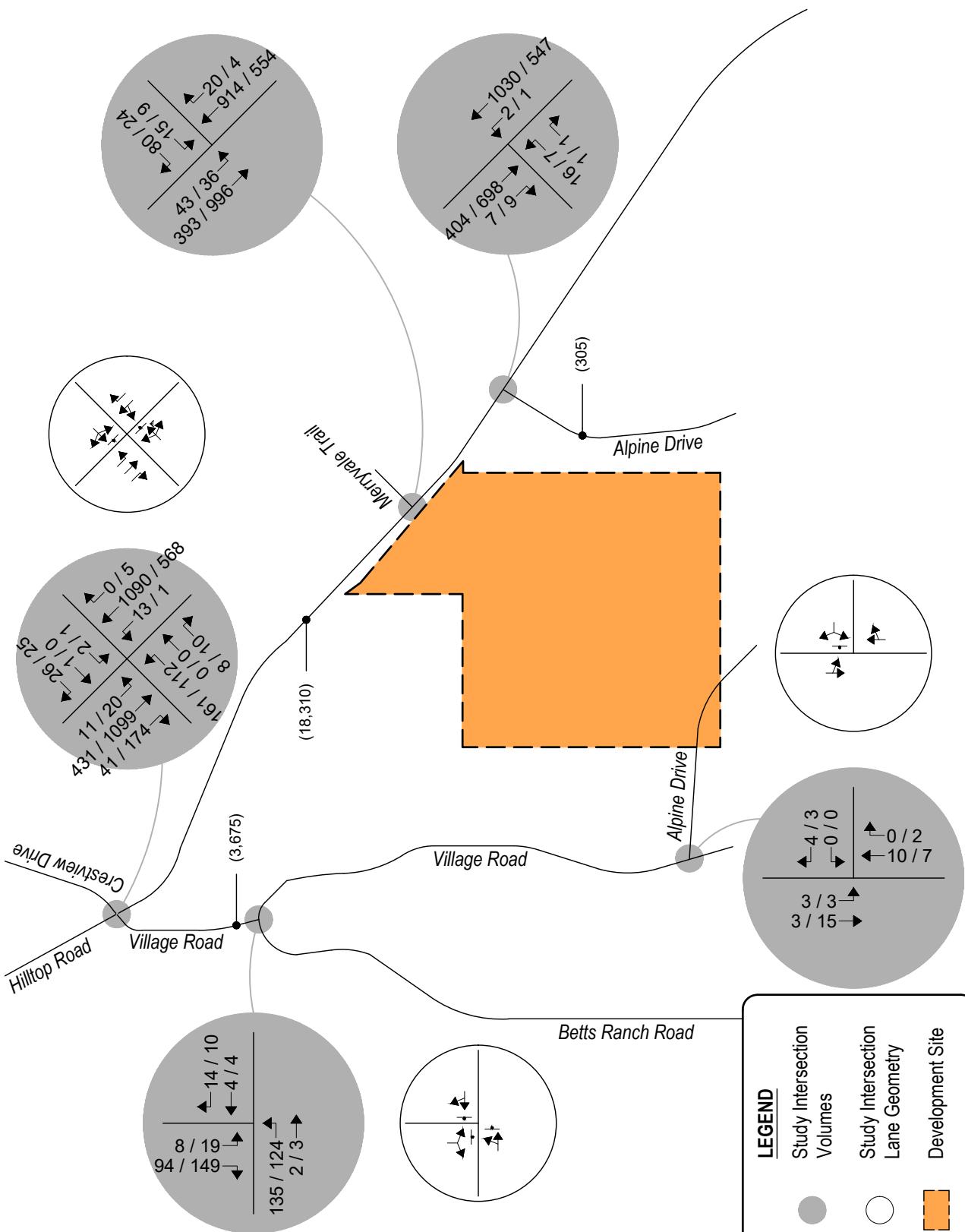
Projected background traffic volumes and intersection geometry for Years 2029 and 2044 are shown on Figure 4 and Figure 5, respectively.

---

<sup>4</sup> Fields: Traffic Impact Analysis, Felsberg, Holt, and Ullevig, November, 2021



Not to Scale



| <u>LEGEND</u> | Study Intersection Volumes | Study Intersection Lane Geometry | Development Site |
|---------------|----------------------------|----------------------------------|------------------|
| ●             | ○                          | □                                |                  |

Figure 4

**BACKGROUND TRAFFIC - YEAR 2029**

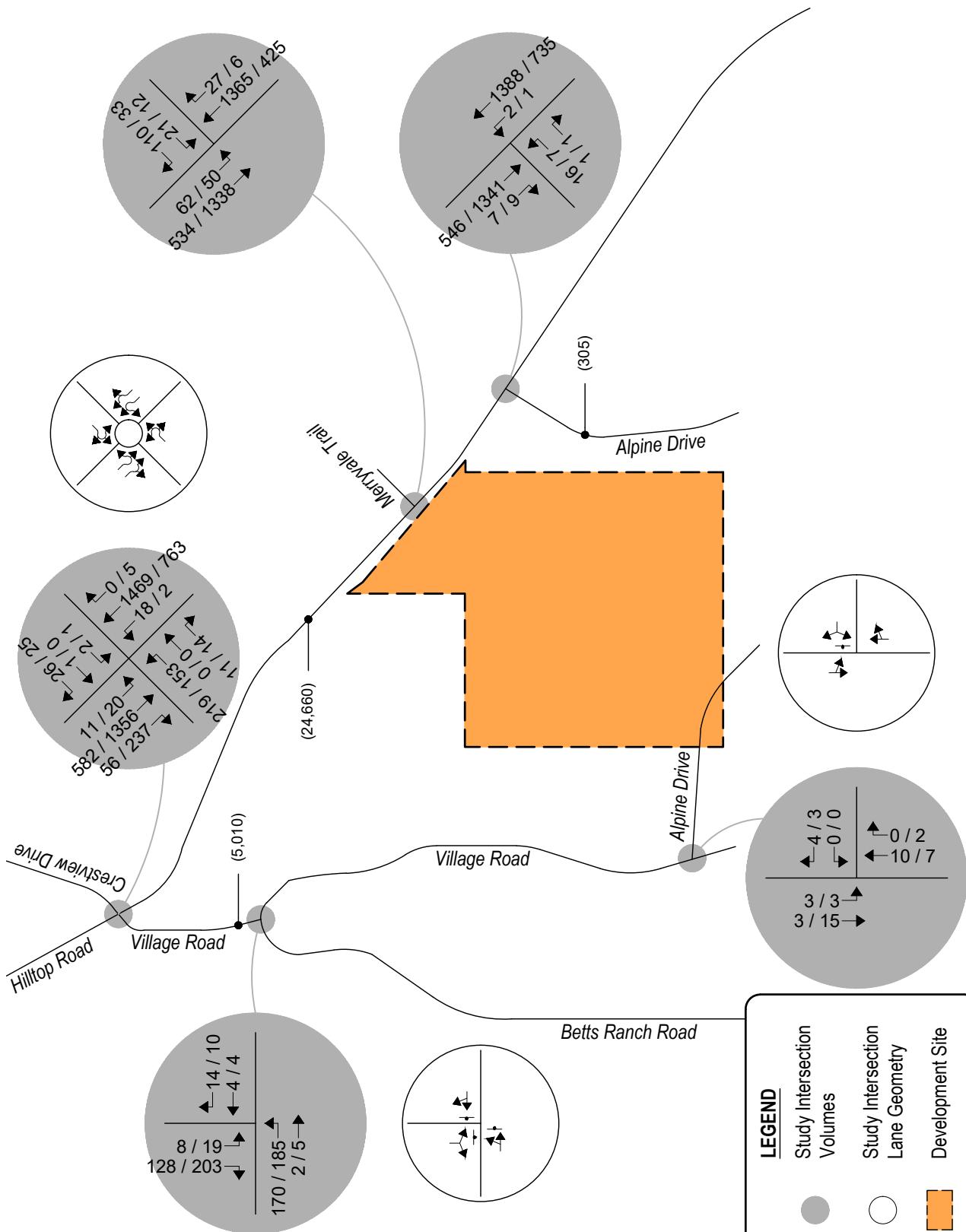
Volumes & Intersection Geometry

AM / PM Peak Hour (ADT)

(ADT) : Average Daily Traffic



Not to Scale



**Figure 5**  
**BACKGROUND TRAFFIC - YEAR 2044**  
 Volumes & Intersection Geometry  
 AM / PM Peak Hour  
 (ADT): Average Daily Traffic

May 2025  
Page 12

**SM ROCHA, LLC** *Traffic and Transportation Consultants*



### Peak Hour Intersection Levels of Service – Background Traffic

As with existing traffic conditions, the operations of study intersections were analyzed under background conditions, without the proposed development, using the SYNCHRO computer program.

Background traffic level of service analysis results for Year 2029 are listed in Table 2. Year 2044 operational results are summarized in Table 3.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

**Table 2 – Intersection Capacity Analysis Summary – Background Traffic – Year 2029**

| INTERSECTION<br>LANE GROUPS                                           | LEVEL OF SERVICE |              |
|-----------------------------------------------------------------------|------------------|--------------|
|                                                                       | AM PEAK HOUR     | PM PEAK HOUR |
| Hilltop Road / Village Road / Crest View Road (Roundabout-Controlled) |                  |              |
| Southeastbound Left and Through                                       | A                | A            |
| Southeastbound Through and Right                                      | A                | A            |
| Northwestbound Left and Through                                       | A                | A            |
| Northwestbound Through and Right                                      | A                | A            |
| Northeastbound Left, Through and Right                                | A                | B            |
| Southwestbound Left, Through and Right                                | A                | A            |
| Hilltop Road / Merryvale Trail (Stop-Controlled)                      |                  |              |
| Southeastbound Left                                                   | B                | A            |
| Southwestbound Left and Right                                         | C                | C            |
| Hilltop Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Northwestbound Through and Left                                       | A                | A            |
| Northeastbound Left and Right                                         | E                | D            |
| Betts Ranch Road / Village Road (Stop-Controlled)                     |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Westbound Right and Through                                           | A                | A            |
| Southbound Left and Right                                             | A                | A            |
| Village Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Westbound Left and Right                                              | A                | A            |
| Southbound Left and Through                                           | A                | A            |

Key: Stop-Controlled Intersection: Level of Service  
Roundabout Intersection: Level of Service

### Background Traffic Analysis Results – Year 2029

Year 2029 background traffic analysis indicates that the roundabout-controlled intersection of Hilltop Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hilltop Road and Merryvale Trail has turning movement operations at LOS C or better during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hilltop Road and Alpine Drive has turning movement operations at LOS A during the morning peak traffic hour and LOS D or better during the afternoon peak traffic hour. Exceptions include the northeastbound turning movement which has operations at LOS E during the morning peak traffic hour. The LOS E operation is attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection. Potential mitigations may include the addition of a northeastbound to a northwestbound left turn acceleration lane along Hilltop Road.

The unsignalized intersection of Betts Ranch Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The unsignalized intersection of Village Road and Alpine Drive has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

**Table 3 – Intersection Capacity Analysis Summary – Background Traffic – Year 2044**

| INTERSECTION<br>LANE GROUPS                                           | LEVEL OF SERVICE |              |
|-----------------------------------------------------------------------|------------------|--------------|
|                                                                       | AM PEAK HOUR     | PM PEAK HOUR |
| Hilltop Road / Village Road / Crest View Road (Roundabout-Controlled) |                  |              |
| Southeastbound Left and Through                                       | A                | B            |
| Southeastbound Through and Right                                      | A                | B            |
| Northwestbound Left and Through                                       | C                | A            |
| Northwestbound Through and Right                                      | C                | A            |
| Northeastbound Left, Through and Right                                | A                | C            |
| Southwestbound Left, Through and Right                                | C                | A            |
| Hilltop Road / Merryvale Trail (Stop-Controlled)                      |                  |              |
| Southeastbound Left                                                   | B                | A            |
| Southwestbound Left and Right                                         | F                | C            |
| Hilltop Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Northwestbound Through and Left                                       | A                | B            |
| Northeastbound Left and Right                                         | D                | F            |
| Betts Ranch Road / Village Road (Stop-Controlled)                     |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Westbound Right and Through                                           | A                | A            |
| Southbound Left and Right                                             | A                | A            |
| Village Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Westbound Left and Right                                              | A                | A            |
| Southbound Left and Through                                           | A                | A            |

Key: Stop-Controlled Intersection: Level of Service  
Roundabout Intersection: Level of Service

## Background Traffic Analysis Results – Year 2044

By Year 2044 and without the proposed development, the roundabout controlled intersection of Hilltop Road and Village Road has turning movement operations at LOS C or better during the morning and afternoon peak traffic hours.

The unsignalized intersection of Hilltop Road and Merryvale Trail has turning movement operations at LOS B during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour. Exceptions include the southwestbound turning movement which has operations at LOS F during the morning peak traffic hour. The LOS F operation is attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection. Potential mitigations may include the addition of a southwestbound to southeastbound left turn acceleration lane along Hilltop Road or conversion of the intersection to either a signal-controlled intersection or a roundabout controlled intersection.

The unsignalized intersection of Hilltop Road and Alpine Drive has turning movement operations at LOS D during the morning peak traffic hour and LOS B during the afternoon peak traffic hour. Exceptions include the northeastbound turning movement which has operations at LOS F during the afternoon peak traffic hour. The LOS F operation is attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection. Potential mitigations continue to include the addition of a northeastbound to northwestbound left turn acceleration lane along Hilltop Road.

The unsignalized intersection of Betts Ranch Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The unsignalized intersection of Village Road and Alpine Drive has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

## IV. Proposed Project Traffic

### Trip Generation

Standard traffic generation characteristics compiled by the Institute of Transportation Engineers (ITE) in their report entitled Trip Generation Manual, 11<sup>th</sup> Edition, were applied to the proposed land use in order to estimate average daily traffic (ADT), AM Peak Hour, and PM Peak Hour vehicle trips. A vehicle trip is defined as a one-way vehicle movement from a point of origin to a point of destination.

The ITE land use code 210 (Single-Family Detached Housing) was used for estimating trip generation because of its conservative rates and best fit to the proposed land use description.

Trip generation rates used in this study are presented in Table 4.

**Table 4 – Trip Generation Rates**

| ITE<br>CODE | LAND USE                       | UNIT | TRIP GENERATION RATES |              |      |       |              |      |       |  |  |
|-------------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|--|--|
|             |                                |      | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |  |  |
|             |                                |      |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |  |  |
| 210         | Single-Family Detached Housing | DU   | 9.43                  | 0.18         | 0.53 | 0.70  | 0.59         | 0.35 | 0.94  |  |  |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Table 5 illustrates projected ADT, AM Peak Hour, and PM Peak Hour traffic volumes likely generated by the proposed development upon build-out.

**Table 5 – Trip Generation Summary**

| ITE<br>CODE | LAND USE                       | SIZE   | TOTAL TRIPS GENERATED |              |      |       |              |      |       |  |  |
|-------------|--------------------------------|--------|-----------------------|--------------|------|-------|--------------|------|-------|--|--|
|             |                                |        | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |  |  |
|             |                                |        |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |  |  |
| 210         | Single-Family Detached Housing | 70 DU  | 660                   | 12           | 37   | 49    | 41           | 24   | 66    |  |  |
|             |                                | Total: | 660                   | 12           | 37   | 49    | 41           | 24   | 66    |  |  |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

Upon build-out, Table 5 illustrates that the proposed development has the potential to generate approximately 660 daily vehicle trips with 49 of those occurring during the morning peak hour and 66 during the afternoon peak hour.

## Adjustments to Trip Generation Rates

A development of this type is not likely to attract trips from within area land uses nor pass-by or diverted link trips from the adjacent roadway system, therefore no trip reduction was taken in this analysis.

## Trip Distribution

The overall directional distribution of site-generated traffic was determined based on the location of development site within the County, proposed and existing area land uses, allowed turning movements, and available roadway network.

Overall trip distribution patterns for the development are shown on Figure 6.

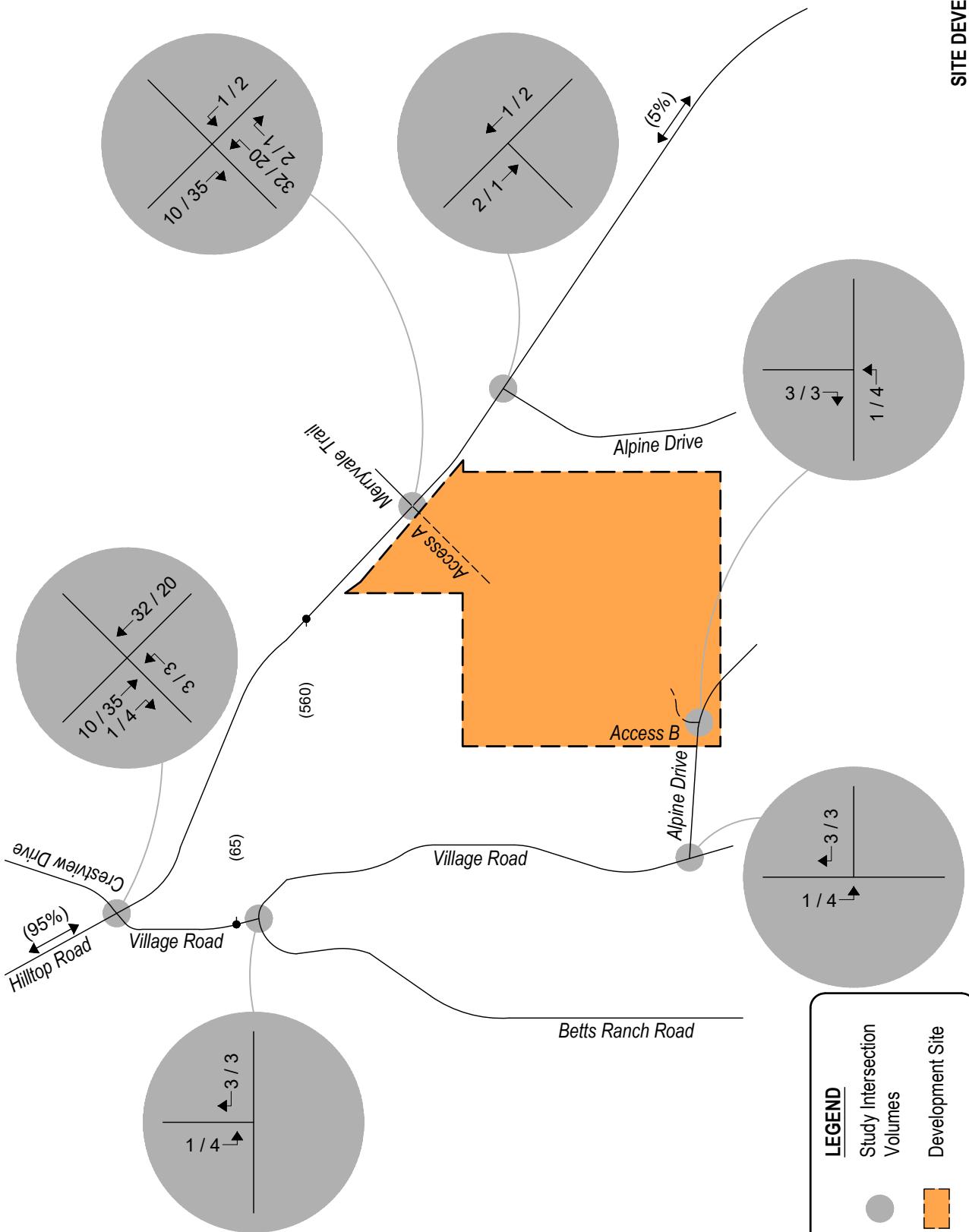
## Trip Assignment

Traffic assignment is how generated and distributed vehicle trips are expected to be loaded onto the available roadway network.

Applying trip distribution patterns to site-generated traffic provides the overall site-generated trip assignments shown on Figure 6.



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Figure 6  
**SITE DEVELOPMENT DISTRIBUTION**  
SITE-GENERATED TRIPS  
(%) : Overall  
AM / PM Peak Hour  
(ADT) : Average Daily Traffic  
(ADT) : Average Daily Traffic

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## V. Future Traffic Conditions With Proposed Developments

Total traffic is the traffic projected to be on area roadways with consideration of the proposed development. Total traffic includes background traffic projections for Years 2029 and 2044 with consideration of site-generated traffic. For analysis purposes, it was assumed that development construction would be completed by end of Year 2029.

Pursuant to area roadway improvement discussions provided in Section III, Year 2029 and Year 2044 total traffic conditions assume no roadway improvements to accommodate regional transportation demands. Roadway improvements associated with site development are expected to be limited to site access and frontage as required by the governing agency.

### Total Traffic Auxiliary Lane Analysis

Auxiliary lanes for Hilltop Road were evaluated and are to be based on the County's Roadway Standards.

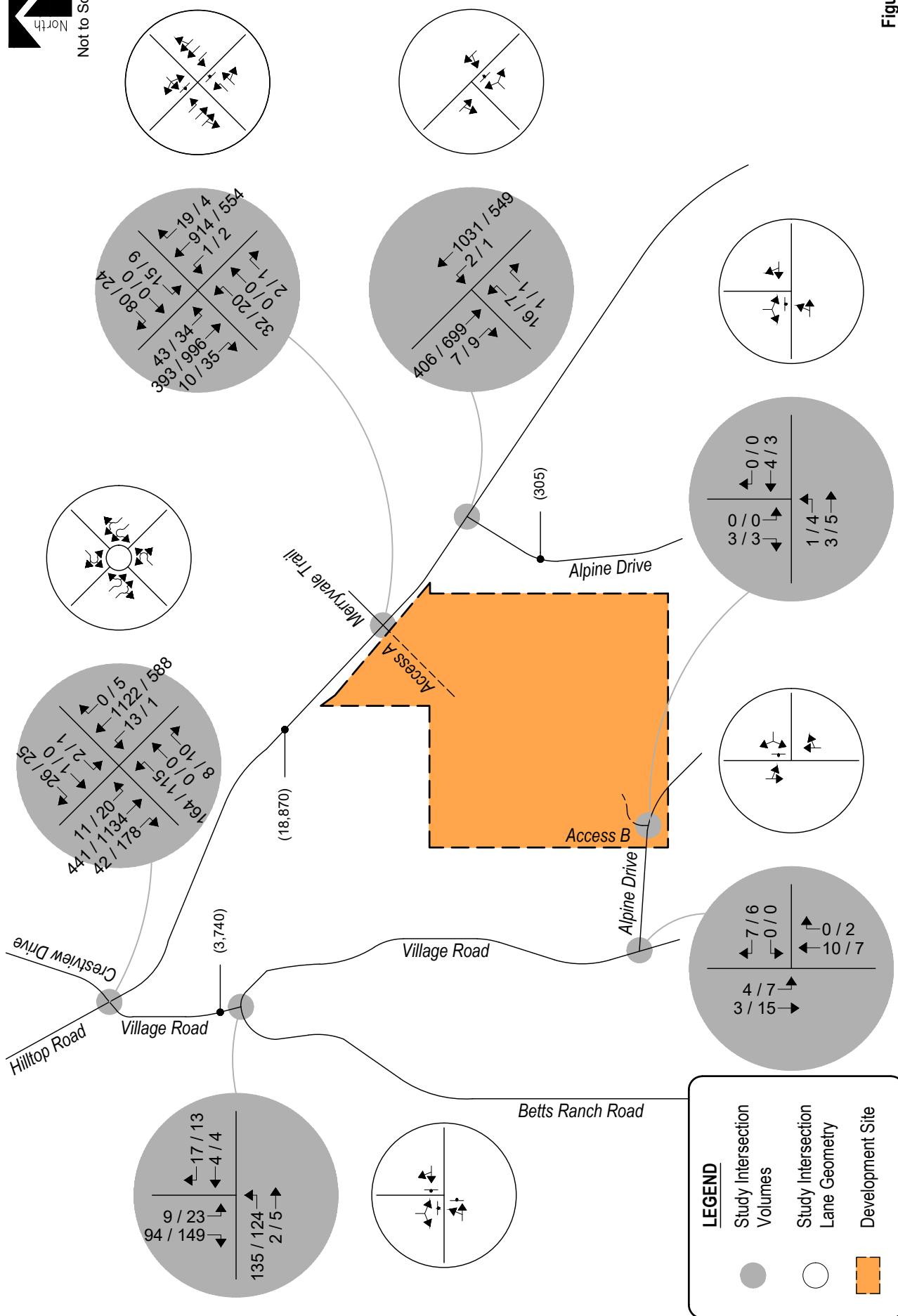
Section 4.13 of the County's Roadway Standards also indicates that the need for auxiliary lanes on roadways that have greater than two lanes are to be established by an accepted traffic impact study. Considering build-out traffic, an evaluation of auxiliary lane requirements, pursuant to Section 4.13 of the County's Roadway Standards, analysis results indicate that a shared northwestbound left turn lane operates at LOS B or better and with minimal queues. However, it is understood pursuant to County review that a left-turn lane is required with the planned widening of Hilltop Road to a four-lane roadway section.

Projected Year 2029 total traffic volumes and intersection geometry are shown in Figure 7.

Figure 8 shows projected total traffic volumes and intersection geometry for Year 2044.



Not to Scale



**Figure 7**  
**TOTAL TRAFFIC - YEAR 2029**  
 Volumes & Intersection Geometry  
 AM / PM Peak Hour  
 (ADT) : Average Daily Traffic

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Ramblewood Planned Development - Rezoning  
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Not to Scale



**Figure 8**  
**TOTAL TRAFFIC - YEAR 2044**  
 Volumes & Intersection Geometry

AM / PM Peak Hour  
 (ADT) : Average Daily Traffic

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## VI. Project Impacts

The analyses and procedures described in this study were performed in accordance with the latest HCM. The analyses are based upon the worst-case conditions that occur during a typical weekday upon build-out of site development and analyzed land uses. Therefore, study intersections are likely to operate with traffic conditions better than those described within this study, which represent the peak hours of weekday operations only.

### Peak Hour Intersection Levels of Service – Total Traffic

As with background traffic, the operations of the study intersections were analyzed under projected total traffic conditions using the SYNCHRO computer program. Total traffic level of service analysis results for Years 2029 and 2044 are summarized in Table 6 and Table 7, respectively.

Definitions of levels of service are given in Appendix B. Intersection capacity worksheets are provided in Appendix C.

**Table 6 – Intersection Capacity Analysis Summary – Total Traffic – Year 2029**

| INTERSECTION<br>LANE GROUPS                                           | LEVEL OF SERVICE |              |
|-----------------------------------------------------------------------|------------------|--------------|
|                                                                       | AM PEAK HOUR     | PM PEAK HOUR |
| Hilltop Road / Village Road / Crest View Road (Roundabout-Controlled) |                  |              |
| Southeastbound Left and Through                                       | A                | A            |
| Southeastbound Through and Right                                      | A                | A            |
| Northwestbound Left and Through                                       | A                | A            |
| Northwestbound Through and Right                                      | A                | A            |
| Northeastbound Left, Through and Right                                | A                | B            |
| Southwestbound Left, Through and Right                                | A                | A            |
| Hilltop Road / Merryvale Trail / Access A (Stop-Controlled)           |                  |              |
| Southeastbound Left                                                   | B                | A            |
| Northwestbound Left                                                   | A                | B            |
| Northeastbound Left                                                   | E                | F            |
| Northeastbound Through and Right                                      | A                | B            |
| Southwestbound Left, Through and Right                                | C                | C            |
| Hilltop Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Northwestbound Through and Left                                       | A                | A            |
| Northeastbound Left and Right                                         | E                | D            |
| Betts Ranch Road / Village Road (Stop-Controlled)                     |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Westbound Right and Through                                           | A                | A            |
| Southbound Left and Right                                             | A                | A            |
| Village Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Westbound Left and Right                                              | A                | A            |
| Southbound Left and Through                                           | A                | A            |
| Alpine Drive / Access B (Stop-Controlled)                             |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Southbound Left and Right                                             | A                | A            |

Key: Stop-Controlled Intersection: Level of Service  
 Roundabout Intersection: Level of Service

**Table 7 – Intersection Capacity Analysis Summary – Total Traffic – Year 2044**

| INTERSECTION<br>LANE GROUPS                                           | LEVEL OF SERVICE |              |
|-----------------------------------------------------------------------|------------------|--------------|
|                                                                       | AM PEAK HOUR     | PM PEAK HOUR |
| Hilltop Road / Village Road / Crest View Road (Roundabout-Controlled) |                  |              |
| Southeastbound Left and Through                                       | A                | B            |
| Southeastbound Through and Right                                      | A                | B            |
| Northwestbound Left and Through                                       | C                | A            |
| Northwestbound Through and Right                                      | C                | A            |
| Northeastbound Left, Through and Right                                | A                | C            |
| Southwestbound Left, Through and Right                                | C                | A            |
| Hilltop Road / Merryvale Trail / Access A (Stop-Controlled)           |                  |              |
| Southeastbound Left                                                   | B                | A            |
| Northwestbound Left                                                   | A                | B            |
| Northeastbound Left                                                   | F                | F            |
| Northeastbound Through and Right                                      | B                | B            |
| Southwestbound Left, Through and Right                                | F                | C            |
| Hilltop Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Northwestbound Through and Left                                       | A                | B            |
| Northeastbound Left and Right                                         | D                | F            |
| Betts Ranch Road / Village Road (Stop-Controlled)                     |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Westbound Right and Through                                           | A                | A            |
| Southbound Left and Right                                             | A                | A            |
| Village Road / Alpine Drive (Stop-Controlled)                         |                  |              |
| Westbound Left and Right                                              | A                | A            |
| Southbound Left and Through                                           | A                | A            |
| Alpine Drive / Access B (Stop-Controlled)                             |                  |              |
| Eastbound Left and Through                                            | A                | A            |
| Southbound Left and Right                                             | A                | A            |

Key: Stop-Controlled Intersection: Level of Service  
Roundabout Intersection: Level of Service

### Total Traffic Analysis Results Upon Development Build-Out

Table 7 illustrates how, by Year 2044 and upon development build-out, the roundabout-controlled intersection has turning movement operations at LOS C or better during the morning and afternoon peak traffic hours. Compared to the background traffic analysis, the traffic generated by the proposed development is not expected to significantly change the operations of the study intersection.

The stop-controlled intersection of Hilltop Road and Access A has turning movement operations at LOS B or better during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hours. Exceptions include the southwestbound turning movement, which operates at LOS F during the morning peak traffic hour, and the northeastbound left turning movement, which operates at LOS F during the morning and afternoon peak traffic hour. The LOS F operations are attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection. Similar to background traffic conditions potential mitigations include conversion of the intersection to either a signal-controlled intersection or a roundabout controlled intersection. It is important to note that this development does not significantly contribute or change operations compared to background traffic conditions.

The stop-controlled intersection of Hilltop Road and Alpine Drive has turning movement operations at LOS D or better during the morning peak traffic hour and LOS B during the afternoon peak traffic hour. Exceptions continue to include the northeastbound turning movement which has turning movement operations at LOS F during the afternoon peak traffic hour. The LOS F operation continues to be attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection. As with background traffic conditions, potential mitigations continue to include the addition of a northeastbound to northwestbound left turn acceleration lane along Hilltop Road.

The stop-controlled intersection of Betts Ranch Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The stop-controlled nature of the intersection of Village Road and Alpine Drive has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

The stop-controlled nature of the intersection of Alpine Drive and Access B has turning movement operations at LOS A during the morning and afternoon peak traffic hours.

It is to be noted that it is not uncommon for unsignalized movements to or from an arterial roadway, in urban areas, to operate with noticeable delays during peak traffic hours. It is, however, likely that turn movements will operate better than the results obtained with this HCM Two-Way Stop-Control (TWSC) level of service analysis would indicate, as the HCM analysis may not accurately account for the effect of vehicle platooning and gaps caused by upstream signals.

These intersection operations are similar to background conditions.

Compared to Year 2044 background traffic conditions along Hilltop Road, a potential increase of approximately 560 trips per day is expected as shown in Figure 6. This equates to an approximate 2% increase from background traffic volumes and is considered minor. Percent contribution calculations are provided for reference in Appendix E.

## Queue Length Analysis

Queue lengths for the study intersections were analyzed using Year 2044 total traffic conditions. The analysis yields estimate of 95<sup>th</sup> percentile queue lengths, which have only a five percent probability of being exceeded during the analysis time period. An average vehicle length of 25 feet was assumed. Queue lengths were modeled and are included with the Synchro worksheets in Appendix C.

Table 8 summarizes the 95<sup>th</sup> percentile queue results in comparison to the projected storage requirements for turn movements within study area for Year 2044.

**Table 8 – Turn Lane Queues and Storage Requirements – Total Traffic – Year 2041**

| Intersection                                  | Turn Movement | Existing Turn Lane Length (feet) | AM Peak Hour                        |                               | PM Peak Hour                        |                               | Recommended Turn Lane Length (feet) |      |
|-----------------------------------------------|---------------|----------------------------------|-------------------------------------|-------------------------------|-------------------------------------|-------------------------------|-------------------------------------|------|
|                                               |               |                                  | 95th Percentile Queue Length (feet) | Vehicle Equivalent (vehicles) | 95th Percentile Queue Length (feet) | Vehicle Equivalent (vehicles) |                                     |      |
| Roundabout-Controlled Intersections           |               |                                  |                                     |                               |                                     |                               |                                     |      |
| Hilltop Road / Village Road / Crest View Road | SEB           | L,T                              | -                                   | 25'                           | 1                                   | 130'                          | 6                                   | -    |
|                                               |               | T,R                              | -                                   | 25'                           | 1                                   | 150'                          | 6                                   | -    |
|                                               | NWB           | L,T                              | -                                   | 175'                          | 7                                   | 50'                           | 2                                   | -    |
|                                               |               | T,R                              | -                                   | 200'                          | 8                                   | 50'                           | 2                                   | -    |
|                                               | NEB           | L,T,R                            | -                                   | 25'                           | 1                                   | 75'                           | 3                                   | -    |
|                                               | SWB           | L,T,R                            | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
| Stop-Controlled Intersections                 |               |                                  |                                     |                               |                                     |                               |                                     |      |
| Hilltop Road / Merryvale Trail / Access A     | SEB           | L                                | 315'                                | 13'                           | 0                                   | 5'                            | 0                                   | 315' |
|                                               |               | T,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | NWB           | L                                | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | 315' |
|                                               |               | T,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | NEB           | L                                | -                                   | 70'                           | 0                                   | 45'                           | 0                                   | 75'  |
|                                               | SWB           | L,T,R                            | -                                   | 185'                          | 0                                   | 15'                           | 0                                   | -    |
| Hilltop Road / Alpine Drive                   | SEB           | T,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | NWB           | L,T                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | NEB           | L,R                              | -                                   | 10'                           | 0                                   | 10'                           | 1                                   | -    |
| Village Road / Betts Ranch Road               | EB            | L,T                              | -                                   | 23'                           | 1                                   | 28'                           | 2                                   | -    |
|                                               | WB            | T,R                              | -                                   | 3'                            | 1                                   | 3'                            | 0                                   | -    |
|                                               | SB            | L,R                              | -                                   | 15'                           | 1                                   | 28'                           | 0                                   | -    |
| Village Road / Alpine Drive                   | WB            | L,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | NB            | T,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | SB            | L,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
| Alpine Drive / Access B                       | EB            | L,T                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | WB            | T,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |
|                                               | SB            | L,R                              | -                                   | 0'                            | 0                                   | 0'                            | 0                                   | -    |

Note: Turn Lane Length does not include taper length.

As Table 8 shows, all turn lane lengths at stop-controlled intersections have sufficient storage to accommodate future traffic volumes.

## VII. Conclusion

This traffic impact study addressed the capacity, geometric, and control requirements associated with the development entitled Ramblewood. This proposed residential development consists of a single-family home development. The development is located to the southwest of Hilltop Road, north of Alpine Drive, and east of N Village Road in Douglas County, Colorado.

The study area examined in this analysis encompassed the area bounded by Hilltop Road from Village Road east to Alpine Drive, Village Road from Betts Ranch Road east to Alpine Drive, and includes proposed site accesses.

Analysis was conducted for critical AM Peak Hour and PM Peak Hour traffic operations for existing traffic conditions, Year 2029 and Year 2044 background traffic conditions, and Year 2029 and Year 2044 total traffic conditions.

Analysis of existing traffic conditions indicates that the unsignalized intersections within the study area have turning movement operations at LOS D or better during the morning and afternoon peak traffic hour. Exceptions include the northeastbound turning movement which operates at LOS F during the morning and afternoon peak traffic hour at the intersection of Hilltop Road and Village Road.

Without the proposed development, Year 2029 background operational analysis shows that the roundabout-controlled intersection of Hilltop Road and Village Road has turning movement operations at LOS A during the morning and afternoon peak traffic hours. The unsignalized intersections within the study area have turning movement operations at LOS D or better during the morning peak traffic hour and LOS B or better during the afternoon peak traffic hour. Exceptions include the northeastbound turning movement at the intersection of Hilltop Road and Alpine Drive which operates at LOS E during the afternoon peak traffic hour. The LOS E operation is attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection.

By Year 2044 and without the proposed development, the roundabout-controlled intersection of Hilltop Road and Village Road has turning movement operations at LOS C or better during the morning and afternoon peak traffic hours. The unsignalized intersections within the study area have turning movement operations at LOS D or better during the morning peak traffic hour and LOS C or better during the afternoon peak traffic hour. Exceptions include the southwestbound turning movement at the intersection of Hilltop Road and Merryvale Trail which operates at LOS F during the morning peak traffic and the northeastbound turning movement at the intersection of Hilltop Road and Alpine Drive which operates at LOS F during the afternoon peak traffic hour. The LOS F operations are attributed to the through traffic volumes along Hilltop Road and the stop-controlled nature of the intersection.

Analysis of future traffic conditions indicates that the addition of site-generated traffic is expected to create no negative impact to traffic operations for the existing and surrounding roadway system upon consideration of the various roadway and intersection control improvements assumed within this analysis. With all conservative assumptions defined in this analysis, the study intersections are projected to operate at future levels of service comparable to Year 2044 background traffic conditions. Proposed site accesses have long-term operations at LOS A or better during peak traffic periods and upon build-out. Exceptions include the northeastbound left turning movement at the intersection of Hilltop Road and Access A, which operates at LOS F during the morning and afternoon peak traffic hours. Potential mitigations may include converting the intersection to a signal-control. It is again important to note that this development does not significantly contribute or change operations compared to background traffic conditions. It is recommended that County Staff monitor the study intersections in order to determine when specific mitigation measures may be necessary as planned corridor improvements occur.

## **APPENDIX A**

### **Traffic Count Data Approved Base Assumptions**

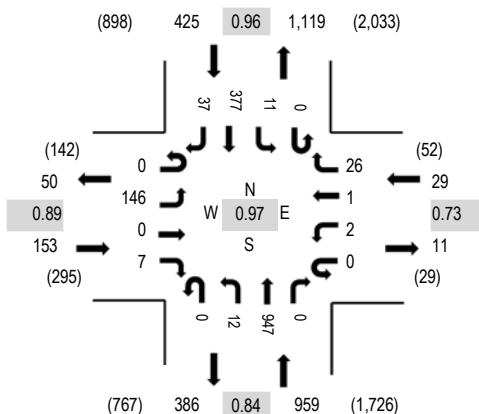
Location: 1 HILLTOP RD & VILLAGE RD AM

Date: Wednesday, September 25, 2024

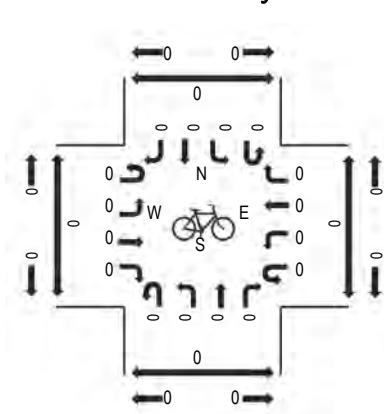
**Peak Hour:** 07:00 AM - 08:00 AM

**Peak 15-Minutes:** 07:00 AM - 07:15 AM

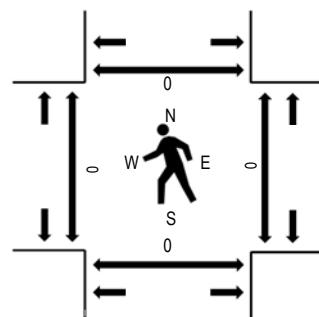
## Peak Hour - Motorized Vehicles



## Peak Hour - Bicycles



## Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

## Traffic Counts - Motorized Vehicles

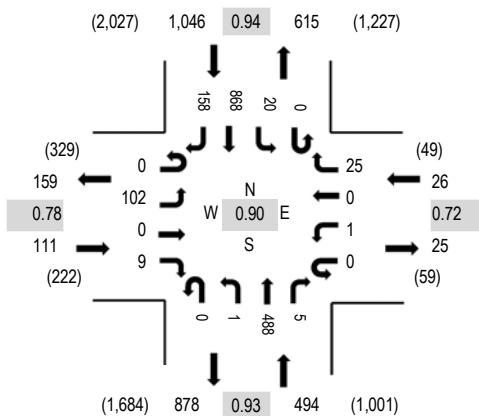
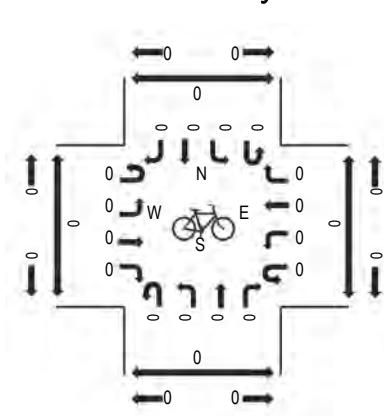
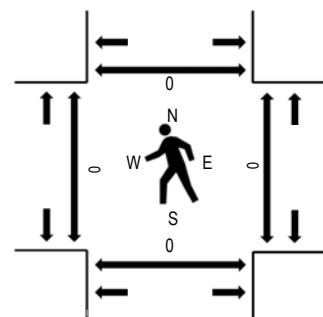
| Interval Start Time | VILLAGE RD |      |      |       |  |           |      |      |       |  | HILLTOP RD |      |       |       |  |            |      |      |       |       | Pedestrian Crossings |      |      |       |       |
|---------------------|------------|------|------|-------|--|-----------|------|------|-------|--|------------|------|-------|-------|--|------------|------|------|-------|-------|----------------------|------|------|-------|-------|
|                     | Eastbound  |      |      |       |  | Westbound |      |      |       |  | Northbound |      |       |       |  | Southbound |      |      |       |       | Rolling Hour         |      |      |       |       |
|                     | U-Turn     | Left | Thru | Right |  | U-Turn    | Left | Thru | Right |  | U-Turn     | Left | Thru  | Right |  | U-Turn     | Left | Thru | Right | Total | Hour                 | West | East | South | North |
| 7:00 AM             | 0          | 42   | 0    | 0     |  | 0         | 1    | 0    | 6     |  | 0          | 1    | 284   | 0     |  | 0          | 0    | 66   | 5     | 405   | 1,566                | 0    | 0    | 0     | 0     |
| 7:15 AM             | 0          | 27   | 0    | 4     |  | 0         | 1    | 0    | 9     |  | 0          | 4    | 223   | 0     |  | 0          | 5    | 115  | 11    | 399   | 1,538                | 0    | 0    | 0     | 0     |
| 7:30 AM             | 0          | 36   | 0    | 1     |  | 0         | 0    | 1    | 5     |  | 0          | 3    | 215   | 0     |  | 0          | 4    | 101  | 11    | 377   | 1,494                | 0    | 0    | 0     | 0     |
| 7:45 AM             | 0          | 41   | 0    | 2     |  | 0         | 0    | 0    | 6     |  | 0          | 4    | 225   | 0     |  | 0          | 2    | 95   | 10    | 385   | 1,464                | 0    | 0    | 0     | 0     |
| 8:00 AM             | 0          | 40   | 0    | 0     |  | 0         | 0    | 0    | 5     |  | 0          | 2    | 215   | 1     |  | 0          | 4    | 88   | 22    | 377   | 1,405                | 0    | 0    | 0     | 0     |
| 8:15 AM             | 0          | 28   | 0    | 1     |  | 0         | 1    | 0    | 6     |  | 0          | 3    | 201   | 0     |  | 0          | 5    | 91   | 19    | 355   |                      | 0    | 0    | 0     | 0     |
| 8:30 AM             | 0          | 25   | 0    | 1     |  | 0         | 0    | 0    | 4     |  | 0          | 2    | 194   | 0     |  | 0          | 3    | 99   | 19    | 347   |                      | 0    | 0    | 0     | 0     |
| 8:45 AM             | 0          | 46   | 0    | 1     |  | 0         | 0    | 0    | 7     |  | 0          | 6    | 143   | 0     |  | 0          | 5    | 99   | 19    | 326   |                      | 0    | 0    | 0     | 0     |
| Count Total         | 0          | 285  | 0    | 10    |  | 0         | 3    | 1    | 48    |  | 0          | 25   | 1,700 | 1     |  | 0          | 28   | 754  | 116   | 2,971 |                      | 0    | 0    | 0     | 0     |
| Peak Hour           | 0          | 146  | 0    | 7     |  | 0         | 2    | 1    | 26    |  | 0          | 12   | 947   | 0     |  | 0          | 11   | 377  | 37    | 1,566 |                      | 0    | 0    | 0     | 0     |

Location: 1 HILLTOP RD &amp; VILLAGE RD PM

Date: Wednesday, September 25, 2024

Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

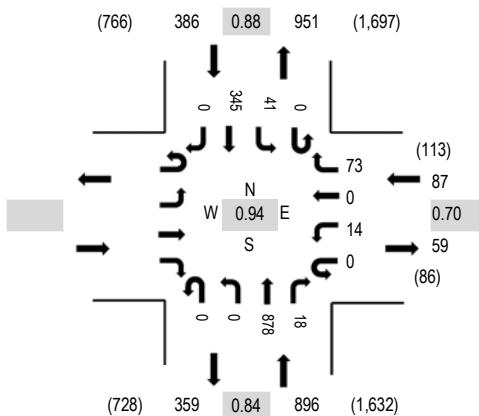
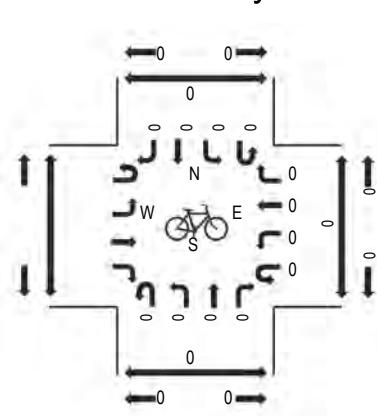
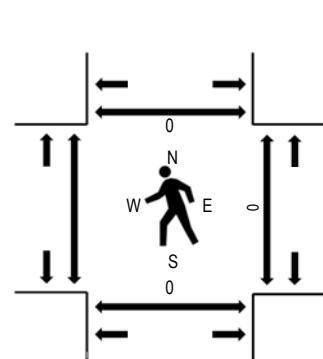
| Interval Start Time | VILLAGE RD |      |           |        | VILLAGE RD |      |            |        | HILLTOP RD |      |            |        | HILLTOP RD |      |            |       | Rolling Hour | Pedestrian Crossings |      |       |       |   |
|---------------------|------------|------|-----------|--------|------------|------|------------|--------|------------|------|------------|--------|------------|------|------------|-------|--------------|----------------------|------|-------|-------|---|
|                     | Eastbound  |      | Westbound |        | Northbound |      | Southbound |        | Northbound |      | Southbound |        | Northbound |      | Southbound |       |              | West                 | East | South | North |   |
| U-Turn              | Left       | Thru | Right     | U-Turn | Left       | Thru | Right      | U-Turn | Left       | Thru | Right      | U-Turn | Left       | Thru | Right      | Total |              |                      |      |       |       |   |
| 4:00 PM             | 0          | 30   | 0         | 5      | 0          | 0    | 0          | 4      | 0          | 0    | 114        | 0      | 0          | 4    | 171        | 32    | 360          | 1,630                | 0    | 0     | 0     | 0 |
| 4:15 PM             | 0          | 36   | 0         | 4      | 0          | 0    | 0          | 9      | 0          | 1    | 139        | 0      | 0          | 6    | 214        | 57    | 466          | 1,677                | 0    | 0     | 0     | 0 |
| 4:30 PM             | 0          | 20   | 0         | 2      | 0          | 0    | 0          | 6      | 0          | 0    | 128        | 2      | 0          | 1    | 218        | 38    | 415          | 1,641                | 0    | 0     | 0     | 0 |
| 4:45 PM             | 0          | 25   | 0         | 2      | 0          | 0    | 0          | 7      | 0          | 0    | 96         | 1      | 0          | 6    | 223        | 29    | 389          | 1,653                | 0    | 0     | 0     | 0 |
| 5:00 PM             | 0          | 21   | 0         | 1      | 0          | 1    | 0          | 3      | 0          | 0    | 125        | 2      | 0          | 7    | 213        | 34    | 407          | 1,669                | 0    | 0     | 0     | 0 |
| 5:15 PM             | 0          | 20   | 1         | 5      | 0          | 1    | 0          | 5      | 0          | 4    | 133        | 1      | 0          | 12   | 215        | 33    | 430          |                      | 0    | 0     | 0     | 0 |
| 5:30 PM             | 0          | 27   | 0         | 3      | 0          | 1    | 0          | 7      | 0          | 2    | 136        | 2      | 0          | 10   | 198        | 41    | 427          |                      | 0    | 0     | 0     | 0 |
| 5:45 PM             | 0          | 19   | 0         | 1      | 0          | 0    | 0          | 5      | 0          | 2    | 112        | 1      | 0          | 3    | 206        | 56    | 405          |                      | 0    | 0     | 0     | 0 |
| Count Total         | 0          | 198  | 1         | 23     | 0          | 3    | 0          | 46     | 0          | 9    | 983        | 9      | 0          | 49   | 1,658      | 320   | 3,299        |                      | 0    | 0     | 0     | 0 |
| Peak Hour           | 0          | 102  | 0         | 9      | 0          | 1    | 0          | 25     | 0          | 1    | 488        | 5      | 0          | 20   | 868        | 158   | 1,677        |                      | 0    | 0     | 0     | 0 |

Location: 2 HILLTOP RD &amp; MERRYVALE TRAIL AM

Date: Wednesday, September 25, 2024

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

| Interval Start Time | MERRYVALE TRAIL |      |           |        | HILLTOP RD |      |            |        | HILLTOP RD |       |       |       | Rolling Hour | Pedestrian Crossings |   |       |       |       |
|---------------------|-----------------|------|-----------|--------|------------|------|------------|--------|------------|-------|-------|-------|--------------|----------------------|---|-------|-------|-------|
|                     | Eastbound       |      | Westbound |        | Northbound |      | Southbound |        | Total      |       | West  | East  | South        | North                |   |       |       |       |
| U-Turn              | Left            | Thru | Right     | U-Turn | Left       | Thru | Right      | U-Turn | Left       | Thru  | Right | Total |              |                      |   |       |       |       |
| 7:00 AM             |                 |      |           | 0      | 1          | 0    | 26         | 0      | 0          | 261   | 5     | 0     | 7            | 65                   | 0 | 365   | 1,369 | 0 0 0 |
| 7:15 AM             |                 |      |           | 0      | 6          | 0    | 25         | 0      | 0          | 198   | 5     | 0     | 12           | 102                  | 0 | 348   | 1,301 | 0 0 0 |
| 7:30 AM             |                 |      |           | 0      | 3          | 0    | 11         | 0      | 0          | 196   | 6     | 0     | 14           | 90                   | 0 | 320   | 1,253 | 0 0 0 |
| 7:45 AM             |                 |      |           | 0      | 4          | 0    | 11         | 0      | 0          | 223   | 2     | 0     | 8            | 88                   | 0 | 336   | 1,223 | 0 0 0 |
| 8:00 AM             |                 |      |           | 0      | 3          | 0    | 5          | 0      | 0          | 201   | 2     | 0     | 8            | 78                   | 0 | 297   | 1,142 | 0 0 0 |
| 8:15 AM             |                 |      |           | 0      | 0          | 0    | 5          | 0      | 0          | 191   | 4     | 0     | 5            | 95                   | 0 | 300   |       | 0 0 0 |
| 8:30 AM             |                 |      |           | 0      | 2          | 0    | 4          | 0      | 0          | 195   | 1     | 0     | 4            | 84                   | 0 | 290   |       | 0 0 0 |
| 8:45 AM             |                 |      |           | 0      | 3          | 0    | 4          | 0      | 0          | 141   | 1     | 0     | 2            | 104                  | 0 | 255   |       | 0 0 0 |
| Count Total         |                 |      |           | 0      | 22         | 0    | 91         | 0      | 0          | 1,606 | 26    | 0     | 60           | 706                  | 0 | 2,511 |       | 0 0 0 |
| Peak Hour           |                 |      |           | 0      | 14         | 0    | 73         | 0      | 0          | 878   | 18    | 0     | 41           | 345                  | 0 | 1,369 |       | 0 0 0 |

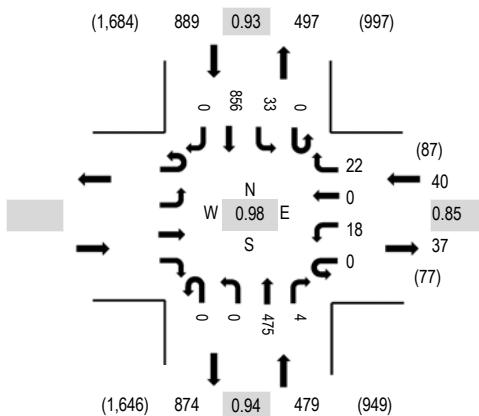
Location: 2 HILLTOP RD & MERRYVALE TRAIL PM

Date: Wednesday, September 25, 2024

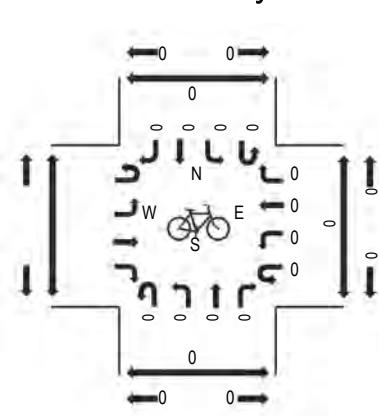
**Peak Hour:** 04:15 PM - 05:15 PM

**Peak 15-Minutes:** 05:00 PM - 05:15 PM

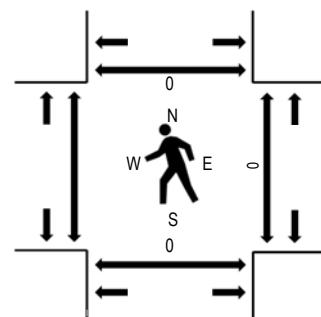
## Peak Hour - Motorized Vehicles



## Peak Hour - Bicycles



## Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

## Traffic Counts - Motorized Vehicles

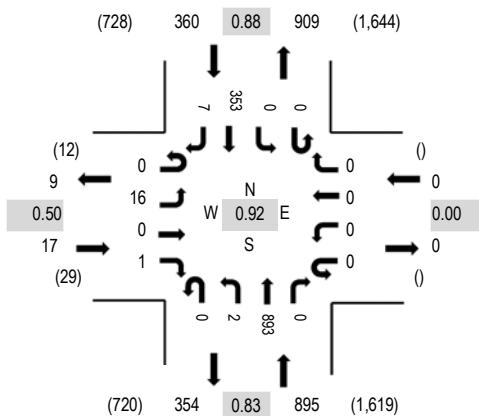
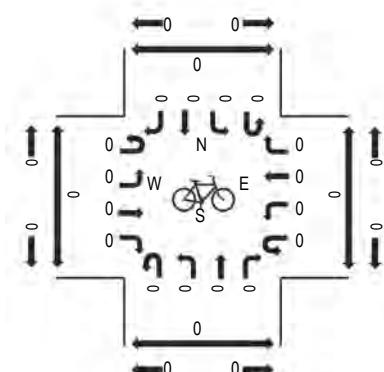
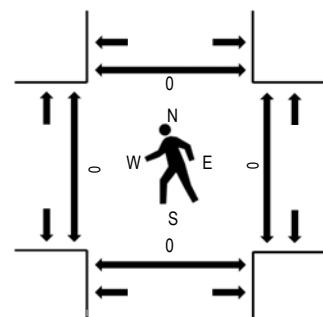
| Interval Start Time | MERRYVALE TRAIL |      |      |       | HILLTOP RD |      |      |       | HILLTOP RD |      |      |       | Pedestrian Crossings |       |       |       | Rolling Hour |      |       |       |  |
|---------------------|-----------------|------|------|-------|------------|------|------|-------|------------|------|------|-------|----------------------|-------|-------|-------|--------------|------|-------|-------|--|
|                     | Eastbound       |      |      |       | Westbound  |      |      |       | Northbound |      |      |       | Southbound           |       |       |       | West         | East | South | North |  |
|                     | U-Turn          | Left | Thru | Right | U-Turn     | Left | Thru | Right | U-Turn     | Left | Thru | Right | U-Turn               | Left  | Thru  | Right | Total        |      |       |       |  |
| 4:00 PM             |                 | 0    | 3    | 0     | 9          | 0    | 0    | 106   | 1          | 0    | 1    | 171   | 0                    | 291   | 1,340 |       | 0            | 0    | 0     | 0     |  |
| 4:15 PM             |                 | 0    | 6    | 0     | 8          | 0    | 0    | 128   | 0          | 0    | 9    | 207   | 0                    | 358   | 1,408 |       | 0            | 0    | 0     | 0     |  |
| 4:30 PM             |                 | 0    | 4    | 0     | 3          | 0    | 0    | 120   | 2          | 0    | 7    | 209   | 0                    | 345   | 1,381 |       | 0            | 0    | 0     | 0     |  |
| 4:45 PM             |                 | 0    | 4    | 0     | 6          | 0    | 0    | 98    | 0          | 0    | 6    | 232   | 0                    | 346   | 1,398 |       | 0            | 0    | 0     | 0     |  |
| 5:00 PM             |                 | 0    | 4    | 0     | 5          | 0    | 0    | 129   | 2          | 0    | 11   | 208   | 0                    | 359   | 1,380 |       | 0            | 0    | 0     | 0     |  |
| 5:15 PM             |                 | 0    | 4    | 0     | 8          | 0    | 0    | 121   | 1          | 0    | 12   | 185   | 0                    | 331   |       |       | 0            | 0    | 0     | 0     |  |
| 5:30 PM             |                 | 0    | 3    | 0     | 10         | 0    | 0    | 131   | 0          | 0    | 14   | 204   | 0                    | 362   |       |       | 0            | 0    | 0     | 0     |  |
| 5:45 PM             |                 | 0    | 4    | 0     | 6          | 0    | 0    | 109   | 1          | 0    | 10   | 198   | 0                    | 328   |       |       | 0            | 0    | 0     | 0     |  |
| Count Total         |                 | 0    | 32   | 0     | 55         | 0    | 0    | 942   | 7          | 0    | 70   | 1,614 | 0                    | 2,720 |       |       | 0            | 0    | 0     | 0     |  |
| Peak Hour           |                 | 0    | 18   | 0     | 22         | 0    | 0    | 475   | 4          | 0    | 33   | 856   | 0                    | 1,408 |       |       | 0            | 0    | 0     | 0     |  |

Location: 3 HILLTOP RD &amp; ALPINE DR AM

Date: Wednesday, September 25, 2024

Peak Hour: 07:00 AM - 08:00 AM

Peak 15-Minutes: 07:00 AM - 07:15 AM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

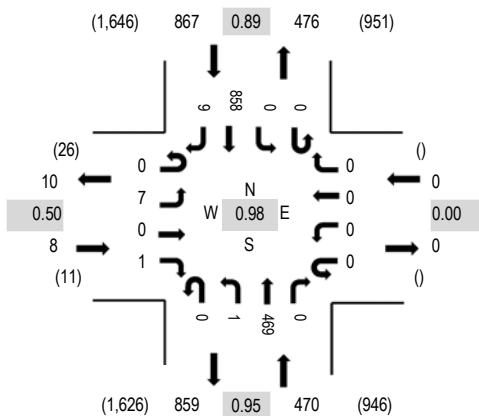
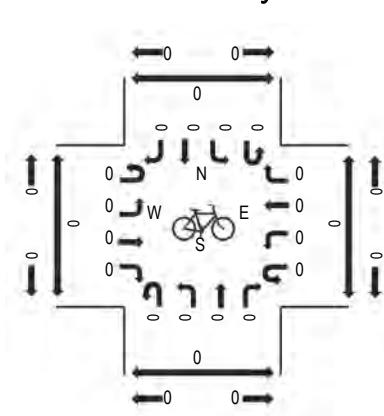
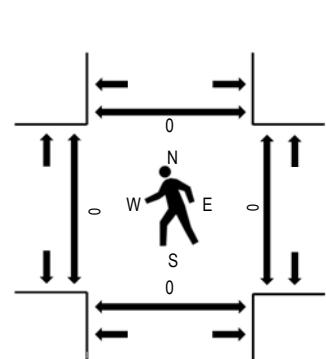
| Interval Start Time | ALPINE DR Eastbound |      |      |       | ALPINE DR Westbound |      |      |       | HILLTOP RD Northbound |      |       |       | HILLTOP RD Southbound |      |      |       | Rolling Hour | Pedestrian Crossings |       |       |       |   |
|---------------------|---------------------|------|------|-------|---------------------|------|------|-------|-----------------------|------|-------|-------|-----------------------|------|------|-------|--------------|----------------------|-------|-------|-------|---|
|                     | U-Turn              | Left | Thru | Right | U-Turn              | Left | Thru | Right | U-Turn                | Left | Thru  | Right | U-Turn                | Left | Thru | Right | Total        | West                 | East  | South | North |   |
| 7:00 AM             | 0                   | 5    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 1     | 269   | 0                     | 0    | 0    | 68    | 1            | 344                  | 1,272 | 0     | 0     | 0 |
| 7:15 AM             | 0                   | 2    | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 1    | 201   | 0     | 0                     | 0    | 0    | 105   | 1            | 311                  | 1,215 | 0     | 0     | 0 |
| 7:30 AM             | 0                   | 9    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 191   | 0     | 0                     | 0    | 0    | 93    | 2            | 295                  | 1,195 | 0     | 0     | 0 |
| 7:45 AM             | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 232   | 0     | 0                     | 0    | 0    | 87    | 3            | 322                  | 1,182 | 0     | 0     | 0 |
| 8:00 AM             | 0                   | 3    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 201   | 0     | 0                     | 0    | 0    | 82    | 1            | 287                  | 1,104 | 0     | 0     | 0 |
| 8:15 AM             | 0                   | 5    | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 0    | 191   | 0     | 0                     | 0    | 0    | 92    | 2            | 291                  | 0     | 0     | 0     | 0 |
| 8:30 AM             | 0                   | 2    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 193   | 0     | 0                     | 0    | 0    | 87    | 0            | 282                  | 0     | 0     | 0     | 0 |
| 8:45 AM             | 0                   | 1    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 139   | 0     | 0                     | 0    | 0    | 104   | 0            | 244                  | 0     | 0     | 0     | 0 |
| Count Total         | 0                   | 27   | 0    | 2     | 0                   | 0    | 0    | 0     | 0                     | 2    | 1,617 | 0     | 0                     | 0    | 0    | 718   | 10           | 2,376                | 0     | 0     | 0     | 0 |
| Peak Hour           | 0                   | 16   | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 2    | 893   | 0     | 0                     | 0    | 0    | 353   | 7            | 1,272                | 0     | 0     | 0     | 0 |

Location: 3 HILLTOP RD &amp; ALPINE DR PM

Date: Wednesday, September 25, 2024

Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

| Interval Start Time | ALPINE DR Eastbound |      |      |       | ALPINE DR Westbound |      |      |       | HILLTOP RD Northbound |      |      |       | HILLTOP RD Southbound |      |      |       | Rolling Hour | Pedestrian Crossings |       |       |       |   |
|---------------------|---------------------|------|------|-------|---------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|--------------|----------------------|-------|-------|-------|---|
|                     | U-Turn              | Left | Thru | Right | U-Turn              | Left | Thru | Right | U-Turn                | Left | Thru | Right | U-Turn                | Left | Thru | Right |              | West                 | East  | South | North |   |
| 4:00 PM             | 0                   | 0    | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 0    | 0    | 109   | 0                     | 0    | 0    | 173   | 2            | 285                  | 1,293 | 0     | 0     | 0 |
| 4:15 PM             | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 0    | 130   | 0                     | 0    | 0    | 209   | 3            | 342                  | 1,345 | 0     | 0     | 0 |
| 4:30 PM             | 0                   | 3    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 0    | 114   | 0                     | 0    | 0    | 206   | 1            | 324                  | 1,321 | 0     | 0     | 0 |
| 4:45 PM             | 0                   | 3    | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 0    | 0    | 95    | 0                     | 0    | 0    | 242   | 1            | 342                  | 1,333 | 0     | 0     | 0 |
| 5:00 PM             | 0                   | 1    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 1    | 130  | 0     | 0                     | 0    | 0    | 201   | 4            | 337                  | 1,310 | 0     | 0     | 0 |
| 5:15 PM             | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 1                     | 0    | 123  | 0     | 0                     | 0    | 0    | 190   | 4            | 318                  | 0     | 0     | 0     | 0 |
| 5:30 PM             | 0                   | 0    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 2    | 129  | 0     | 0                     | 0    | 0    | 199   | 6            | 336                  | 0     | 0     | 0     | 0 |
| 5:45 PM             | 0                   | 2    | 0    | 0     | 0                   | 0    | 0    | 0     | 0                     | 0    | 112  | 0     | 0                     | 0    | 0    | 203   | 2            | 319                  | 0     | 0     | 0     | 0 |
| Count Total         | 0                   | 9    | 0    | 2     | 0                   | 0    | 0    | 0     | 1                     | 3    | 942  | 0     | 0                     | 0    | 0    | 1,623 | 23           | 2,603                | 0     | 0     | 0     | 0 |
| Peak Hour           | 0                   | 7    | 0    | 1     | 0                   | 0    | 0    | 0     | 0                     | 1    | 469  | 0     | 0                     | 0    | 0    | 858   | 9            | 1,345                | 0     | 0     | 0     | 0 |

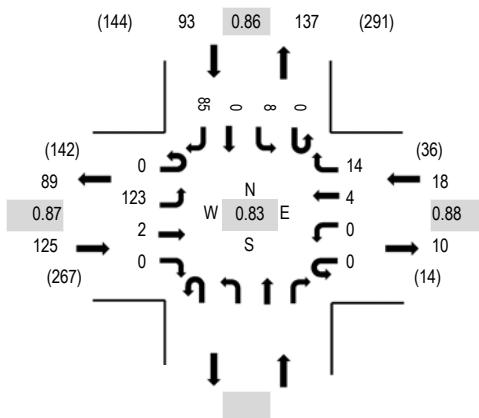
**Location:** 4 VILLAGE RD & VILLAGE RD AM

Date: Wednesday, September 25, 2024

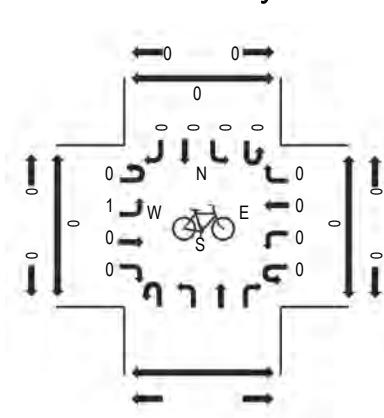
**Peak Hour:** 08:00 AM - 09:00 AM

**Peak 15-Minutes:** 08:45 AM - 09:00 AM

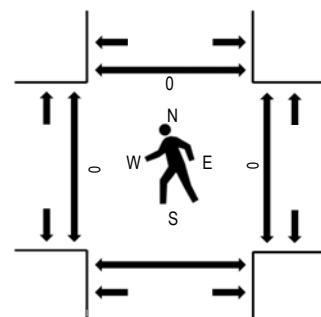
## Peak Hour - Motorized Vehicles



## Peak Hour - Bicycles



## Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

## Traffic Counts - Motorized Vehicles

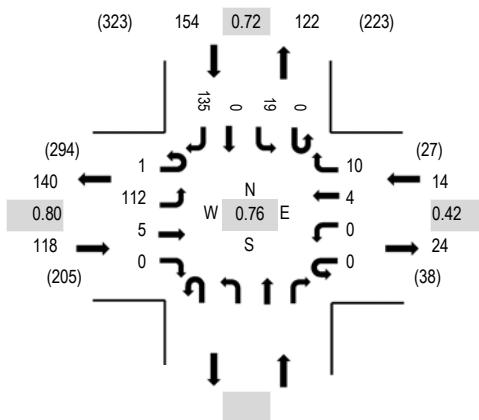
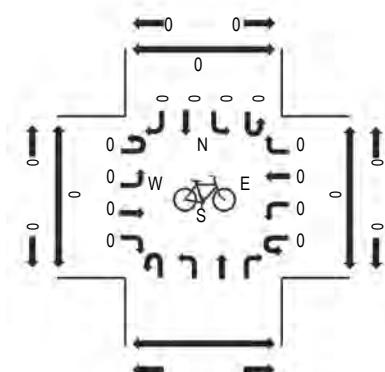
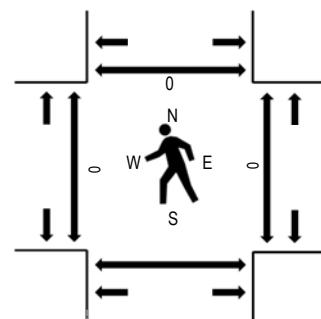
| Interval Start Time | BETTS RANCH RD |      |      |       | VILLAGE RD |      |      |       | VILLAGE RD |      |      |       |            |      |      |       | Pedestrian Crossings |      |      |       |       |   |
|---------------------|----------------|------|------|-------|------------|------|------|-------|------------|------|------|-------|------------|------|------|-------|----------------------|------|------|-------|-------|---|
|                     | Eastbound      |      |      |       | Westbound  |      |      |       | Northbound |      |      |       | Southbound |      |      |       | Rolling Hour         |      |      |       |       |   |
|                     | U-Turn         | Left | Thru | Right | U-Turn     | Left | Thru | Right | U-Turn     | Left | Thru | Right | U-Turn     | Left | Thru | Right | Total                | West | East | South | North |   |
| 7:00 AM             | 0              | 41   | 0    | 0     | 0          | 0    | 0    | 1     | 0          |      |      |       | 0          | 1    | 0    | 5     | 48                   | 211  | 0    | 0     | 0     | 0 |
| 7:15 AM             | 0              | 26   | 0    | 0     | 0          | 0    | 0    | 2     | 4          |      |      |       | 0          | 2    | 0    | 14    | 48                   | 224  | 0    | 0     | 0     | 0 |
| 7:30 AM             | 0              | 35   | 1    | 0     | 0          | 0    | 0    | 1     | 5          |      |      |       | 0          | 0    | 0    | 14    | 56                   | 231  | 0    | 0     | 0     | 0 |
| 7:45 AM             | 0              | 39   | 0    | 0     | 0          | 0    | 0    | 1     | 4          |      |      |       | 0          | 0    | 0    | 15    | 59                   | 224  | 0    | 0     | 0     | 0 |
| 8:00 AM             | 0              | 34   | 0    | 0     | 0          | 0    | 0    | 1     | 3          |      |      |       | 0          | 0    | 0    | 23    | 61                   | 236  | 0    | 0     | 0     | 0 |
| 8:15 AM             | 0              | 30   | 1    | 0     | 0          | 0    | 0    | 0     | 1          |      |      |       | 0          | 3    | 0    | 20    | 55                   |      | 0    | 0     | 0     | 0 |
| 8:30 AM             | 0              | 22   | 0    | 0     | 0          | 0    | 0    | 1     | 6          |      |      |       | 0          | 2    | 0    | 18    | 49                   |      | 0    | 0     | 0     | 0 |
| 8:45 AM             | 0              | 37   | 1    | 0     | 0          | 0    | 2    | 4     |            |      |      |       | 0          | 3    | 0    | 24    | 71                   |      | 0    | 0     | 0     | 0 |
| Count Total         | 0              | 264  | 3    | 0     | 0          | 0    | 9    | 27    |            |      |      |       | 0          | 11   | 0    | 133   | 447                  |      | 0    | 0     | 0     | 0 |
| Peak Hour           | 0              | 123  | 2    | 0     | 0          | 0    | 4    | 14    |            |      |      |       | 0          | 8    | 0    | 85    | 236                  |      | 0    | 0     | 0     | 0 |

Location: 4 VILLAGE RD &amp; VILLAGE RD PM

Date: Wednesday, September 25, 2024

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:15 PM - 04:30 PM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

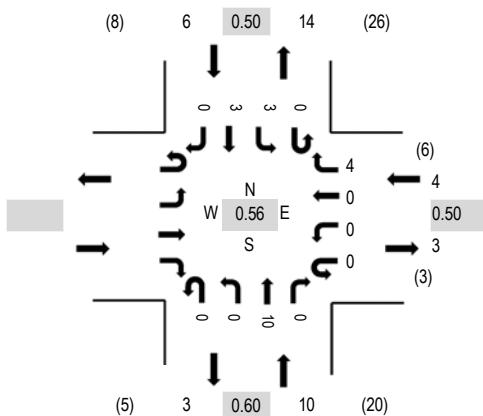
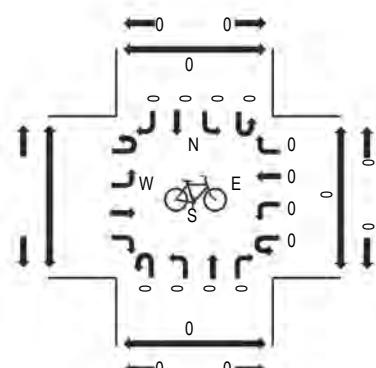
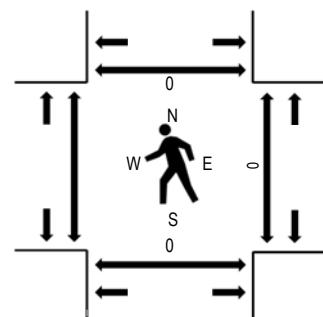
| Interval Start Time | BETTS RANCH RD |     |           |   | VILLAGE RD |   |            |    | VILLAGE RD |      |      |       | Rolling Hour | Pedestrian Crossings |      |       |       |
|---------------------|----------------|-----|-----------|---|------------|---|------------|----|------------|------|------|-------|--------------|----------------------|------|-------|-------|
|                     | Eastbound      |     | Westbound |   | Northbound |   | Southbound |    | U-Turn     | Left | Thru | Right | Total        | West                 | East | South | North |
| 4:00 PM             | 0              | 35  | 1         | 0 | 0          | 0 | 1          | 0  | 0          | 4    | 0    | 27    | 68           | 286                  | 0    | 0     | 0     |
| 4:15 PM             | 1              | 35  | 1         | 0 | 0          | 0 | 1          | 3  | 0          | 9    | 0    | 44    | 94           | 272                  | 0    | 0     | 0     |
| 4:30 PM             | 0              | 18  | 1         | 0 | 0          | 0 | 2          | 3  | 0          | 5    | 0    | 36    | 65           | 240                  | 0    | 0     | 0     |
| 4:45 PM             | 0              | 24  | 2         | 0 | 0          | 0 | 0          | 4  | 0          | 1    | 0    | 28    | 59           | 247                  | 0    | 0     | 0     |
| 5:00 PM             | 0              | 21  | 0         | 0 | 0          | 0 | 0          | 2  | 0          | 2    | 0    | 29    | 54           | 269                  | 0    | 0     | 0     |
| 5:15 PM             | 0              | 25  | 0         | 0 | 0          | 0 | 0          | 0  | 0          | 0    | 0    | 37    | 62           | 0                    | 0    | 0     | 0     |
| 5:30 PM             | 0              | 21  | 0         | 0 | 0          | 0 | 0          | 9  | 0          | 4    | 0    | 38    | 72           | 0                    | 0    | 0     | 0     |
| 5:45 PM             | 0              | 20  | 0         | 0 | 0          | 0 | 0          | 2  | 1          | 8    | 0    | 50    | 81           | 0                    | 0    | 0     | 0     |
| Count Total         | 1              | 199 | 5         | 0 | 0          | 0 | 4          | 23 | 1          | 33   | 0    | 289   | 555          | 0                    | 0    | 0     | 0     |
| Peak Hour           | 1              | 112 | 5         | 0 | 0          | 0 | 4          | 10 | 0          | 19   | 0    | 135   | 286          | 0                    | 0    | 0     | 0     |

Location: 5 VILLAGE RD &amp; ALPINE DR AM

Date: Wednesday, September 25, 2024

Peak Hour: 08:00 AM - 09:00 AM

Peak 15-Minutes: 08:45 AM - 09:00 AM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

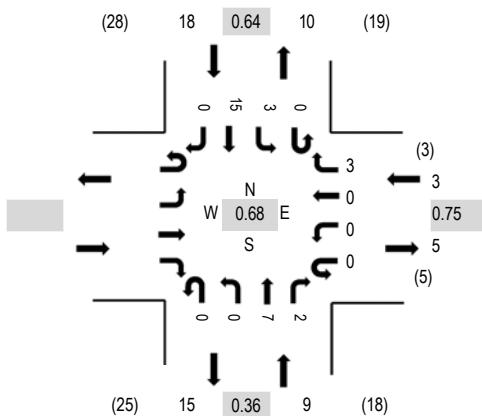
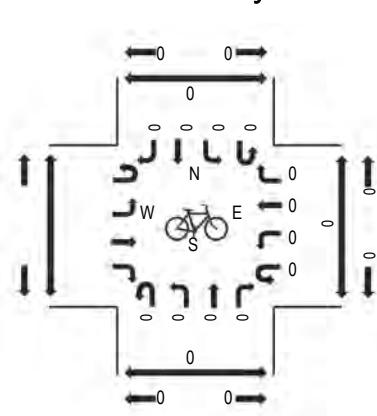
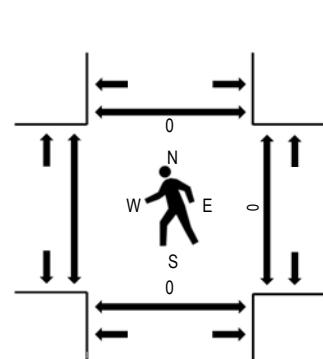
| Interval Start Time | Eastbound |      |      |       | ALPINE DR |      |      | VILLAGE RD |        |      | VILLAGE RD |       |       | Rolling Hour | Pedestrian Crossings |       |       |    |
|---------------------|-----------|------|------|-------|-----------|------|------|------------|--------|------|------------|-------|-------|--------------|----------------------|-------|-------|----|
|                     | U-Turn    | Left | Thru | Right | U-Turn    | Left | Thru | Right      | U-Turn | Left | Thru       | Right | Total | West         | East                 | South | North |    |
| 7:00 AM             |           |      |      |       | 0         | 0    | 0    | 0          | 0      | 0    | 0          | 0     | 0     | 0            | 14                   | 0     | 0     | 0  |
| 7:15 AM             |           |      |      |       | 0         | 0    | 0    | 0          | 0      | 0    | 5          | 0     | 0     | 0            | 1                    | 0     | 6     | 16 |
| 7:30 AM             |           |      |      |       | 0         | 0    | 0    | 2          | 0      | 0    | 2          | 0     | 0     | 0            | 0                    | 0     | 0     | 0  |
| 7:45 AM             |           |      |      |       | 0         | 0    | 0    | 0          | 0      | 0    | 3          | 0     | 0     | 0            | 1                    | 0     | 4     | 15 |
| 8:00 AM             |           |      |      |       | 0         | 0    | 0    | 0          | 0      | 0    | 2          | 0     | 0     | 0            | 0                    | 0     | 0     | 0  |
| 8:15 AM             |           |      |      |       | 0         | 0    | 0    | 1          | 0      | 0    | 1          | 0     | 0     | 0            | 2                    | 0     | 0     | 0  |
| 8:30 AM             |           |      |      |       | 0         | 0    | 0    | 2          | 0      | 0    | 2          | 0     | 0     | 0            | 1                    | 0     | 0     | 0  |
| 8:45 AM             |           |      |      |       | 0         | 0    | 0    | 1          | 0      | 0    | 5          | 0     | 0     | 3            | 0                    | 0     | 9     | 0  |
| Count Total         |           |      |      |       | 0         | 0    | 0    | 6          | 0      | 0    | 20         | 0     | 0     | 3            | 5                    | 0     | 34    | 0  |
| Peak Hour           |           |      |      |       | 0         | 0    | 0    | 4          | 0      | 0    | 10         | 0     | 0     | 3            | 3                    | 0     | 20    | 0  |

Location: 5 VILLAGE RD &amp; ALPINE DR PM

Date: Wednesday, September 25, 2024

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

**Peak Hour - Motorized Vehicles**

**Peak Hour - Bicycles**

**Peak Hour - Pedestrians**


Note: Total study counts contained in parentheses.

**Traffic Counts - Motorized Vehicles**

| Interval Start Time | Eastbound |      |      |       | ALPINE DR Westbound |      |      |       | VILLAGE RD Northbound |      |      |       | VILLAGE RD Southbound |      |      |       | Rolling Hour | Pedestrian Crossings |      |       |       |   |
|---------------------|-----------|------|------|-------|---------------------|------|------|-------|-----------------------|------|------|-------|-----------------------|------|------|-------|--------------|----------------------|------|-------|-------|---|
|                     | U-Turn    | Left | Thru | Right | U-Turn              | Left | Thru | Right | U-Turn                | Left | Thru | Right | U-Turn                | Left | Thru | Right | Total        | West                 | East | South | North |   |
| 4:00 PM             |           |      |      |       | 0                   | 0    | 0    | 0     | 0                     | 0    | 1    | 1     | 0                     | 1    | 2    | 0     | 5            | 30                   | 0    | 0     | 0     | 0 |
| 4:15 PM             |           |      |      |       | 0                   | 0    | 0    | 1     | 0                     | 0    | 1    | 1     | 0                     | 1    | 6    | 0     | 10           | 27                   | 0    | 0     | 0     | 0 |
| 4:30 PM             |           |      |      |       | 0                   | 0    | 0    | 1     | 0                     | 0    | 3    | 0     | 0                     | 1    | 6    | 0     | 11           | 18                   | 0    | 0     | 0     | 0 |
| 4:45 PM             |           |      |      |       | 0                   | 0    | 0    | 1     | 0                     | 0    | 2    | 0     | 0                     | 0    | 1    | 0     | 4            | 16                   | 0    | 0     | 0     | 0 |
| 5:00 PM             |           |      |      |       | 0                   | 0    | 0    | 0     | 0                     | 0    | 0    | 0     | 0                     | 0    | 2    | 0     | 2            | 19                   | 0    | 0     | 0     | 0 |
| 5:15 PM             |           |      |      |       | 0                   | 0    | 0    | 0     | 0                     | 0    | 1    | 0     | 0                     | 0    | 0    | 0     | 0            | 1                    | 0    | 0     | 0     | 0 |
| 5:30 PM             |           |      |      |       | 0                   | 0    | 0    | 0     | 0                     | 0    | 7    | 0     | 0                     | 0    | 2    | 0     | 9            | 0                    | 0    | 0     | 0     | 0 |
| 5:45 PM             |           |      |      |       | 0                   | 0    | 0    | 0     | 0                     | 0    | 1    | 0     | 0                     | 0    | 6    | 0     | 7            | 0                    | 0    | 0     | 0     | 0 |
| Count Total         |           |      |      |       | 0                   | 0    | 0    | 3     | 0                     | 0    | 16   | 2     | 0                     | 3    | 25   | 0     | 49           | 0                    | 0    | 0     | 0     | 0 |
| Peak Hour           |           |      |      |       | 0                   | 0    | 0    | 3     | 0                     | 0    | 7    | 2     | 0                     | 3    | 15   | 0     | 30           | 0                    | 0    | 0     | 0     | 0 |

| Start Time          | 25-Sep-24 Wed | NB         | SB          | Total       |
|---------------------|---------------|------------|-------------|-------------|
| 12:00 AM            |               | 5          | 23          | 28          |
| 01:00               |               | 4          | 8           | 12          |
| 02:00               |               | 9          | 3           | 12          |
| 03:00               |               | 21         | 4           | 25          |
| 04:00               |               | 107        | 9           | 116         |
| 05:00               |               | 295        | 31          | 326         |
| 06:00               |               | 707        | 160         | 867         |
| 07:00               | <b>951</b>    | <b>386</b> | <b>1337</b> |             |
| 08:00               |               | 746        | 380         | 1126        |
| 09:00               |               | 527        | 349         | 876         |
| 10:00               |               | 494        | 356         | 850         |
| 11:00               |               | 469        | 383         | 852         |
| 12:00 PM            |               | 442        | 442         | 884         |
| 01:00               |               | 476        | 454         | 930         |
| 02:00               |               | 494        | 492         | 986         |
| 03:00               | <b>520</b>    | 705        |             | 1225        |
| 04:00               |               | 478        | <b>842</b>  | 1320        |
| 05:00               |               | 519        | 842         | 1361        |
| 06:00               |               | 384        | 689         | 1073        |
| 07:00               |               | 232        | 478         | 710         |
| 08:00               |               | 130        | 362         | 492         |
| 09:00               |               | 53         | 192         | 245         |
| 10:00               |               | 33         | 118         | 151         |
| 11:00               |               | 10         | 56          | 66          |
| Total               |               | 8106       | 7764        | 15870       |
| Percent             |               | 51.1%      | 48.9%       |             |
| AM Peak Vol.        | -             | 07:00      | 07:00       | -           |
| PM Peak Vol.        | -             | 951        | 386         | -           |
| Grand Total Percent |               | 51.1%      | 48.9%       | AADT 15,870 |
| ADT                 | ADT 15,870    |            |             |             |

| Start Time          | 25-Sep-24<br>Wed | EB    | WB        | Total     |
|---------------------|------------------|-------|-----------|-----------|
| 12:00 AM            |                  | 0     | 0         | 0         |
| 01:00               |                  | 0     | 0         | 0         |
| 02:00               |                  | 0     | 0         | 0         |
| 03:00               |                  | 1     | 0         | 1         |
| 04:00               |                  | 1     | 0         | 1         |
| 05:00               |                  | 1     | 1         | 2         |
| 06:00               |                  | 6     | 2         | 8         |
| 07:00               | <b>17</b>        | 9     |           | 26        |
| 08:00               |                  | 12    | 3         | 15        |
| 09:00               |                  | 9     | <b>20</b> | <b>29</b> |
| 10:00               |                  | 12    | 11        | 23        |
| 11:00               |                  | 10    | 11        | 21        |
| 12:00 PM            | <b>17</b>        | 8     |           | <b>25</b> |
| 01:00               |                  | 11    | 11        | 22        |
| 02:00               |                  | 10    | 9         | 19        |
| 03:00               |                  | 8     | 5         | 13        |
| 04:00               |                  | 8     | 7         | 15        |
| 05:00               |                  | 3     | <b>19</b> | <b>22</b> |
| 06:00               |                  | 11    | 11        | 22        |
| 07:00               |                  | 9     | 9         | 18        |
| 08:00               |                  | 2     | 8         | 10        |
| 09:00               |                  | 0     | 4         | 4         |
| 10:00               |                  | 1     | 5         | 6         |
| 11:00               |                  | 1     | 0         | 1         |
| Total               | 150              | 153   | 50.5%     | 303       |
| Percent             | 49.5%            | 50.5% |           |           |
| AM Peak Vol.        | -                | 07:00 | 09:00     | -         |
| PM Peak Vol.        | -                | 12:00 | 17:00     | -         |
| Grand Total Percent | 150              | 153   | 50.5%     | 303       |
| ADT                 | ADT 303          |       |           | AADT 303  |

| Start Time             | 25-Sep-24<br>Wed | EB        | WB         | Total      |
|------------------------|------------------|-----------|------------|------------|
| 12:00 AM               |                  | 2         | 8          | 10         |
| 01:00                  |                  | 2         | 1          | 3          |
| 02:00                  |                  | 0         | 1          | 1          |
| 03:00                  |                  | 5         | 0          | 5          |
| 04:00                  |                  | 9         | 2          | 11         |
| 05:00                  |                  | 40        | 2          | 42         |
| 06:00                  |                  | 98        | 22         | 120        |
| 07:00                  | <b>153</b>       | 50        |            | 203        |
| 08:00                  |                  | 142       | 92         | <b>234</b> |
| 09:00                  |                  | 112       | <b>99</b>  | 211        |
| 10:00                  |                  | 98        | 88         | 186        |
| 11:00                  |                  | 110       | 93         | 203        |
| 12:00 PM               |                  | 97        | 101        | 198        |
| 01:00                  |                  | 108       | 114        | 222        |
| 02:00                  |                  | 119       | 126        | 245        |
| 03:00                  |                  | 120       | 147        | 267        |
| 04:00                  | <b>124</b>       | 157       |            | <b>281</b> |
| 05:00                  |                  | 98        | <b>172</b> | 270        |
| 06:00                  |                  | 89        | 153        | 242        |
| 07:00                  |                  | 51        | 132        | 183        |
| 08:00                  |                  | 25        | 75         | 100        |
| 09:00                  |                  | 12        | 51         | 63         |
| 10:00                  |                  | 4         | 25         | 29         |
| 11:00                  |                  | 2         | 10         | 12         |
| Total                  |                  | 1620      | 1721       | 3341       |
| Percent                |                  | 48.5%     | 51.5%      |            |
| AM Peak Vol.           | -                | 07:00     | 09:00      | -          |
| PM Peak Vol.           | -                | 153       | 99         | -          |
|                        |                  | 16:00     | 17:00      | -          |
| Grand Total<br>Percent |                  | 124       | 172        | -          |
| ADT                    |                  | ADT 3,341 |            | AADT 3,341 |

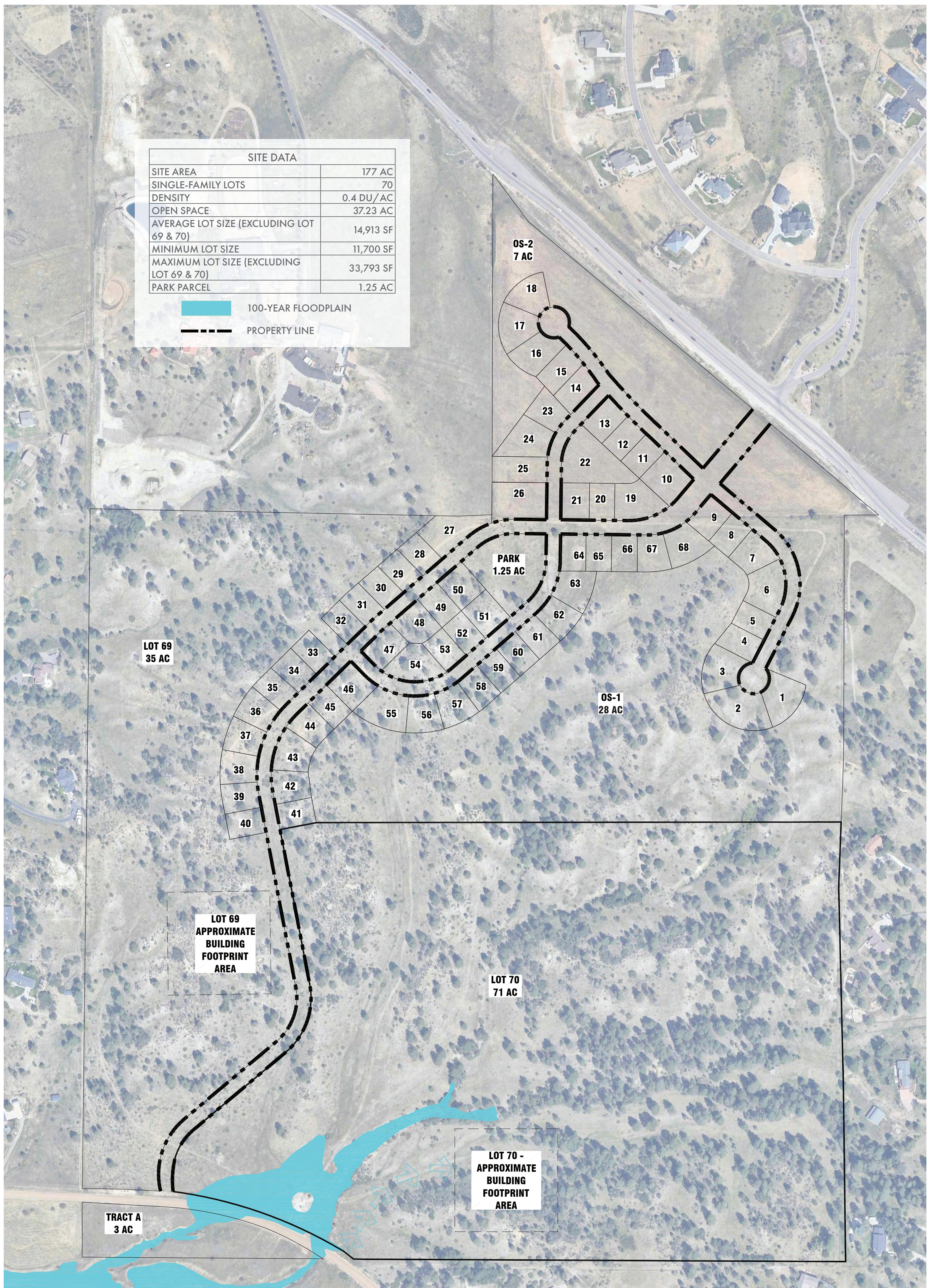
**Transportation Impact Study**  
**Base Assumptions**

| <b>Project Information</b>     |                                                                                                                                                                                                   |                                         |                 |  |  |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------|--|--|
| Project Name                   | Hilltop 177                                                                                                                                                                                       |                                         |                 |  |  |
| Location                       | Douglas County, Colorado                                                                                                                                                                          |                                         |                 |  |  |
| Study Area Boundaries          | Hilltop Road from Village Road to Alpine Drive,<br>Village Road from Hilltop Road to Alpine Drive, and<br>Alpine Drive from Village Road to Hilltop Road                                          |                                         |                 |  |  |
| Study Area Intersections       | Hilltop Road / Village Road, Hilltop Road / Merryvale Trail<br>Hilltop Road / Alpine Drive, Village Road / Betts Ranch Road<br>Village Road / Alpine Drive<br>And includes proposed site accesses |                                         |                 |  |  |
| <b>Study Assumptions</b>       |                                                                                                                                                                                                   |                                         |                 |  |  |
| Type of Study                  | Traffic Impact Study                                                                                                                                                                              |                                         |                 |  |  |
| Trip Generation Rate Reference | ITE 11 <sup>th</sup> Edition                                                                                                                                                                      |                                         |                 |  |  |
| Study Years                    | Short Term: 2026                                                                                                                                                                                  |                                         | Long Term: 2044 |  |  |
| Peak Hour Time Period          | AM:<br>7:00 – 9:00                                                                                                                                                                                | PM:<br>4:00 – 6:00                      | Weekend:<br>N/A |  |  |
| Overall Trip Distribution      | See Attached Sketch                                                                                                                                                                               |                                         |                 |  |  |
| Future Traffic Growth Rate     | 2%                                                                                                                                                                                                |                                         |                 |  |  |
| Trip Adjustment Factors        | Pass-by:<br>None Proposed                                                                                                                                                                         | Internal Capture Rate:<br>None Proposed |                 |  |  |
| Mode Split Assumption          | None                                                                                                                                                                                              |                                         |                 |  |  |
| Committed Roadway Improvements | Expansion of Hilltop Road to four lanes to just east of Alpine Drive.                                                                                                                             |                                         |                 |  |  |
| Areas Requiring Special Study  | None                                                                                                                                                                                              |                                         |                 |  |  |
| Other Traffic Studies          | <u>Fields Traffic Impact Study</u> , Felsberg Holt, and Ullevig, November 2021.                                                                                                                   |                                         |                 |  |  |

Date: September 17, 2024

Traffic Engineer: SM Rocha, LLC

Jurisdiction Engineer: \_\_\_\_\_



| ITE<br>CODE | LAND USE                       | UNIT | TRIP GENERATION RATES |              |      |       |              |      |       |
|-------------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|
|             |                                |      | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|             |                                |      |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210         | Single-Family Detached Housing | DU   | 9.43                  | 0.18         | 0.53 | 0.70  | 0.59         | 0.35 | 0.94  |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

| ITE<br>CODE | LAND USE                       | SIZE   | TOTAL TRIPS GENERATED |              |      |       |              |      |       |
|-------------|--------------------------------|--------|-----------------------|--------------|------|-------|--------------|------|-------|
|             |                                |        | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|             |                                |        |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210         | Single-Family Detached Housing | 70 DU  | 660                   | 12           | 37   | 49    | 41           | 24   | 66    |
|             |                                | Total: | 660                   | 12           | 37   | 49    | 41           | 24   | 66    |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

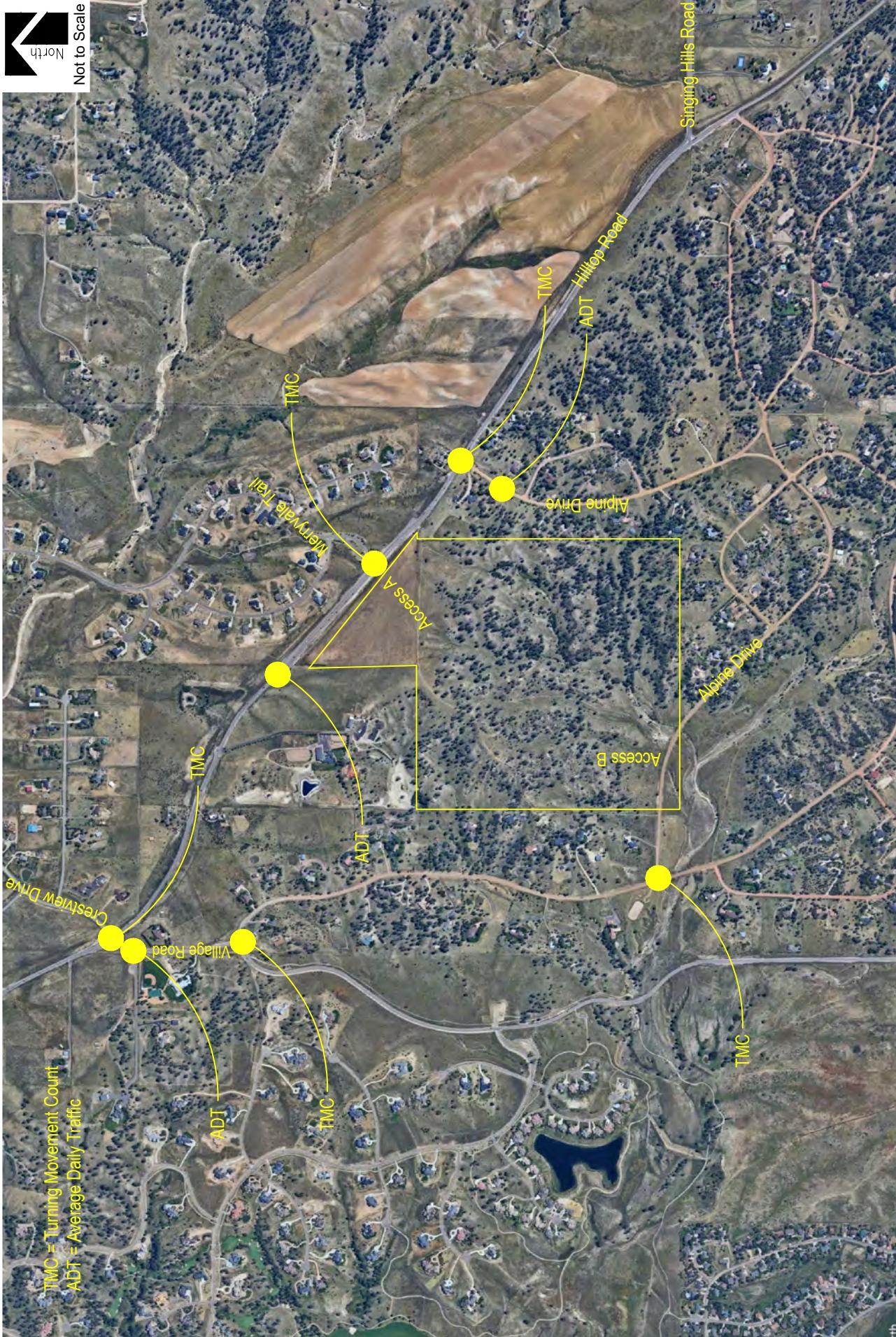
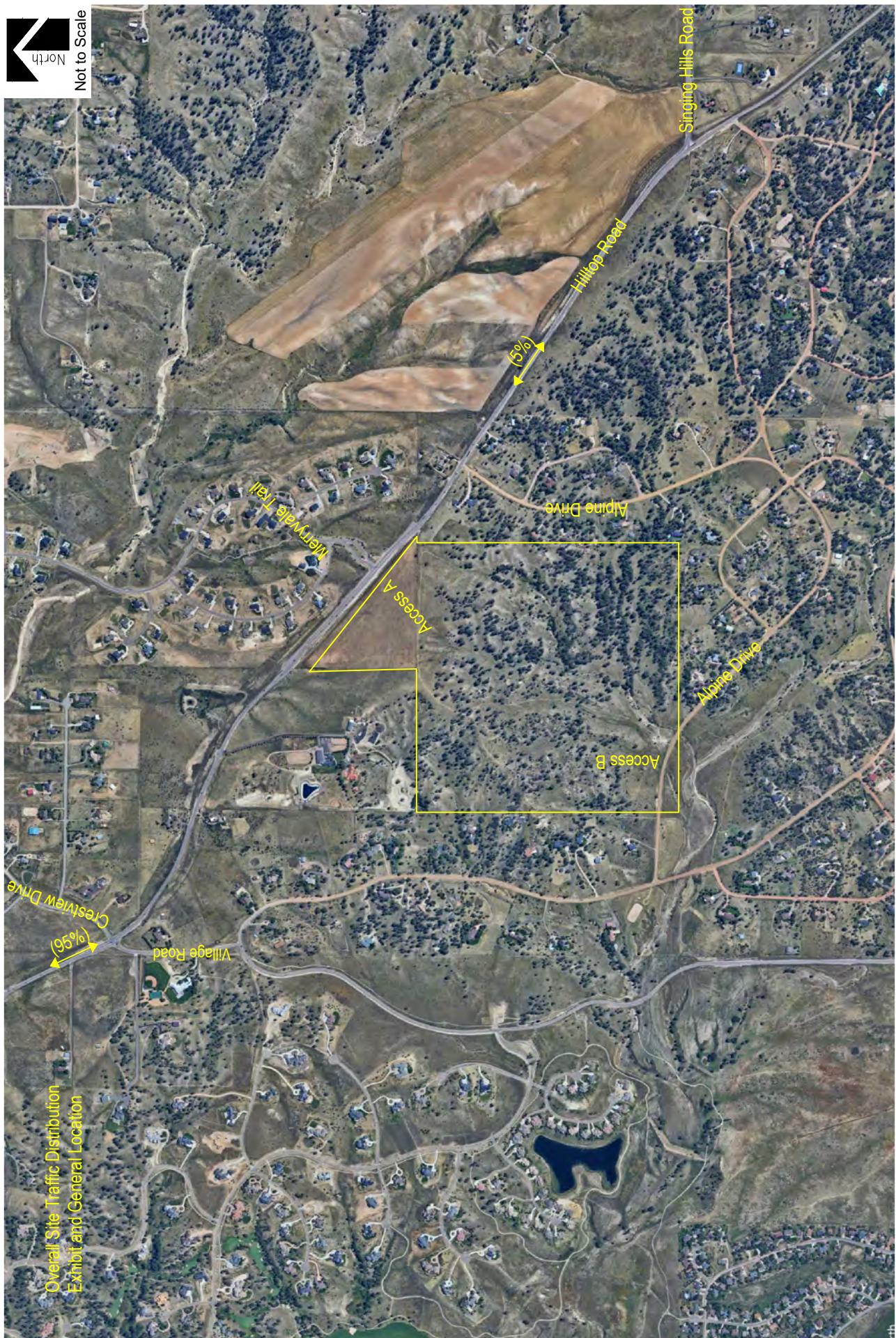


Figure 1  
**STUDY AREA INTERSECTIONS**  
September 2024  
Page 4

**HILLTOP 177**  
Base Assumption

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**SM ROCHA, LLC**  
Traffic and Transport



Ramblewood Planned Development - Rezoning  
Project File # ZR2024-031  
Board of County Commissioners' Staff Report - Page 203 of 287

Figure 2  
OVERALL TRIP DISTRIBUTION  
September 2024  
Page 5

## **APPENDIX B**

### **Level of Service Definitions**

The following information is referenced from the [Highway Capacity Manual: A Guide for Multimodal Mobility Analysis, 7<sup>th</sup> Edition, Transportation Research Board, 2022: Chapter 19 – Signalized Intersections](#).

### **Motorized Vehicle Level of Service (LOS) for Signalized Intersections**

Levels of service are defined to represent reasonable ranges in control delay.

**LOS A** Describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

**LOS B** Describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

**LOS C** Describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual *cycle failures* (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

**LOS D** Describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

**LOS E** Describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

**LOS F** Describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

| Control Delay<br>(s/veh) | <u>LOS by Volume-to-Capacity Ratio<sup>a</sup></u> |           |
|--------------------------|----------------------------------------------------|-----------|
|                          | v/c ≤ 1.0                                          | v/c > 1.0 |
| ≤ 10                     | A                                                  | F         |
| > 10 – 20                | B                                                  | F         |
| > 20 – 35                | C                                                  | F         |
| > 35 – 55                | D                                                  | F         |
| > 55 – 80                | E                                                  | F         |
| > 80                     | F                                                  | F         |

Note: <sup>a</sup>For approach-based and intersectionwide assessments, LOS is defined solely by control delay.

The following information is referenced from the [Highway Capacity Manual: A Guide for Multimodal Mobility Analysis](#), 7<sup>th</sup> Edition, Transportation Research Board, 2022: Chapter 20 – Two-Way Stop-Controlled Intersections, Chapter 21 – All-Way Stop-Controlled Intersections, and Chapter 22 - Roundabouts.

### **Motorized Vehicle Level of Service (LOS) for Unsignalized & Roundabout Intersections**

LOS is a quantitative stratification of performance measure(s) representing quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. LOS is measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective.

| <b>Control Delay<br/>(s/veh)</b> | <b><u>LOS by Volume-to-Capacity Ratio<sup>a</sup></u></b> |                  |
|----------------------------------|-----------------------------------------------------------|------------------|
|                                  | <i>v/c</i> ≤ 1.0                                          | <i>v/c</i> > 1.0 |
| 0 – 10                           | A                                                         | F                |
| > 10 – 15                        | B                                                         | F                |
| > 15 – 25                        | C                                                         | F                |
| > 25 – 35                        | D                                                         | F                |
| > 35 – 50                        | E                                                         | F                |
| > 50                             | F                                                         | F                |

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

<sup>a</sup>For approaches and intersectionwide assessment, LOS is defined solely by control delay.

## **APPENDIX C**

### **Capacity Worksheets**

## Intersection

Int Delay, s/veh 48.3

| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    | ↖    | ↑    | ↗    |
| Traffic Vol, veh/h       | 11   | 377  | 37   | 12   | 947  | 0    | 146  | 0    | 7    | 2    | 1    | 26   |
| Future Vol, veh/h        | 11   | 377  | 37   | 12   | 947  | 0    | 146  | 0    | 7    | 2    | 1    | 26   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | Stop | -    | -    | None |
| Storage Length           | 100  | -    | 200  | -    | -    | 150  | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 12   | 410  | 40   | 13   | 1029 | 0    | 159  | 0    | 8    | 2    | 1    | 28   |

| Major/Minor          | Major1 | Major2 |   |       | Minor1 |   |       | Minor2 |       |       |       |       |
|----------------------|--------|--------|---|-------|--------|---|-------|--------|-------|-------|-------|-------|
| Conflicting Flow All | 1029   | 0      | 0 | 450   | 0      | 0 | 1490  | 1489   | 410   | 1489  | 1529  | 1029  |
| Stage 1              | -      | -      | - | -     | -      | - | 434   | 434    | -     | 1055  | 1055  | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 1056  | 1055   | -     | 434   | 474   | -     |
| Critical Hdwy        | 4.12   | -      | - | 4.12  | -      | - | 7.12  | 6.52   | 6.22  | 7.12  | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | -      | - | -     | -      | - | 6.12  | 5.52   | -     | 6.12  | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | -      | - | -     | -      | - | 6.12  | 5.52   | -     | 6.12  | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | -      | - | 2.218 | -      | - | 3.518 | 4.018  | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 675    | -      | - | 1110  | -      | - | ~102  | 124    | 642   | 102   | 117   | 284   |
| Stage 1              | -      | -      | - | -     | -      | - | 601   | 581    | -     | 273   | 302   | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 272   | 302    | -     | 601   | 558   | -     |
| Platoon blocked, %   | -      | -      | - | -     | -      | - | -     | -      | -     | -     | -     | -     |
| Mov Cap-1 Maneuver   | 675    | -      | - | 1110  | -      | - | ~87   | 118    | 642   | 96    | 112   | 284   |
| Mov Cap-2 Maneuver   | -      | -      | - | -     | -      | - | ~87   | 118    | -     | 96    | 112   | -     |
| Stage 1              | -      | -      | - | -     | -      | - | 590   | 571    | -     | 265   | 294   | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 238   | 294    | -     | 583   | 548   | -     |

| Approach                  | SE       | NW    |     |     | NE        |     |          | SW    |  |  |  |
|---------------------------|----------|-------|-----|-----|-----------|-----|----------|-------|--|--|--|
| HCM Control Delay, s/v    | 0.27     | 0.1   |     |     | \$ 488.55 |     |          | 22.33 |  |  |  |
| HCM LOS                   |          | F     |     |     | C         |     |          |       |  |  |  |
| Minor Lane/Major Mvmt     | NELn1    | NWL   | NWT | NWR | SEL       | SET | SERSWLn1 |       |  |  |  |
| Capacity (veh/h)          | 91       | 23    | -   | -   | 675       | -   | -        | 239   |  |  |  |
| HCM Lane V/C Ratio        | 1.825    | 0.012 | -   | -   | 0.018     | -   | -        | 0.132 |  |  |  |
| HCM Control Delay (s/veh) | \$ 488.5 | 8.3   | 0   | -   | 10.4      | -   | -        | 22.3  |  |  |  |
| HCM Lane LOS              | F        | A     | A   | -   | B         | -   | -        | C     |  |  |  |
| HCM 95th %tile Q(veh)     | 13.9     | 0     | -   | -   | 0.1       | -   | -        | 0.4   |  |  |  |

## Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

HCM 7th TWSC  
2: Hilltop Road & Merryvale Trail

Existing Traffic Volumes  
AM Traffic Volumes

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |
| Movement                 | SEL  | SET  | NWT  | NWR  | SWL  | SWR  |
| Lane Configurations      | ↑    | ↑    | ↑    | ↑    | ↑    | ↑    |
| Traffic Vol, veh/h       | 41   | 345  | 878  | 18   | 14   | 73   |
| Future Vol, veh/h        | 41   | 345  | 878  | 18   | 14   | 73   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 315  | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 45   | 375  | 954  | 20   | 15   | 79   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |       |       |
|----------------------|--------|--------|--------|---|-------|-------|
| Conflicting Flow All | 974    | 0      | -      | 0 | 1428  | 964   |
| Stage 1              | -      | -      | -      | - | 964   | -     |
| Stage 2              | -      | -      | -      | - | 464   | -     |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42  | 6.22  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  | -     |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver   | 708    | -      | -      | - | 149   | 310   |
| Stage 1              | -      | -      | -      | - | 370   | -     |
| Stage 2              | -      | -      | -      | - | 633   | -     |
| Platoon blocked, %   | -      | -      | -      | - | -     | -     |
| Mov Cap-1 Maneuver   | 708    | -      | -      | - | 139   | 310   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 139   | -     |
| Stage 1              | -      | -      | -      | - | 347   | -     |
| Stage 2              | -      | -      | -      | - | 633   | -     |

| Approach                  | SE   | NW  | SW    |     |       |     |
|---------------------------|------|-----|-------|-----|-------|-----|
| HCM Control Delay, s/v    | 1.11 | 0   | 26.72 |     |       |     |
| HCM LOS                   |      |     | D     |     |       |     |
| Minor Lane/Major Mvmt     | NWT  | NWR | SEL   | SET | SWL   | Ln1 |
| Capacity (veh/h)          | -    | -   | 708   | -   | 259   |     |
| HCM Lane V/C Ratio        | -    | -   | 0.063 | -   | 0.366 |     |
| HCM Control Delay (s/veh) | -    | -   | 10.4  | -   | 26.7  |     |
| HCM Lane LOS              | -    | -   | B     | -   | D     |     |
| HCM 95th %tile Q(veh)     | -    | -   | 0.2   | -   | 1.6   |     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.4  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      | ↑    |      | ↔    | ↔    |      |      |
| Traffic Vol, veh/h       | 353  | 7    | 2    | 893  | 16   | 1    |
| Future Vol, veh/h        | 353  | 7    | 2    | 893  | 16   | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 384  | 8    | 2    | 971  | 17   | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |       |
|----------------------|--------|--------|--------|---|-------|-------|
| Conflicting Flow All | 0      | 0      | 391    | 0 | 1362  | 387   |
| Stage 1              | -      | -      | -      | - | 387   | -     |
| Stage 2              | -      | -      | -      | - | 975   | -     |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  | 6.22  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  | -     |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 1167   | - | 163   | 661   |
| Stage 1              | -      | -      | -      | - | 686   | -     |
| Stage 2              | -      | -      | -      | - | 366   | -     |
| Platoon blocked, %   | -      | -      | -      | - | -     | -     |
| Mov Cap-1 Maneuver   | -      | -      | 1167   | - | 162   | 661   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 162   | -     |
| Stage 1              | -      | -      | -      | - | 686   | -     |
| Stage 2              | -      | -      | -      | - | 364   | -     |

| Approach               | SE | NW   | NE    |  |  |  |
|------------------------|----|------|-------|--|--|--|
| HCM Control Delay, s/v | 0  | 0.02 | 28.76 |  |  |  |
| HCM LOS                |    |      | D     |  |  |  |

| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT | SET | SER |  |
|---------------------------|-------|-------|-----|-----|-----|--|
| Capacity (veh/h)          | 170   | 4     | -   | -   | -   |  |
| HCM Lane V/C Ratio        | 0.109 | 0.002 | -   | -   | -   |  |
| HCM Control Delay (s/veh) | 28.8  | 8.1   | 0   | -   | -   |  |
| HCM Lane LOS              | D     | A     | A   | -   | -   |  |
| HCM 95th %tile Q(veh)     | 0.4   | 0     | -   | -   | -   |  |

Intersection

Intersection Delay, s/veh 7.7

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations



|                    |     |   |   |    |   |    |
|--------------------|-----|---|---|----|---|----|
| Traffic Vol, veh/h | 123 | 2 | 4 | 14 | 8 | 85 |
|--------------------|-----|---|---|----|---|----|

|                   |     |   |   |    |   |    |
|-------------------|-----|---|---|----|---|----|
| Future Vol, veh/h | 123 | 2 | 4 | 14 | 8 | 85 |
|-------------------|-----|---|---|----|---|----|

|                  |      |      |      |      |      |      |
|------------------|------|------|------|------|------|------|
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
|------------------|------|------|------|------|------|------|

|                   |   |   |   |   |   |   |
|-------------------|---|---|---|---|---|---|
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
|-------------------|---|---|---|---|---|---|

|           |     |   |   |    |   |    |
|-----------|-----|---|---|----|---|----|
| Mvmt Flow | 134 | 2 | 4 | 15 | 9 | 92 |
|-----------|-----|---|---|----|---|----|

|                 |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|
| Number of Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
|-----------------|---|---|---|---|---|---|

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                   |    |    |  |
|-------------------|----|----|--|
| Opposing Approach | WB | EB |  |
|-------------------|----|----|--|

|                |   |   |   |
|----------------|---|---|---|
| Opposing Lanes | 1 | 1 | 0 |
|----------------|---|---|---|

|                           |    |  |    |
|---------------------------|----|--|----|
| Conflicting Approach Left | SB |  | WB |
|---------------------------|----|--|----|

|                        |   |   |   |
|------------------------|---|---|---|
| Conflicting Lanes Left | 1 | 0 | 1 |
|------------------------|---|---|---|

|                            |  |    |    |
|----------------------------|--|----|----|
| Conflicting Approach Right |  | SB | EB |
|----------------------------|--|----|----|

|                         |   |   |   |
|-------------------------|---|---|---|
| Conflicting Lanes Right | 0 | 1 | 1 |
|-------------------------|---|---|---|

|                          |     |     |     |
|--------------------------|-----|-----|-----|
| HCM Control Delay, s/veh | 8.2 | 6.9 | 7.2 |
|--------------------------|-----|-----|-----|

|         |   |   |   |
|---------|---|---|---|
| HCM LOS | A | A | A |
|---------|---|---|---|

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|             |     |    |    |
|-------------|-----|----|----|
| Vol Left, % | 98% | 0% | 9% |
|-------------|-----|----|----|

|             |    |     |    |
|-------------|----|-----|----|
| Vol Thru, % | 2% | 22% | 0% |
|-------------|----|-----|----|

|              |    |     |     |
|--------------|----|-----|-----|
| Vol Right, % | 0% | 78% | 91% |
|--------------|----|-----|-----|

|              |      |      |      |
|--------------|------|------|------|
| Sign Control | Stop | Stop | Stop |
|--------------|------|------|------|

|                     |     |    |    |
|---------------------|-----|----|----|
| Traffic Vol by Lane | 125 | 18 | 93 |
|---------------------|-----|----|----|

|        |     |   |   |
|--------|-----|---|---|
| LT Vol | 123 | 0 | 8 |
|--------|-----|---|---|

|             |   |   |   |
|-------------|---|---|---|
| Through Vol | 2 | 4 | 0 |
|-------------|---|---|---|

|        |   |    |    |
|--------|---|----|----|
| RT Vol | 0 | 14 | 85 |
|--------|---|----|----|

|                |     |    |     |
|----------------|-----|----|-----|
| Lane Flow Rate | 136 | 20 | 101 |
|----------------|-----|----|-----|

|              |   |   |   |
|--------------|---|---|---|
| Geometry Grp | 1 | 1 | 1 |
|--------------|---|---|---|

|                    |       |      |       |
|--------------------|-------|------|-------|
| Degree of Util (X) | 0.163 | 0.02 | 0.103 |
|--------------------|-------|------|-------|

|                        |       |       |      |
|------------------------|-------|-------|------|
| Departure Headway (Hd) | 4.324 | 3.749 | 3.67 |
|------------------------|-------|-------|------|

|                  |     |     |     |
|------------------|-----|-----|-----|
| Convergence, Y/N | Yes | Yes | Yes |
|------------------|-----|-----|-----|

|     |     |     |     |
|-----|-----|-----|-----|
| Cap | 829 | 945 | 959 |
|-----|-----|-----|-----|

|              |       |       |       |
|--------------|-------|-------|-------|
| Service Time | 2.352 | 1.812 | 1.757 |
|--------------|-------|-------|-------|

|                    |       |       |       |
|--------------------|-------|-------|-------|
| HCM Lane V/C Ratio | 0.164 | 0.021 | 0.105 |
|--------------------|-------|-------|-------|

|                          |     |     |     |
|--------------------------|-----|-----|-----|
| HCM Control Delay, s/veh | 8.2 | 6.9 | 7.2 |
|--------------------------|-----|-----|-----|

|              |   |   |   |
|--------------|---|---|---|
| HCM Lane LOS | A | A | A |
|--------------|---|---|---|

|                 |     |     |     |
|-----------------|-----|-----|-----|
| HCM 95th-tile Q | 0.6 | 0.1 | 0.3 |
|-----------------|-----|-----|-----|

| Intersection              |        |        |        |       |       |      |
|---------------------------|--------|--------|--------|-------|-------|------|
| Int Delay, s/veh          | 2.8    |        |        |       |       |      |
| Movement                  | WBL    | WBR    | NBT    | NBR   | SBL   | SBT  |
| Lane Configurations       | W      | W      | W      | W     | W     | W    |
| Traffic Vol, veh/h        | 0      | 4      | 10     | 0     | 3     | 3    |
| Future Vol, veh/h         | 0      | 4      | 10     | 0     | 3     | 3    |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0     | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free   | Free  | Free  | Free |
| RT Channelized            | -      | None   | -      | None  | -     | None |
| Storage Length            | 0      | -      | -      | -     | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0      | -     | -     | 0    |
| Grade, %                  | 0      | -      | 0      | -     | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92     | 92    | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2     | 2     | 2    |
| Mvmt Flow                 | 0      | 4      | 11     | 0     | 3     | 3    |
| Major/Minor               | Minor1 | Major1 | Major2 |       |       |      |
| Conflicting Flow All      | 21     | 11     | 0      | 0     | 11    | 0    |
| Stage 1                   | 11     | -      | -      | -     | -     | -    |
| Stage 2                   | 10     | -      | -      | -     | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -      | -     | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -      | -     | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -      | -     | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -      | -     | 2.218 | -    |
| Pot Cap-1 Maneuver        | 996    | 1070   | -      | -     | 1608  | -    |
| Stage 1                   | 1012   | -      | -      | -     | -     | -    |
| Stage 2                   | 1013   | -      | -      | -     | -     | -    |
| Platoon blocked, %        | -      | -      | -      | -     | -     | -    |
| Mov Cap-1 Maneuver        | 994    | 1070   | -      | -     | 1608  | -    |
| Mov Cap-2 Maneuver        | 994    | -      | -      | -     | -     | -    |
| Stage 1                   | 1012   | -      | -      | -     | -     | -    |
| Stage 2                   | 1011   | -      | -      | -     | -     | -    |
| Approach                  | WB     | NB     | SB     |       |       |      |
| HCM Control Delay, s/v    | 8.38   | 0      | 3.62   |       |       |      |
| HCM LOS                   | A      |        |        |       |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1  | SBL   | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1070   | 900   | -     | -    |
| HCM Lane V/C Ratio        | -      | -      | 0.004  | 0.002 | -     | -    |
| HCM Control Delay (s/veh) | -      | -      | 8.4    | 7.2   | 0     | -    |
| HCM Lane LOS              | -      | -      | A      | A     | A     | -    |
| HCM 95th %tile Q(veh)     | -      | -      | 0      | 0     | -     | -    |

## Intersection

Int Delay, s/veh 16.5

| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↖    | ↑    | ↗    |      | ↖    | ↗    |      | ↖    |      | ↖    |      | ↖    |
| Traffic Vol, veh/h       | 20   | 868  | 158  | 1    | 488  | 5    | 102  | 0    | 9    | 1    | 0    | 25   |
| Future Vol, veh/h        | 20   | 868  | 158  | 1    | 488  | 5    | 102  | 0    | 9    | 1    | 0    | 25   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | Stop | -    | -    | None |
| Storage Length           | 100  | -    | 200  | -    | -    | 150  | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 22   | 943  | 172  | 1    | 530  | 5    | 111  | 0    | 10   | 1    | 0    | 27   |

| Major/Minor          | Major1 | Major2 |   |       | Minor1 |   |       | Minor2 |       |       |       |       |
|----------------------|--------|--------|---|-------|--------|---|-------|--------|-------|-------|-------|-------|
| Conflicting Flow All | 536    | 0      | 0 | 1115  | 0      | 0 | 1520  | 1525   | 943   | 1520  | 1691  | 530   |
| Stage 1              | -      | -      | - | -     | -      | - | 987   | 987    | -     | 533   | 533   | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 533   | 538    | -     | 987   | 1159  | -     |
| Critical Hdwy        | 4.12   | -      | - | 4.12  | -      | - | 7.12  | 6.52   | 6.22  | 7.12  | 6.52  | 6.22  |
| Critical Hdwy Stg 1  | -      | -      | - | -     | -      | - | 6.12  | 5.52   | -     | 6.12  | 5.52  | -     |
| Critical Hdwy Stg 2  | -      | -      | - | -     | -      | - | 6.12  | 5.52   | -     | 6.12  | 5.52  | -     |
| Follow-up Hdwy       | 2.218  | -      | - | 2.218 | -      | - | 3.518 | 4.018  | 3.318 | 3.518 | 4.018 | 3.318 |
| Pot Cap-1 Maneuver   | 1032   | -      | - | 626   | -      | - | ~97   | 118    | 318   | 97    | 93    | 549   |
| Stage 1              | -      | -      | - | -     | -      | - | 298   | 325    | -     | 531   | 525   | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 531   | 522    | -     | 298   | 270   | -     |
| Platoon blocked, %   | -      | -      | - | -     | -      | - | -     | -      | -     | -     | -     | -     |
| Mov Cap-1 Maneuver   | 1032   | -      | - | 626   | -      | - | ~90   | 115    | 318   | 92    | 91    | 549   |
| Mov Cap-2 Maneuver   | -      | -      | - | -     | -      | - | ~90   | 115    | -     | 92    | 91    | -     |
| Stage 1              | -      | -      | - | -     | -      | - | 292   | 319    | -     | 529   | 524   | -     |
| Stage 2              | -      | -      | - | -     | -      | - | 503   | 521    | -     | 283   | 264   | -     |

| Approach                  | SE    | NW    |     |     | NE     |     |          | SW    |  |  |  |
|---------------------------|-------|-------|-----|-----|--------|-----|----------|-------|--|--|--|
| HCM Control Delay, s/v    | 0.16  | 0.02  |     |     | 244.15 |     |          | 13.32 |  |  |  |
| HCM LOS                   |       |       |     |     | F      |     |          | B     |  |  |  |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT | NWR | SEL    | SET | SERSWLn1 |       |  |  |  |
| Capacity (veh/h)          | 98    | 4     | -   | -   | 1032   | -   | -        | 461   |  |  |  |
| HCM Lane V/C Ratio        | 1.228 | 0.002 | -   | -   | 0.021  | -   | -        | 0.061 |  |  |  |
| HCM Control Delay (s/veh) | 244.1 | 10.8  | 0   | -   | 8.6    | -   | -        | 13.3  |  |  |  |
| HCM Lane LOS              | F     | B     | A   | -   | A      | -   | -        | B     |  |  |  |
| HCM 95th %tile Q(veh)     | 8.3   | 0     | -   | -   | 0.1    | -   | -        | 0.2   |  |  |  |

## Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

| Intersection              |        |        |        |      |       |       |     |
|---------------------------|--------|--------|--------|------|-------|-------|-----|
| Int Delay, s/veh          | 0.6    | SEL    | SET    | NWT  | NWR   | SWL   | SWR |
| Lane Configurations       |        |        |        |      |       |       |     |
| Traffic Vol, veh/h        | 33     | 856    | 475    | 4    | 8     | 22    |     |
| Future Vol, veh/h         | 33     | 856    | 475    | 4    | 8     | 22    |     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0     |     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop  |     |
| RT Channelized            | -      | None   | -      | None | -     | None  |     |
| Storage Length            | 315    | -      | -      | -    | 0     | -     |     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -     |     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -     |     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92    |     |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2     |     |
| Mvmt Flow                 | 36     | 930    | 516    | 4    | 9     | 24    |     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |       |     |
| Conflicting Flow All      | 521    | 0      | -      | 0    | 1521  | 518   |     |
| Stage 1                   | -      | -      | -      | -    | 518   | -     |     |
| Stage 2                   | -      | -      | -      | -    | 1002  | -     |     |
| Critical Hdwy             | 4.12   | -      | -      | -    | 6.42  | 6.22  |     |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.42  | -     |     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.42  | -     |     |
| Follow-up Hdwy            | 2.218  | -      | -      | -    | 3.518 | 3.318 |     |
| Pot Cap-1 Maneuver        | 1046   | -      | -      | -    | 131   | 557   |     |
| Stage 1                   | -      | -      | -      | -    | 598   | -     |     |
| Stage 2                   | -      | -      | -      | -    | 355   | -     |     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -     |     |
| Mov Cap-1 Maneuver        | 1046   | -      | -      | -    | 126   | 557   |     |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 126   | -     |     |
| Stage 1                   | -      | -      | -      | -    | 577   | -     |     |
| Stage 2                   | -      | -      | -      | -    | 355   | -     |     |
| Approach                  | SE     | NW     | SW     |      |       |       |     |
| HCM Control Delay, s/v    | 0.32   | 0      | 18.9   |      |       |       |     |
| HCM LOS                   |        |        | C      |      |       |       |     |
| Minor Lane/Major Mvmt     | NWT    | NWR    | SEL    | SET  | SWL   | Ln1   |     |
| Capacity (veh/h)          | -      | -      | 1046   | -    | 291   |       |     |
| HCM Lane V/C Ratio        | -      | -      | 0.034  | -    | 0.112 |       |     |
| HCM Control Delay (s/veh) | -      | -      | 8.6    | -    | 18.9  |       |     |
| HCM Lane LOS              | -      | -      | A      | -    | C     |       |     |
| HCM 95th %tile Q(veh)     | -      | -      | 0.1    | -    | 0.4   |       |     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.2  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      | ↑    |      | ↔    | ↔    |      |      |
| Traffic Vol, veh/h       | 858  | 9    | 1    | 469  | 7    | 1    |
| Future Vol, veh/h        | 858  | 9    | 1    | 469  | 7    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 933  | 10   | 1    | 510  | 8    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |       |       |
|----------------------|--------|--------|--------|---|-------|-------|
| Conflicting Flow All | 0      | 0      | 942    | 0 | 1449  | 938   |
| Stage 1              | -      | -      | -      | - | 938   | -     |
| Stage 2              | -      | -      | -      | - | 512   | -     |
| Critical Hdwy        | -      | -      | 4.12   | - | 6.42  | 6.22  |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42  | -     |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42  | -     |
| Follow-up Hdwy       | -      | -      | 2.218  | - | 3.518 | 3.318 |
| Pot Cap-1 Maneuver   | -      | -      | 728    | - | 144   | 321   |
| Stage 1              | -      | -      | -      | - | 381   | -     |
| Stage 2              | -      | -      | -      | - | 602   | -     |
| Platoon blocked, %   | -      | -      | -      | - | -     | -     |
| Mov Cap-1 Maneuver   | -      | -      | 728    | - | 144   | 321   |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 144   | -     |
| Stage 1              | -      | -      | -      | - | 381   | -     |
| Stage 2              | -      | -      | -      | - | 600   | -     |

| Approach                  | SE    | NW    | NE    |     |     |  |
|---------------------------|-------|-------|-------|-----|-----|--|
| HCM Control Delay, s/v    | 0     | 0.02  | 29.66 |     |     |  |
| HCM LOS                   |       |       | D     |     |     |  |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT   | SET | SER |  |
| Capacity (veh/h)          | 155   | 4     | -     | -   | -   |  |
| HCM Lane V/C Ratio        | 0.056 | 0.001 | -     | -   | -   |  |
| HCM Control Delay (s/veh) | 29.7  | 10    | 0     | -   | -   |  |
| HCM Lane LOS              | D     | A     | A     | -   | -   |  |
| HCM 95th %tile Q(veh)     | 0.2   | 0     | -     | -   | -   |  |

HCM 7th AWSC  
4: Betts Ranch Road & Village Road

Existing Traffic Volumes  
PM Traffic Volumes

Intersection

Intersection Delay, s/veh 7.8

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

|                     |                                                                                   |      |      |      |      |      |
|---------------------|-----------------------------------------------------------------------------------|------|------|------|------|------|
| Lane Configurations |  |      |      |      |      |      |
| Traffic Vol, veh/h  | 113                                                                               | 5    | 4    | 10   | 19   | 135  |
| Future Vol, veh/h   | 113                                                                               | 5    | 4    | 10   | 19   | 135  |
| Peak Hour Factor    | 0.92                                                                              | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2                                                                                 | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 123                                                                               | 5    | 4    | 11   | 21   | 147  |
| Number of Lanes     | 0                                                                                 | 1    | 1    | 0    | 1    | 0    |

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                            |     |    |     |
|----------------------------|-----|----|-----|
| Opposing Approach          | WB  | EB |     |
| Opposing Lanes             | 1   | 1  | 0   |
| Conflicting Approach Left  | SB  |    | WB  |
| Conflicting Lanes Left     | 1   | 0  | 1   |
| Conflicting Approach Right |     | SB | EB  |
| Conflicting Lanes Right    | 0   | 1  | 1   |
| HCM Control Delay, s/veh   | 8.3 | 7  | 7.5 |
| HCM LOS                    | A   | A  | A   |

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 96%   | 0%    | 12%   |
| Vol Thru, %              | 4%    | 29%   | 0%    |
| Vol Right, %             | 0%    | 71%   | 88%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 118   | 14    | 154   |
| LT Vol                   | 113   | 0     | 19    |
| Through Vol              | 5     | 4     | 0     |
| RT Vol                   | 0     | 10    | 135   |
| Lane Flow Rate           | 128   | 15    | 167   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.158 | 0.016 | 0.171 |
| Departure Headway (Hd)   | 4.433 | 3.9   | 3.681 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 805   | 904   | 957   |
| Service Time             | 2.478 | 1.984 | 1.77  |
| HCM Lane V/C Ratio       | 0.159 | 0.017 | 0.175 |
| HCM Control Delay, s/veh | 8.3   | 7     | 7.5   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.6   | 0     | 0.6   |

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 1.6    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      |        | ↑     |        | ↔     |      |
| Traffic Vol, veh/h        | 0      | 3      | 7     | 2      | 3     | 15   |
| Future Vol, veh/h         | 0      | 3      | 7     | 2      | 3     | 15   |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 3      | 8     | 2      | 3     | 16   |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 32     | 9      | 0     | 0      | 10    | 0    |
| Stage 1                   | 9      | -      | -     | -      | -     | -    |
| Stage 2                   | 23     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 982    | 1073   | -     | -      | 1610  | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 1000   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 980    | 1073   | -     | -      | 1610  | -    |
| Mov Cap-2 Maneuver        | 980    | -      | -     | -      | -     | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 998    | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.36   | 0      |       | 1.21   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1073  | 300    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.003 | 0.002  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 525      | 1199     | 184      | 31       |          |          |
| Demand Flow Rate, veh/h     | 535      | 1223     | 188      | 32       |          |          |
| Vehicles Circulating, veh/h | 17       | 190      | 491      | 1401     |          |          |
| Vehicles Exiting, veh/h     | 1417     | 488      | 61       | 12       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 4.3      | 9.1      | 5.9      | 9.7      |          |          |
| Approach LOS                | A        | A        | A        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.469    | 0.531    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 251      | 284      | 575      | 648      | 188      | 32       |
| Cap Entry Lane, veh/h       | 1329     | 1400     | 1133     | 1208     | 935      | 432      |
| Entry HV Adj Factor         | 0.982    | 0.979    | 0.980    | 0.981    | 0.979    | 0.968    |
| Flow Entry, veh/h           | 247      | 278      | 564      | 636      | 184      | 31       |
| Cap Entry, veh/h            | 1306     | 1370     | 1111     | 1185     | 916      | 418      |
| V/C Ratio                   | 0.189    | 0.203    | 0.507    | 0.536    | 0.201    | 0.074    |
| Control Delay, s/veh        | 4.3      | 4.3      | 9.1      | 9.2      | 5.9      | 9.7      |
| LOS                         | A        | A        | A        | A        | A        | A        |
| 95th %tile Queue, veh       | 1        | 1        | 3        | 3        | 1        | 0        |

| Intersection              |        |        |        |      |       |      |     |
|---------------------------|--------|--------|--------|------|-------|------|-----|
| Int Delay, s/veh          | 1.6    | SEL    | SET    | NWT  | NWR   | SWL  | SWR |
| Lane Configurations       |        |        |        |      |       |      |     |
| Traffic Vol, veh/h        | 45     | 393    | 914    | 20   | 15    | 80   |     |
| Future Vol, veh/h         | 45     | 393    | 914    | 20   | 15    | 80   |     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0    |     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop |     |
| RT Channelized            | -      | None   | -      | None | -     | None |     |
| Storage Length            | 315    | -      | -      | -    | 0     | -    |     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -    |     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -    |     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92   |     |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2    |     |
| Mvmt Flow                 | 49     | 427    | 993    | 22   | 16    | 87   |     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |      |     |
| Conflicting Flow All      | 1015   | 0      | -      | 0    | 1316  | 508  |     |
| Stage 1                   | -      | -      | -      | -    | 1004  | -    |     |
| Stage 2                   | -      | -      | -      | -    | 311   | -    |     |
| Critical Hdwy             | 4.14   | -      | -      | -    | 6.84  | 6.94 |     |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |     |
| Follow-up Hdwy            | 2.22   | -      | -      | -    | 3.52  | 3.32 |     |
| Pot Cap-1 Maneuver        | 679    | -      | -      | -    | 149   | 510  |     |
| Stage 1                   | -      | -      | -      | -    | 315   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 716   | -    |     |
| Platoon blocked, %        | -      | -      | -      |      |       |      |     |
| Mov Cap-1 Maneuver        | 679    | -      | -      | -    | 138   | 510  |     |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 138   | -    |     |
| Stage 1                   | -      | -      | -      | -    | 292   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 716   | -    |     |
| Approach                  | SE     | NW     | SW     |      |       |      |     |
| HCM Control Delay, s/v    | 1.1    | 0      | 19.06  |      |       |      |     |
| HCM LOS                   |        |        | C      |      |       |      |     |
| Minor Lane/Major Mvmt     | NWT    | NWR    | SEL    | SET  | SWL   | Ln1  |     |
| Capacity (veh/h)          | -      | -      | 679    | -    | 358   |      |     |
| HCM Lane V/C Ratio        | -      | -      | 0.072  | -    | 0.288 |      |     |
| HCM Control Delay (s/veh) | -      | -      | 10.7   | -    | 19.1  |      |     |
| HCM Lane LOS              | -      | -      | B      | -    | C     |      |     |
| HCM 95th %tile Q(veh)     | -      | -      | 0.2    | -    | 1.2   |      |     |

| Intersection              |        |        |       |        |       |       |
|---------------------------|--------|--------|-------|--------|-------|-------|
| Int Delay, s/veh          | 0.5    |        |       |        |       |       |
| Movement                  | SET    | SER    | NWL   | NWT    | NEL   | NER   |
| Lane Configurations       | ↑      | ↗      | ↖     | ↙      | ↘     | ↙     |
| Traffic Vol, veh/h        | 404    | 7      | 2     | 1030   | 16    | 1     |
| Future Vol, veh/h         | 404    | 7      | 2     | 1030   | 16    | 1     |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0     |
| Sign Control              | Free   | Free   | Free  | Free   | Stop  | Stop  |
| RT Channelized            | -      | None   | -     | None   | -     | None  |
| Storage Length            | -      | -      | -     | -      | 0     | -     |
| Veh in Median Storage, #  | 0      | -      | -     | 0      | 0     | -     |
| Grade, %                  | 0      | -      | -     | 0      | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2     |
| Mvmt Flow                 | 439    | 8      | 2     | 1120   | 17    | 1     |
| Major/Minor               | Major1 | Major2 |       | Minor1 |       |       |
| Conflicting Flow All      | 0      | 0      | 447   | 0      | 1563  | 439   |
| Stage 1                   | -      | -      | -     | -      | 439   | -     |
| Stage 2                   | -      | -      | -     | -      | 1124  | -     |
| Critical Hdwy             | -      | -      | 4.12  | -      | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -     | -      | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -     | -      | 5.42  | -     |
| Follow-up Hdwy            | -      | -      | 2.218 | -      | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | -      | -      | 1114  | -      | 123   | 618   |
| Stage 1                   | -      | -      | -     | -      | 650   | -     |
| Stage 2                   | -      | -      | -     | -      | 310   | -     |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -     |
| Mov Cap-1 Maneuver        | -      | -      | 1114  | -      | 122   | 618   |
| Mov Cap-2 Maneuver        | -      | -      | -     | -      | 122   | -     |
| Stage 1                   | -      | -      | -     | -      | 650   | -     |
| Stage 2                   | -      | -      | -     | -      | 309   | -     |
| Approach                  | SE     | NW     |       | NE     |       |       |
| HCM Control Delay, s/v    | 0      | 0.02   |       | 37.71  |       |       |
| HCM LOS                   |        |        |       | E      |       |       |
| Minor Lane/Major Mvmt     | NELn1  | NWL    | NWT   | SET    | SER   |       |
| Capacity (veh/h)          | 128    | 3      | -     | -      | -     |       |
| HCM Lane V/C Ratio        | 0.144  | 0.002  | -     | -      | -     |       |
| HCM Control Delay (s/veh) | 37.7   | 8.2    | 0     | -      | -     |       |
| HCM Lane LOS              | E      | A      | A     | -      | -     |       |
| HCM 95th %tile Q(veh)     | 0.5    | 0      | -     | -      | -     |       |

## Intersection

Intersection Delay, s/veh 7.8

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

|                     |                                                                                   |                                                                                   |                                                                                   |      |      |      |
|---------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------|------|------|
| Lane Configurations |  |  |  |      |      |      |
| Traffic Vol, veh/h  | 135                                                                               | 2                                                                                 | 4                                                                                 | 14   | 8    | 94   |
| Future Vol, veh/h   | 135                                                                               | 2                                                                                 | 4                                                                                 | 14   | 8    | 94   |
| Peak Hour Factor    | 0.92                                                                              | 0.92                                                                              | 0.92                                                                              | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2    | 2    | 2    |
| Mvmt Flow           | 147                                                                               | 2                                                                                 | 4                                                                                 | 15   | 9    | 102  |
| Number of Lanes     | 0                                                                                 | 1                                                                                 | 1                                                                                 | 0    | 1    | 0    |

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                            |     |     |     |
|----------------------------|-----|-----|-----|
| Opposing Approach          | WB  | EB  |     |
| Opposing Lanes             | 1   | 1   | 0   |
| Conflicting Approach Left  | SB  |     | WB  |
| Conflicting Lanes Left     | 1   | 0   | 1   |
| Conflicting Approach Right |     | SB  | EB  |
| Conflicting Lanes Right    | 0   | 1   | 1   |
| HCM Control Delay, s/veh   | 8.3 | 6.9 | 7.3 |
| HCM LOS                    | A   | A   | A   |

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 99%   | 0%    | 8%    |
| Vol Thru, %              | 1%    | 22%   | 0%    |
| Vol Right, %             | 0%    | 78%   | 92%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 137   | 18    | 102   |
| LT Vol                   | 135   | 0     | 8     |
| Through Vol              | 2     | 4     | 0     |
| RT Vol                   | 0     | 14    | 94    |
| Lane Flow Rate           | 149   | 20    | 111   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.18  | 0.021 | 0.117 |
| Departure Headway (Hd)   | 4.342 | 3.777 | 3.785 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 823   | 934   | 952   |
| Service Time             | 2.381 | 1.855 | 1.785 |
| HCM Lane V/C Ratio       | 0.181 | 0.021 | 0.117 |
| HCM Control Delay, s/veh | 8.3   | 6.9   | 7.3   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.7   | 0.1   | 0.4   |

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 2.8    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      | W      | ↑     |        | ↔     |      |
| Traffic Vol, veh/h        | 0      | 4      | 10    | 0      | 3     | 3    |
| Future Vol, veh/h         | 0      | 4      | 10    | 0      | 3     | 3    |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 4      | 11    | 0      | 3     | 3    |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 21     | 11     | 0     | 0      | 11    | 0    |
| Stage 1                   | 11     | -      | -     | -      | -     | -    |
| Stage 2                   | 10     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 996    | 1070   | -     | -      | 1608  | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1013   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 994    | 1070   | -     | -      | 1608  | -    |
| Mov Cap-2 Maneuver        | 994    | -      | -     | -      | -     | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1011   | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.38   | 0      |       | 3.62   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1070  | 900    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.004 | 0.002  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 1406     | 623      | 133      | 28       |          |          |
| Demand Flow Rate, veh/h     | 1434     | 635      | 135      | 29       |          |          |
| Vehicles Circulating, veh/h | 2        | 146      | 1242     | 754      |          |          |
| Vehicles Exiting, veh/h     | 781      | 1231     | 194      | 27       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 8.1      | 5.4      | 11.5     | 5.4      |          |          |
| Approach LOS                | A        | A        | B        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.470    | 0.530    | 0.469    | 0.531    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 674      | 760      | 298      | 337      | 135      | 29       |
| Cap Entry Lane, veh/h       | 1347     | 1418     | 1180     | 1254     | 494      | 748      |
| Entry HV Adj Factor         | 0.981    | 0.981    | 0.982    | 0.979    | 0.985    | 0.966    |
| Flow Entry, veh/h           | 661      | 745      | 293      | 330      | 133      | 28       |
| Cap Entry, veh/h            | 1321     | 1390     | 1159     | 1228     | 487      | 722      |
| V/C Ratio                   | 0.500    | 0.536    | 0.253    | 0.269    | 0.273    | 0.039    |
| Control Delay, s/veh        | 7.9      | 8.2      | 5.4      | 5.3      | 11.5     | 5.4      |
| LOS                         | A        | A        | A        | A        | B        | A        |
| 95th %tile Queue, veh       | 3        | 3        | 1        | 1        | 1        | 0        |

| Intersection              |        |        |        |      |       |      |
|---------------------------|--------|--------|--------|------|-------|------|
| Int Delay, s/veh          | 0.5    |        |        |      |       |      |
| Movement                  | SEL    | SET    | NWT    | NWR  | SWL   | SWR  |
| Lane Configurations       |        |        |        |      |       |      |
| Traffic Vol, veh/h        | 36     | 996    | 554    | 4    | 9     | 24   |
| Future Vol, veh/h         | 36     | 996    | 554    | 4    | 9     | 24   |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0    |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop |
| RT Channelized            | -      | None   | -      | None | -     | None |
| Storage Length            | 315    | -      | -      | -    | 0     | -    |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -    |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -    |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2    |
| Mvmt Flow                 | 39     | 1083   | 602    | 4    | 10    | 26   |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |      |
| Conflicting Flow All      | 607    | 0      | -      | 0    | 1224  | 303  |
| Stage 1                   | -      | -      | -      | -    | 604   | -    |
| Stage 2                   | -      | -      | -      | -    | 620   | -    |
| Critical Hdwy             | 4.14   | -      | -      | -    | 6.84  | 6.94 |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |
| Follow-up Hdwy            | 2.22   | -      | -      | -    | 3.52  | 3.32 |
| Pot Cap-1 Maneuver        | 968    | -      | -      | -    | 171   | 693  |
| Stage 1                   | -      | -      | -      | -    | 508   | -    |
| Stage 2                   | -      | -      | -      | -    | 499   | -    |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -    |
| Mov Cap-1 Maneuver        | 968    | -      | -      | -    | 164   | 693  |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 164   | -    |
| Stage 1                   | -      | -      | -      | -    | 488   | -    |
| Stage 2                   | -      | -      | -      | -    | 499   | -    |
| Approach                  | SE     | NW     | SW     |      |       |      |
| HCM Control Delay, s/v    | 0.31   | 0      | 15.79  |      |       |      |
| HCM LOS                   |        |        | C      |      |       |      |
| Minor Lane/Major Mvmt     | NWT    | NWR    | SEL    | SET  | SWL   | Ln1  |
| Capacity (veh/h)          | -      | -      | 968    | -    | 369   |      |
| HCM Lane V/C Ratio        | -      | -      | 0.04   | -    | 0.097 |      |
| HCM Control Delay (s/veh) | -      | -      | 8.9    | -    | 15.8  |      |
| HCM Lane LOS              | -      | -      | A      | -    | C     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0.1    | -    | 0.3   |      |

| Intersection              |        |        |       |        |       |       |
|---------------------------|--------|--------|-------|--------|-------|-------|
| Int Delay, s/veh          | 0.2    |        |       |        |       |       |
| Movement                  | SET    | SER    | NWL   | NWT    | NEL   | NER   |
| Lane Configurations       | ↑      | ↗      | ↖     | ↙      | ↘     | ↙     |
| Traffic Vol, veh/h        | 698    | 9      | 1     | 547    | 7     | 1     |
| Future Vol, veh/h         | 698    | 9      | 1     | 547    | 7     | 1     |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0     |
| Sign Control              | Free   | Free   | Free  | Free   | Stop  | Stop  |
| RT Channelized            | -      | None   | -     | None   | -     | None  |
| Storage Length            | -      | -      | -     | -      | 0     | -     |
| Veh in Median Storage, #  | 0      | -      | -     | 0      | 0     | -     |
| Grade, %                  | 0      | -      | -     | 0      | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2     |
| Mvmt Flow                 | 759    | 10     | 1     | 595    | 8     | 1     |
| Major/Minor               | Major1 | Major2 |       | Minor1 |       |       |
| Conflicting Flow All      | 0      | 0      | 768   | 0      | 1355  | 759   |
| Stage 1                   | -      | -      | -     | -      | 759   | -     |
| Stage 2                   | -      | -      | -     | -      | 597   | -     |
| Critical Hdwy             | -      | -      | 4.12  | -      | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -     | -      | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -     | -      | 5.42  | -     |
| Follow-up Hdwy            | -      | -      | 2.218 | -      | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | -      | -      | 846   | -      | 165   | 407   |
| Stage 1                   | -      | -      | -     | -      | 462   | -     |
| Stage 2                   | -      | -      | -     | -      | 550   | -     |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -     |
| Mov Cap-1 Maneuver        | -      | -      | 846   | -      | 164   | 407   |
| Mov Cap-2 Maneuver        | -      | -      | -     | -      | 164   | -     |
| Stage 1                   | -      | -      | -     | -      | 462   | -     |
| Stage 2                   | -      | -      | -     | -      | 549   | -     |
| Approach                  | SE     | NW     |       | NE     |       |       |
| HCM Control Delay, s/v    | 0      | 0.02   |       | 26.32  |       |       |
| HCM LOS                   |        |        |       | D      |       |       |
| Minor Lane/Major Mvmt     | NELn1  | NWL    | NWT   | SET    | SER   |       |
| Capacity (veh/h)          | 178    | 3      | -     | -      | -     |       |
| HCM Lane V/C Ratio        | 0.049  | 0.001  | -     | -      | -     |       |
| HCM Control Delay (s/veh) | 26.3   | 9.3    | 0     | -      | -     |       |
| HCM Lane LOS              | D      | A      | A     | -      | -     |       |
| HCM 95th %tile Q(veh)     | 0.2    | 0      | -     | -      | -     |       |

Intersection

Intersection Delay, s/veh 8  
Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

|                     |      |      |      |      |      |      |
|---------------------|------|------|------|------|------|------|
| Lane Configurations |      |      |      | 10   | 19   | 149  |
| Traffic Vol, veh/h  | 124  | 5    | 4    | 10   | 19   | 149  |
| Future Vol, veh/h   | 124  | 5    | 4    | 10   | 19   | 149  |
| Peak Hour Factor    | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 135  | 5    | 4    | 11   | 21   | 162  |
| Number of Lanes     | 0    | 1    | 1    | 0    | 1    | 0    |

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                            |     |     |     |
|----------------------------|-----|-----|-----|
| Opposing Approach          | WB  | EB  |     |
| Opposing Lanes             | 1   | 1   | 0   |
| Conflicting Approach Left  | SB  |     | WB  |
| Conflicting Lanes Left     | 1   | 0   | 1   |
| Conflicting Approach Right |     | SB  | EB  |
| Conflicting Lanes Right    | 0   | 1   | 1   |
| HCM Control Delay, s/veh   | 8.5 | 7.1 | 7.7 |
| HCM LOS                    | A   | A   | A   |

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 96%   | 0%    | 11%   |
| Vol Thru, %              | 4%    | 29%   | 0%    |
| Vol Right, %             | 0%    | 71%   | 89%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 129   | 14    | 168   |
| LT Vol                   | 124   | 0     | 19    |
| Through Vol              | 5     | 4     | 0     |
| RT Vol                   | 0     | 10    | 149   |
| Lane Flow Rate           | 140   | 15    | 183   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.174 | 0.017 | 0.192 |
| Departure Headway (Hd)   | 4.459 | 4.041 | 3.794 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 798   | 891   | 951   |
| Service Time             | 2.521 | 2.041 | 1.794 |
| HCM Lane V/C Ratio       | 0.175 | 0.017 | 0.192 |
| HCM Control Delay, s/veh | 8.5   | 7.1   | 7.7   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.6   | 0.1   | 0.7   |

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 1.6    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      |        | ↑     |        | ↔     |      |
| Traffic Vol, veh/h        | 0      | 3      | 7     | 2      | 3     | 15   |
| Future Vol, veh/h         | 0      | 3      | 7     | 2      | 3     | 15   |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 3      | 8     | 2      | 3     | 16   |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 32     | 9      | 0     | 0      | 10    | 0    |
| Stage 1                   | 9      | -      | -     | -      | -     | -    |
| Stage 2                   | 23     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 982    | 1073   | -     | -      | 1610  | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 1000   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 980    | 1073   | -     | -      | 1610  | -    |
| Mov Cap-2 Maneuver        | 980    | -      | -     | -      | -     | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 998    | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.36   | 0      |       | 1.21   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1073  | 300    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.003 | 0.002  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 706      | 1617     | 250      | 31       |          |          |
| Demand Flow Rate, veh/h     | 720      | 1649     | 255      | 32       |          |          |
| Vehicles Circulating, veh/h | 23       | 255      | 660      | 1892     |          |          |
| Vehicles Exiting, veh/h     | 1901     | 660      | 83       | 12       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 5.0      | 16.1     | 8.2      | 15.3     |          |          |
| Approach LOS                | A        | C        | A        | C        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.469    | 0.531    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 338      | 382      | 775      | 874      | 255      | 32       |
| Cap Entry Lane, veh/h       | 1322     | 1393     | 1068     | 1143     | 810      | 284      |
| Entry HV Adj Factor         | 0.982    | 0.980    | 0.981    | 0.981    | 0.980    | 0.968    |
| Flow Entry, veh/h           | 332      | 374      | 760      | 857      | 250      | 31       |
| Cap Entry, veh/h            | 1298     | 1365     | 1047     | 1121     | 794      | 275      |
| V/C Ratio                   | 0.256    | 0.274    | 0.726    | 0.764    | 0.315    | 0.113    |
| Control Delay, s/veh        | 5.0      | 5.0      | 15.6     | 16.6     | 8.2      | 15.3     |
| LOS                         | A        | A        | C        | C        | A        | C        |
| 95th %tile Queue, veh       | 1        | 1        | 7        | 8        | 1        | 0        |

| Intersection              |        |        |        |      |       |      |     |
|---------------------------|--------|--------|--------|------|-------|------|-----|
| Int Delay, s/veh          | 5.2    | SEL    | SET    | NWT  | NWR   | SWL  | SWR |
| Lane Configurations       |        |        |        |      |       |      |     |
| Traffic Vol, veh/h        | 62     | 534    | 1365   | 27   | 21    | 110  |     |
| Future Vol, veh/h         | 62     | 534    | 1365   | 27   | 21    | 110  |     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0    |     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop |     |
| RT Channelized            | -      | None   | -      | None | -     | None |     |
| Storage Length            | 315    | -      | -      | -    | 0     | -    |     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -    |     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -    |     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92   |     |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2    |     |
| Mvmt Flow                 | 67     | 580    | 1484   | 29   | 23    | 120  |     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |      |     |
| Conflicting Flow All      | 1513   | 0      | -      | 0    | 1923  | 757  |     |
| Stage 1                   | -      | -      | -      | -    | 1498  | -    |     |
| Stage 2                   | -      | -      | -      | -    | 425   | -    |     |
| Critical Hdwy             | 4.14   | -      | -      | -    | 6.84  | 6.94 |     |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |     |
| Follow-up Hdwy            | 2.22   | -      | -      | -    | 3.52  | 3.32 |     |
| Pot Cap-1 Maneuver        | 438    | -      | -      | -    | 59    | 350  |     |
| Stage 1                   | -      | -      | -      | -    | 171   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 627   | -    |     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -    |     |
| Mov Cap-1 Maneuver        | 438    | -      | -      | -    | 50    | 350  |     |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 50    | -    |     |
| Stage 1                   | -      | -      | -      | -    | 145   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 627   | -    |     |
| Approach                  | SE     | NW     | SW     |      |       |      |     |
| HCM Control Delay, s/v    | 1.53   | 0      | 76.86  |      |       |      |     |
| HCM LOS                   |        |        | F      |      |       |      |     |
| Minor Lane/Major Mvmt     | NWT    | NWR    | SEL    | SET  | SWL   | Ln1  |     |
| Capacity (veh/h)          | -      | -      | 438    | -    | 178   |      |     |
| HCM Lane V/C Ratio        | -      | -      | 0.154  | -    | 0.801 |      |     |
| HCM Control Delay (s/veh) | -      | -      | 14.7   | -    | 76.9  |      |     |
| HCM Lane LOS              | -      | -      | B      | -    | F     |      |     |
| HCM 95th %tile Q(veh)     | -      | -      | 0.5    | -    | 5.4   |      |     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      | ↑↑   |      | ↔    | ↑↑   | ↔    |      |
| Traffic Vol, veh/h       | 546  | 7    | 2    | 1388 | 16   | 1    |
| Future Vol, veh/h        | 546  | 7    | 2    | 1388 | 16   | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 593  | 8    | 2    | 1509 | 17   | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |      |
|----------------------|--------|--------|--------|---|------|------|
| Conflicting Flow All | 0      | 0      | 601    | 0 | 1356 | 301  |
| Stage 1              | -      | -      | -      | - | 597  | -    |
| Stage 2              | -      | -      | -      | - | 759  | -    |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 | -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 | -    |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver   | -      | -      | 972    | - | 140  | 696  |
| Stage 1              | -      | -      | -      | - | 512  | -    |
| Stage 2              | -      | -      | -      | - | 423  | -    |
| Platoon blocked, %   | -      | -      | -      | - | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | 972    | - | 140  | 696  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 140  | -    |
| Stage 1              | -      | -      | -      | - | 512  | -    |
| Stage 2              | -      | -      | -      | - | 421  | -    |

| Approach                  | SE    | NW    | NE    |     |     |  |
|---------------------------|-------|-------|-------|-----|-----|--|
| HCM Control Delay, s/v    | 0     | 0.05  | 33.03 |     |     |  |
| HCM LOS                   |       |       | D     |     |     |  |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT   | SET | SER |  |
| Capacity (veh/h)          | 147   | 5     | -     | -   | -   |  |
| HCM Lane V/C Ratio        | 0.126 | 0.002 | -     | -   | -   |  |
| HCM Control Delay (s/veh) | 33    | 8.7   | 0     | -   | -   |  |
| HCM Lane LOS              | D     | A     | A     | -   | -   |  |
| HCM 95th %tile Q(veh)     | 0.4   | 0     | -     | -   | -   |  |

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations



Traffic Vol, veh/h 170 2 4 14 8 128

Future Vol, veh/h 170 2 4 14 8 128

Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 185 2 4 15 9 139

Number of Lanes 0 1 1 0 1 0

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left SB WB

Conflicting Lanes Left 1 0 1

Conflicting Approach Right SB EB

Conflicting Lanes Right 0 1 1

HCM Control Delay, s/veh 8.8 7.1 7.6

HCM LOS A A A

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

Vol Left, % 99% 0% 6%

Vol Thru, % 1% 22% 0%

Vol Right, % 0% 78% 94%

Sign Control Stop Stop Stop

Traffic Vol by Lane 172 18 136

LT Vol 170 0 8

Through Vol 2 4 0

RT Vol 0 14 128

Lane Flow Rate 187 20 148

Geometry Grp 1 1 1

Degree of Util (X) 0.229 0.022 0.159

Departure Headway (Hd) 4.406 3.972 3.864

Convergence, Y/N Yes Yes Yes

Cap 810 904 933

Service Time 2.466 1.985 1.866

HCM Lane V/C Ratio 0.231 0.022 0.159

HCM Control Delay, s/veh 8.8 7.1 7.6

HCM Lane LOS A A A

HCM 95th-tile Q 0.9 0.1 0.6

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 2.8    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      | W      | ↑     |        | ↔     |      |
| Traffic Vol, veh/h        | 0      | 4      | 10    | 0      | 3     | 3    |
| Future Vol, veh/h         | 0      | 4      | 10    | 0      | 3     | 3    |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 4      | 11    | 0      | 3     | 3    |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 21     | 11     | 0     | 0      | 11    | 0    |
| Stage 1                   | 11     | -      | -     | -      | -     | -    |
| Stage 2                   | 10     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 996    | 1070   | -     | -      | 1608  | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1013   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 994    | 1070   | -     | -      | 1608  | -    |
| Mov Cap-2 Maneuver        | 994    | -      | -     | -      | -     | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1011   | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.38   | 0      |       | 3.62   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1070  | 900    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.004 | 0.002  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 1754     | 836      | 181      | 28       |          |          |
| Demand Flow Rate, veh/h     | 1788     | 853      | 184      | 29       |          |          |
| Vehicles Circulating, veh/h | 3        | 191      | 1526     | 1017     |          |          |
| Vehicles Exiting, veh/h     | 1043     | 1519     | 265      | 27       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 10.7     | 6.7      | 20.0     | 6.8      |          |          |
| Approach LOS                | B        | A        | C        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.470    | 0.530    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 840      | 948      | 401      | 452      | 184      | 29       |
| Cap Entry Lane, veh/h       | 1346     | 1417     | 1132     | 1207     | 388      | 598      |
| Entry HV Adj Factor         | 0.981    | 0.980    | 0.980    | 0.981    | 0.984    | 0.966    |
| Flow Entry, veh/h           | 824      | 929      | 393      | 443      | 181      | 28       |
| Cap Entry, veh/h            | 1321     | 1389     | 1110     | 1184     | 382      | 578      |
| V/C Ratio                   | 0.624    | 0.669    | 0.354    | 0.374    | 0.474    | 0.048    |
| Control Delay, s/veh        | 10.3     | 11.0     | 6.8      | 6.7      | 20.0     | 6.8      |
| LOS                         | B        | B        | A        | A        | C        | A        |
| 95th %tile Queue, veh       | 5        | 6        | 2        | 2        | 2        | 0        |

| Intersection              |        |        |        |      |       |      |     |
|---------------------------|--------|--------|--------|------|-------|------|-----|
| Int Delay, s/veh          | 0.6    | SEL    | SET    | NWT  | NWR   | SWL  | SWR |
| Lane Configurations       |        |        |        |      |       |      |     |
| Traffic Vol, veh/h        | 50     | 1338   | 425    | 6    | 12    | 33   |     |
| Future Vol, veh/h         | 50     | 1338   | 425    | 6    | 12    | 33   |     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0    |     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop |     |
| RT Channelized            | -      | None   | -      | None | -     | None |     |
| Storage Length            | 315    | -      | -      | -    | 0     | -    |     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -    |     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -    |     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92   |     |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2    |     |
| Mvmt Flow                 | 54     | 1454   | 462    | 7    | 13    | 36   |     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |      |     |
| Conflicting Flow All      | 468    | 0      | -      | 0    | 1301  | 234  |     |
| Stage 1                   | -      | -      | -      | -    | 465   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 836   | -    |     |
| Critical Hdwy             | 4.14   | -      | -      | -    | 6.84  | 6.94 |     |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.84  | -    |     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.84  | -    |     |
| Follow-up Hdwy            | 2.22   | -      | -      | -    | 3.52  | 3.32 |     |
| Pot Cap-1 Maneuver        | 1089   | -      | -      | -    | 153   | 768  |     |
| Stage 1                   | -      | -      | -      | -    | 598   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 386   | -    |     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -    |     |
| Mov Cap-1 Maneuver        | 1089   | -      | -      | -    | 145   | 768  |     |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 145   | -    |     |
| Stage 1                   | -      | -      | -      | -    | 569   | -    |     |
| Stage 2                   | -      | -      | -      | -    | 386   | -    |     |
| Approach                  | SE     | NW     | SW     |      |       |      |     |
| HCM Control Delay, s/v    | 0.31   | 0      | 16.65  |      |       |      |     |
| HCM LOS                   |        |        | C      |      |       |      |     |
| Minor Lane/Major Mvmt     | NWT    | NWR    | SEL    | SET  | SWL   | Ln1  |     |
| Capacity (veh/h)          | -      | -      | 1089   | -    | 358   |      |     |
| HCM Lane V/C Ratio        | -      | -      | 0.05   | -    | 0.137 |      |     |
| HCM Control Delay (s/veh) | -      | -      | 8.5    | -    | 16.6  |      |     |
| HCM Lane LOS              | -      | -      | A      | -    | C     |      |     |
| HCM 95th %tile Q(veh)     | -      | -      | 0.2    | -    | 0.5   |      |     |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      | ↑↑   |      | ↔↑   | ↔    |      |      |
| Traffic Vol, veh/h       | 1341 | 9    | 1    | 735  | 7    | 1    |
| Future Vol, veh/h        | 1341 | 9    | 1    | 735  | 7    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1458 | 10   | 1    | 799  | 8    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |      |
|----------------------|--------|--------|--------|---|------|------|
| Conflicting Flow All | 0      | 0      | 1467   | 0 | 1864 | 734  |
| Stage 1              | -      | -      | -      | - | 1462 | -    |
| Stage 2              | -      | -      | -      | - | 402  | -    |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 | -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 | -    |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver   | -      | -      | 456    | - | 64   | 363  |
| Stage 1              | -      | -      | -      | - | 179  | -    |
| Stage 2              | -      | -      | -      | - | 645  | -    |
| Platoon blocked, %   | -      | -      | -      | - | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | 456    | - | 64   | 363  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 64   | -    |
| Stage 1              | -      | -      | -      | - | 179  | -    |
| Stage 2              | -      | -      | -      | - | 643  | -    |

| Approach                  | SE    | NW    | NE    |     |     |  |
|---------------------------|-------|-------|-------|-----|-----|--|
| HCM Control Delay, s/v    | 0     | 0.06  | 62.15 |     |     |  |
| HCM LOS                   |       |       | F     |     |     |  |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT   | SET | SER |  |
| Capacity (veh/h)          | 72    | 5     | -     | -   | -   |  |
| HCM Lane V/C Ratio        | 0.122 | 0.002 | -     | -   | -   |  |
| HCM Control Delay (s/veh) | 62.2  | 12.9  | 0     | -   | -   |  |
| HCM Lane LOS              | F     | B     | A     | -   | -   |  |
| HCM 95th %tile Q(veh)     | 0.4   | 0     | -     | -   | -   |  |

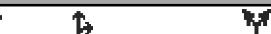
Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations



Traffic Vol, veh/h 185 5 4 10 19 203

Future Vol, veh/h 185 5 4 10 19 203

Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 201 5 4 11 21 221

Number of Lanes 0 1 1 0 1 0

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left SB WB

Conflicting Lanes Left 1 0 1

Conflicting Approach Right SB EB

Conflicting Lanes Right 0 1 1

HCM Control Delay, s/veh 9.4 7.4 8.4

HCM LOS A A A

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

Vol Left, % 97% 0% 9%

Vol Thru, % 3% 29% 0%

Vol Right, % 0% 71% 91%

Sign Control Stop Stop Stop

Traffic Vol by Lane 190 14 222

LT Vol 185 0 19

Through Vol 5 4 0

RT Vol 0 10 203

Lane Flow Rate 207 15 241

Geometry Grp 1 1 1

Degree of Util (X) 0.268 0.018 0.264

Departure Headway (Hd) 4.668 4.25 3.942

Convergence, Y/N Yes Yes Yes

Cap 774 842 915

Service Time 2.668 2.276 1.956

HCM Lane V/C Ratio 0.267 0.018 0.263

HCM Control Delay, s/veh 9.4 7.4 8.4

HCM Lane LOS A A A

HCM 95th-tile Q 1.1 0.1 1.1

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 1.6    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      |        | ↑     |        | ↓     |      |
| Traffic Vol, veh/h        | 0      | 3      | 7     | 2      | 3     | 15   |
| Future Vol, veh/h         | 0      | 3      | 7     | 2      | 3     | 15   |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 3      | 8     | 2      | 3     | 16   |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 32     | 9      | 0     | 0      | 10    | 0    |
| Stage 1                   | 9      | -      | -     | -      | -     | -    |
| Stage 2                   | 23     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 982    | 1073   | -     | -      | 1610  | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 1000   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 980    | 1073   | -     | -      | 1610  | -    |
| Mov Cap-2 Maneuver        | 980    | -      | -     | -      | -     | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 998    | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.36   | 0      |       | 1.21   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1073  | 300    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.003 | 0.002  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 537      | 1234     | 134      | 31       |          |          |
| Demand Flow Rate, veh/h     | 548      | 1258     | 137      | 32       |          |          |
| Vehicles Circulating, veh/h | 17       | 140      | 503      | 1386     |          |          |
| Vehicles Exiting, veh/h     | 1401     | 500      | 62       | 12       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 4.4      | 8.7      | 5.4      | 9.5      |          |          |
| Approach LOS                | A        | A        | A        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.471    | 0.529    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 258      | 290      | 591      | 667      | 137      | 32       |
| Cap Entry Lane, veh/h       | 1329     | 1400     | 1187     | 1261     | 926      | 437      |
| Entry HV Adj Factor         | 0.979    | 0.982    | 0.981    | 0.980    | 0.978    | 0.968    |
| Flow Entry, veh/h           | 253      | 285      | 580      | 654      | 134      | 31       |
| Cap Entry, veh/h            | 1301     | 1375     | 1164     | 1236     | 906      | 423      |
| V/C Ratio                   | 0.194    | 0.207    | 0.498    | 0.529    | 0.148    | 0.073    |
| Control Delay, s/veh        | 4.4      | 4.3      | 8.6      | 8.8      | 5.4      | 9.5      |
| LOS                         | A        | A        | A        | A        | A        | A        |
| 95th %tile Queue, veh       | 1        | 1        | 3        | 3        | 1        | 0        |

Intersection

Int Delay, s/veh 2.5

| Movement | SEL | SET | SER | NWL | NWT | NWR | NEL | NET | NER | SWL | SWT | SWR |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

Lane Configurations

|                    |    |     |    |   |     |    |    |   |   |    |   |    |
|--------------------|----|-----|----|---|-----|----|----|---|---|----|---|----|
| Traffic Vol, veh/h | 45 | 393 | 10 | 1 | 914 | 20 | 32 | 0 | 2 | 15 | 0 | 80 |
|--------------------|----|-----|----|---|-----|----|----|---|---|----|---|----|

|                   |    |     |    |   |     |    |    |   |   |    |   |    |
|-------------------|----|-----|----|---|-----|----|----|---|---|----|---|----|
| Future Vol, veh/h | 45 | 393 | 10 | 1 | 914 | 20 | 32 | 0 | 2 | 15 | 0 | 80 |
|-------------------|----|-----|----|---|-----|----|----|---|---|----|---|----|

|                        |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|

|              |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|

|                |   |   |      |   |   |      |   |   |      |   |   |      |
|----------------|---|---|------|---|---|------|---|---|------|---|---|------|
| RT Channelized | - | - | None |
|----------------|---|---|------|---|---|------|---|---|------|---|---|------|

|                |     |   |   |     |   |   |     |   |   |   |   |   |
|----------------|-----|---|---|-----|---|---|-----|---|---|---|---|---|
| Storage Length | 315 | - | - | 150 | - | - | 150 | - | - | 0 | - | - |
|----------------|-----|---|---|-----|---|---|-----|---|---|---|---|---|

|                          |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|

|          |   |   |   |   |   |   |   |   |   |   |   |   |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|

|                  |    |    |    |    |    |    |    |    |    |    |    |    |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
|------------------|----|----|----|----|----|----|----|----|----|----|----|----|

|                   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|

|           |    |     |    |   |     |    |    |   |   |    |   |    |
|-----------|----|-----|----|---|-----|----|----|---|---|----|---|----|
| Mvmt Flow | 49 | 427 | 11 | 1 | 993 | 22 | 35 | 0 | 2 | 16 | 0 | 87 |
|-----------|----|-----|----|---|-----|----|----|---|---|----|---|----|

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 1015   | 0      | 0 | 438  | 0      | 0 | 1029 | 1548   | 219  | 1318 | 1542 | 508  |
| Stage 1              | -      | -      | - | -    | -      | - | 530  | 530    | -    | 1007 | 1007 | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 499  | 1017   | -    | 311  | 536  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 679    | -      | - | 1118 | -      | - | 188  | 113    | 785  | 115  | 114  | 510  |
| Stage 1              | -      | -      | - | -    | -      | - | 500  | 525    | -    | 258  | 317  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 522  | 313    | -    | 674  | 522  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 679    | -      | - | 1118 | -      | - | 144  | 105    | 785  | 106  | 106  | 510  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 144  | 105    | -    | 106  | 106  | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 464  | 487    | -    | 258  | 317  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 433  | 313    | -    | 623  | 484  | -    |

| Approach | SE | NW |  |  | NE |  |  | SW |  |  |  |
|----------|----|----|--|--|----|--|--|----|--|--|--|
|----------|----|----|--|--|----|--|--|----|--|--|--|

|                        |      |      |       |  |  |       |  |  |  |
|------------------------|------|------|-------|--|--|-------|--|--|--|
| HCM Control Delay, s/v | 1.08 | 0.01 | 35.99 |  |  | 21.59 |  |  |  |
|------------------------|------|------|-------|--|--|-------|--|--|--|

|         |  |  |   |  |  |   |  |  |  |
|---------|--|--|---|--|--|---|--|--|--|
| HCM LOS |  |  | E |  |  | C |  |  |  |
|---------|--|--|---|--|--|---|--|--|--|

| Minor Lane/Major Mvmt     | NELn1 | NELn2 | NWL   | NWT | NWR | SEL   | SET | SERSWLn1 |
|---------------------------|-------|-------|-------|-----|-----|-------|-----|----------|
| Capacity (veh/h)          | 144   | 785   | 1118  | -   | -   | 679   | -   | -        |
| HCM Lane V/C Ratio        | 0.241 | 0.003 | 0.001 | -   | -   | 0.072 | -   | -        |
| HCM Control Delay (s/veh) | 37.6  | 9.6   | 8.2   | -   | -   | 10.7  | -   | -        |
| HCM Lane LOS              | E     | A     | A     | -   | -   | B     | -   | -        |
| HCM 95th %tile Q(veh)     | 0.9   | 0     | 0     | -   | -   | 0.2   | -   | -        |
|                           |       |       |       |     |     |       |     | 1.4      |

| Intersection              |                                                                                   |                                                                                    |        |      |       |       |
|---------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------|------|-------|-------|
| Int Delay, s/veh          | 0.5                                                                               |                                                                                    |        |      |       |       |
| Movement                  | SET                                                                               | SER                                                                                | NWL    | NWT  | NEL   | NER   |
| Lane Configurations       |  |  |        |      |       |       |
| Traffic Vol, veh/h        | 406                                                                               | 7                                                                                  | 2      | 1031 | 16    | 1     |
| Future Vol, veh/h         | 406                                                                               | 7                                                                                  | 2      | 1031 | 16    | 1     |
| Conflicting Peds, #/hr    | 0                                                                                 | 0                                                                                  | 0      | 0    | 0     | 0     |
| Sign Control              | Free                                                                              | Free                                                                               | Free   | Free | Stop  | Stop  |
| RT Channelized            | -                                                                                 | None                                                                               | -      | None | -     | None  |
| Storage Length            | -                                                                                 | -                                                                                  | -      | -    | 0     | -     |
| Veh in Median Storage, #  | 0                                                                                 | -                                                                                  | -      | 0    | 0     | -     |
| Grade, %                  | 0                                                                                 | -                                                                                  | -      | 0    | 0     | -     |
| Peak Hour Factor          | 92                                                                                | 92                                                                                 | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %         | 2                                                                                 | 2                                                                                  | 2      | 2    | 2     | 2     |
| Mvmt Flow                 | 441                                                                               | 8                                                                                  | 2      | 1121 | 17    | 1     |
| Major/Minor               | Major1                                                                            | Major2                                                                             | Minor1 |      |       |       |
| Conflicting Flow All      | 0                                                                                 | 0                                                                                  | 449    | 0    | 1566  | 441   |
| Stage 1                   | -                                                                                 | -                                                                                  | -      | -    | 441   | -     |
| Stage 2                   | -                                                                                 | -                                                                                  | -      | -    | 1125  | -     |
| Critical Hdwy             | -                                                                                 | -                                                                                  | 4.12   | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -                                                                                 | -                                                                                  | -      | -    | 5.42  | -     |
| Critical Hdwy Stg 2       | -                                                                                 | -                                                                                  | -      | -    | 5.42  | -     |
| Follow-up Hdwy            | -                                                                                 | -                                                                                  | 2.218  | -    | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | -                                                                                 | -                                                                                  | 1111   | -    | 122   | 616   |
| Stage 1                   | -                                                                                 | -                                                                                  | -      | -    | 648   | -     |
| Stage 2                   | -                                                                                 | -                                                                                  | -      | -    | 310   | -     |
| Platoon blocked, %        | -                                                                                 | -                                                                                  | -      | -    | -     | -     |
| Mov Cap-1 Maneuver        | -                                                                                 | -                                                                                  | 1111   | -    | 122   | 616   |
| Mov Cap-2 Maneuver        | -                                                                                 | -                                                                                  | -      | -    | 122   | -     |
| Stage 1                   | -                                                                                 | -                                                                                  | -      | -    | 648   | -     |
| Stage 2                   | -                                                                                 | -                                                                                  | -      | -    | 308   | -     |
| Approach                  | SE                                                                                | NW                                                                                 | NE     |      |       |       |
| HCM Control Delay, s/v    | 0                                                                                 | 0.02                                                                               | 37.88  |      |       |       |
| HCM LOS                   |                                                                                   |                                                                                    | E      |      |       |       |
| Minor Lane/Major Mvmt     | NELn1                                                                             | NWL                                                                                | NWT    | SET  | SER   |       |
| Capacity (veh/h)          | 128                                                                               | 3                                                                                  | -      | -    | -     |       |
| HCM Lane V/C Ratio        | 0.145                                                                             | 0.002                                                                              | -      | -    | -     |       |
| HCM Control Delay (s/veh) | 37.9                                                                              | 8.2                                                                                | 0      | -    | -     |       |
| HCM Lane LOS              | E                                                                                 | A                                                                                  | A      | -    | -     |       |
| HCM 95th %tile Q(veh)     | 0.5                                                                               | 0                                                                                  | -      | -    | -     |       |

Intersection

Intersection Delay, s/veh 7.8  
Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations

|                    |      |      |      |      |      |      |
|--------------------|------|------|------|------|------|------|
| Traffic Vol, veh/h | 135  | 2    | 4    | 17   | 9    | 94   |
| Future Vol, veh/h  | 135  | 2    | 4    | 17   | 9    | 94   |
| Peak Hour Factor   | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %  | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow          | 147  | 2    | 4    | 18   | 10   | 102  |
| Number of Lanes    | 0    | 1    | 1    | 0    | 1    | 0    |

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                            |     |     |     |
|----------------------------|-----|-----|-----|
| Opposing Approach          | WB  | EB  |     |
| Opposing Lanes             | 1   | 1   | 0   |
| Conflicting Approach Left  | SB  |     | WB  |
| Conflicting Lanes Left     | 1   | 0   | 1   |
| Conflicting Approach Right |     | SB  | EB  |
| Conflicting Lanes Right    | 0   | 1   | 1   |
| HCM Control Delay, s/veh   | 8.3 | 6.9 | 7.3 |
| HCM LOS                    | A   | A   | A   |

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 99%   | 0%    | 9%    |
| Vol Thru, %              | 1%    | 19%   | 0%    |
| Vol Right, %             | 0%    | 81%   | 91%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 137   | 21    | 103   |
| LT Vol                   | 135   | 0     | 9     |
| Through Vol              | 2     | 4     | 0     |
| RT Vol                   | 0     | 17    | 94    |
| Lane Flow Rate           | 149   | 23    | 112   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.18  | 0.024 | 0.118 |
| Departure Headway (Hd)   | 4.346 | 3.76  | 3.798 |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 823   | 938   | 949   |
| Service Time             | 2.386 | 1.838 | 1.798 |
| HCM Lane V/C Ratio       | 0.181 | 0.025 | 0.118 |
| HCM Control Delay, s/veh | 8.3   | 6.9   | 7.3   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.7   | 0.1   | 0.4   |

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 3.7    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       |        |        |       |        |       |      |
| Traffic Vol, veh/h        | 0      | 7      | 10    | 0      | 4     | 3    |
| Future Vol, veh/h         | 0      | 7      | 10    | 0      | 4     | 3    |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 8      | 11    | 0      | 4     | 3    |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 23     | 11     | 0     | 0      | 11    | 0    |
| Stage 1                   | 11     | -      | -     | -      | -     | -    |
| Stage 2                   | 12     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 993    | 1070   | -     | -      | 1608  | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1011   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 991    | 1070   | -     | -      | 1608  | -    |
| Mov Cap-2 Maneuver        | 991    | -      | -     | -      | -     | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1008   | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.39   | 0      |       | 4.14   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1070  | 1029   | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.007 | 0.003  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection              |        |        |        |      |       |       |
|---------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh          | 2.9    |        |        |      |       |       |
| Movement                  | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations       |        |        |        |      |       |       |
| Traffic Vol, veh/h        | 1      | 3      | 4      | 0    | 0     | 3     |
| Future Vol, veh/h         | 1      | 3      | 4      | 0    | 0     | 3     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized            | -      | None   | -      | None | -     | None  |
| Storage Length            | -      | -      | -      | -    | -     | -     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2     |
| Mvmt Flow                 | 1      | 3      | 4      | 0    | 0     | 3     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All      | 4      | 0      | -      | 0    | 10    | 4     |
| Stage 1                   | -      | -      | -      | -    | 4     | -     |
| Stage 2                   | -      | -      | -      | -    | 5     | -     |
| Critical Hdwy             | 4.12   | -      | -      | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.42  | -     |
| Follow-up Hdwy            | 2.218  | -      | -      | -    | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | 1617   | -      | -      | -    | 1010  | 1079  |
| Stage 1                   | -      | -      | -      | -    | 1019  | -     |
| Stage 2                   | -      | -      | -      | -    | 1018  | -     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver        | 1617   | -      | -      | -    | 1010  | 1079  |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 1010  | -     |
| Stage 1                   | -      | -      | -      | -    | 1018  | -     |
| Stage 2                   | -      | -      | -      | -    | 1018  | -     |
| Approach                  | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s/v    | 1.81   | 0      | 8.35   |      |       |       |
| HCM LOS                   |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt     | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)          | 450    | -      | -      | -    | 1079  |       |
| HCM Lane V/C Ratio        | 0.001  | -      | -      | -    | 0.003 |       |
| HCM Control Delay (s/veh) | 7.2    | 0      | -      | -    | 8.3   |       |
| HCM Lane LOS              | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)     | 0      | -      | -      | -    | 0     |       |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 1448     | 645      | 136      | 28       |          |          |
| Demand Flow Rate, veh/h     | 1477     | 658      | 139      | 29       |          |          |
| Vehicles Circulating, veh/h | 2        | 150      | 1281     | 781      |          |          |
| Vehicles Exiting, veh/h     | 808      | 1270     | 198      | 27       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 8.3      | 5.5      | 12.3     | 5.5      |          |          |
| Approach LOS                | A        | A        | B        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.470    | 0.530    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 694      | 783      | 309      | 349      | 139      | 29       |
| Cap Entry Lane, veh/h       | 1347     | 1418     | 1176     | 1250     | 478      | 731      |
| Entry HV Adj Factor         | 0.981    | 0.980    | 0.981    | 0.980    | 0.978    | 0.966    |
| Flow Entry, veh/h           | 681      | 768      | 303      | 342      | 136      | 28       |
| Cap Entry, veh/h            | 1322     | 1390     | 1154     | 1225     | 468      | 706      |
| V/C Ratio                   | 0.515    | 0.552    | 0.263    | 0.279    | 0.291    | 0.040    |
| Control Delay, s/veh        | 8.2      | 8.5      | 5.5      | 5.5      | 12.3     | 5.5      |
| LOS                         | A        | A        | A        | A        | B        | A        |
| 95th %tile Queue, veh       | 3        | 4        | 1        | 1        | 1        | 0        |

Intersection

Int Delay, s/veh 1.4

| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      | ↑    | ↑↑   |      | ↑    | ↑↑   |      | ↑    | ↑    |      | ↔    |      |      |
| Traffic Vol, veh/h       | 36   | 996  | 35   | 2    | 554  | 4    | 20   | 0    | 1    | 9    | 0    | 24   |
| Future Vol, veh/h        | 36   | 996  | 35   | 2    | 554  | 4    | 20   | 0    | 1    | 9    | 0    | 24   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 315  | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 39   | 1083 | 38   | 2    | 602  | 4    | 22   | 0    | 1    | 10   | 0    | 26   |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 607    | 0      | 0 | 1121 | 0      | 0 | 1485 | 1791   | 560  | 1228 | 1808 | 303  |
| Stage 1              | -      | -      | - | -    | -      | - | 1180 | 1180   | -    | 609  | 609  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 305  | 611    | -    | 620  | 1199 | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 968    | -      | - | 619  | -      | - | 86   | 80     | 471  | 134  | 78   | 693  |
| Stage 1              | -      | -      | - | -    | -      | - | 202  | 262    | -    | 449  | 484  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 679  | 483    | -    | 442  | 257  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 968    | -      | - | 619  | -      | - | 80   | 77     | 471  | 128  | 75   | 693  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 80   | 77     | -    | 128  | 75   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 194  | 252    | -    | 448  | 482  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 651  | 481    | -    | 424  | 246  | -    |

| Approach                  | SE    | NW    |       |     | NE    |      |     | SW    |     |       |  |
|---------------------------|-------|-------|-------|-----|-------|------|-----|-------|-----|-------|--|
| HCM Control Delay, s/v    | 0.3   | 0.04  |       |     | 63.94 |      |     | 17.92 |     |       |  |
| HCM LOS                   |       |       |       |     | F     |      |     | C     |     |       |  |
| Minor Lane/Major Mvmt     |       | NELn1 | NELn2 | NWL | NWT   | NWR  | SEL | SET   | SER | SWLn1 |  |
| Capacity (veh/h)          | 80    | 471   | 619   | -   | -     | 968  | -   | -     | -   | 314   |  |
| HCM Lane V/C Ratio        | 0.273 | 0.002 | 0.004 | -   | -     | 0.04 | -   | -     | -   | 0.114 |  |
| HCM Control Delay (s/veh) | 66.5  | 12.7  | 10.8  | -   | -     | 8.9  | -   | -     | -   | 17.9  |  |
| HCM Lane LOS              | F     | B     | B     | -   | -     | A    | -   | -     | -   | C     |  |
| HCM 95th %tile Q(veh)     | 1     | 0     | 0     | -   | -     | 0.1  | -   | -     | -   | 0.4   |  |

| Intersection              |        |        |       |        |       |       |
|---------------------------|--------|--------|-------|--------|-------|-------|
| Int Delay, s/veh          | 0.2    |        |       |        |       |       |
| Movement                  | SET    | SER    | NWL   | NWT    | NEL   | NER   |
| Lane Configurations       | ↑      | ↗      | ↖     | ↙      | ↘     | ↙     |
| Traffic Vol, veh/h        | 699    | 9      | 1     | 549    | 7     | 1     |
| Future Vol, veh/h         | 699    | 9      | 1     | 549    | 7     | 1     |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0     |
| Sign Control              | Free   | Free   | Free  | Free   | Stop  | Stop  |
| RT Channelized            | -      | None   | -     | None   | -     | None  |
| Storage Length            | -      | -      | -     | -      | 0     | -     |
| Veh in Median Storage, #  | 0      | -      | -     | 0      | 0     | -     |
| Grade, %                  | 0      | -      | -     | 0      | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2     |
| Mvmt Flow                 | 760    | 10     | 1     | 597    | 8     | 1     |
| Major/Minor               | Major1 | Major2 |       | Minor1 |       |       |
| Conflicting Flow All      | 0      | 0      | 770   | 0      | 1359  | 760   |
| Stage 1                   | -      | -      | -     | -      | 760   | -     |
| Stage 2                   | -      | -      | -     | -      | 599   | -     |
| Critical Hdwy             | -      | -      | 4.12  | -      | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -     | -      | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -     | -      | 5.42  | -     |
| Follow-up Hdwy            | -      | -      | 2.218 | -      | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | -      | -      | 845   | -      | 164   | 406   |
| Stage 1                   | -      | -      | -     | -      | 462   | -     |
| Stage 2                   | -      | -      | -     | -      | 549   | -     |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -     |
| Mov Cap-1 Maneuver        | -      | -      | 845   | -      | 164   | 406   |
| Mov Cap-2 Maneuver        | -      | -      | -     | -      | 164   | -     |
| Stage 1                   | -      | -      | -     | -      | 462   | -     |
| Stage 2                   | -      | -      | -     | -      | 548   | -     |
| Approach                  | SE     | NW     |       | NE     |       |       |
| HCM Control Delay, s/v    | 0      | 0.02   |       | 26.42  |       |       |
| HCM LOS                   |        |        |       | D      |       |       |
| Minor Lane/Major Mvmt     | NELn1  | NWL    | NWT   | SET    | SER   |       |
| Capacity (veh/h)          | 177    | 3      | -     | -      | -     |       |
| HCM Lane V/C Ratio        | 0.049  | 0.001  | -     | -      | -     |       |
| HCM Control Delay (s/veh) | 26.4   | 9.3    | 0     | -      | -     |       |
| HCM Lane LOS              | D      | A      | A     | -      | -     |       |
| HCM 95th %tile Q(veh)     | 0.2    | 0      | -     | -      | -     |       |

Intersection

Intersection Delay, s/veh 8  
Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

|                     |                                                                                   |      |      |      |      |      |
|---------------------|-----------------------------------------------------------------------------------|------|------|------|------|------|
| Lane Configurations |  |      |      |      |      |      |
| Traffic Vol, veh/h  | 124                                                                               | 3    | 4    | 13   | 23   | 149  |
| Future Vol, veh/h   | 124                                                                               | 3    | 4    | 13   | 23   | 149  |
| Peak Hour Factor    | 0.92                                                                              | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles, %   | 2                                                                                 | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow           | 135                                                                               | 3    | 4    | 14   | 25   | 162  |
| Number of Lanes     | 0                                                                                 | 1    | 1    | 0    | 1    | 0    |

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                            |     |     |     |
|----------------------------|-----|-----|-----|
| Opposing Approach          | WB  | EB  |     |
| Opposing Lanes             | 1   | 1   | 0   |
| Conflicting Approach Left  | SB  |     | WB  |
| Conflicting Lanes Left     | 1   | 0   | 1   |
| Conflicting Approach Right |     | SB  | EB  |
| Conflicting Lanes Right    | 0   | 1   | 1   |
| HCM Control Delay, s/veh   | 8.5 | 7.1 | 7.8 |
| HCM LOS                    | A   | A   | A   |

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|                          |       |       |       |
|--------------------------|-------|-------|-------|
| Vol Left, %              | 98%   | 0%    | 13%   |
| Vol Thru, %              | 2%    | 24%   | 0%    |
| Vol Right, %             | 0%    | 76%   | 87%   |
| Sign Control             | Stop  | Stop  | Stop  |
| Traffic Vol by Lane      | 127   | 17    | 172   |
| LT Vol                   | 124   | 0     | 23    |
| Through Vol              | 3     | 4     | 0     |
| RT Vol                   | 0     | 13    | 149   |
| Lane Flow Rate           | 138   | 18    | 187   |
| Geometry Grp             | 1     | 1     | 1     |
| Degree of Util (X)       | 0.171 | 0.021 | 0.198 |
| Departure Headway (Hd)   | 4.472 | 4.02  | 3.81  |
| Convergence, Y/N         | Yes   | Yes   | Yes   |
| Cap                      | 795   | 896   | 948   |
| Service Time             | 2.54  | 2.02  | 1.812 |
| HCM Lane V/C Ratio       | 0.174 | 0.02  | 0.197 |
| HCM Control Delay, s/veh | 8.5   | 7.1   | 7.8   |
| HCM Lane LOS             | A     | A     | A     |
| HCM 95th-tile Q          | 0.6   | 0.1   | 0.7   |

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 2.7    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      | W      | ↑     | ↑      | ↑     | ↑    |
| Traffic Vol, veh/h        | 0      | 6      | 7     | 2      | 7     | 15   |
| Future Vol, veh/h         | 0      | 6      | 7     | 2      | 7     | 15   |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 7      | 8     | 2      | 8     | 16   |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 40     | 9      | 0     | 0      | 10    | 0    |
| Stage 1                   | 9      | -      | -     | -      | -     | -    |
| Stage 2                   | 32     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 971    | 1073   | -     | -      | 1610  | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 991    | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 967    | 1073   | -     | -      | 1610  | -    |
| Mov Cap-2 Maneuver        | 967    | -      | -     | -      | -     | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 986    | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.38   | 0      |       | 2.31   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1073  | 573    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.006 | 0.005  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection              |        |        |        |      |       |       |
|---------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh          | 3.6    |        |        |      |       |       |
| Movement                  | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations       |        |        |        |      |       |       |
| Traffic Vol, veh/h        | 4      | 5      | 3      | 0    | 0     | 3     |
| Future Vol, veh/h         | 4      | 5      | 3      | 0    | 0     | 3     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized            | -      | None   | -      | None | -     | None  |
| Storage Length            | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2     |
| Mvmt Flow                 | 4      | 5      | 3      | 0    | 0     | 3     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All      | 3      | 0      | -      | 0    | 17    | 3     |
| Stage 1                   | -      | -      | -      | -    | 3     | -     |
| Stage 2                   | -      | -      | -      | -    | 14    | -     |
| Critical Hdwy             | 4.12   | -      | -      | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.42  | -     |
| Follow-up Hdwy            | 2.218  | -      | -      | -    | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | 1619   | -      | -      | -    | 1001  | 1081  |
| Stage 1                   | -      | -      | -      | -    | 1020  | -     |
| Stage 2                   | -      | -      | -      | -    | 1009  | -     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver        | 1619   | -      | -      | -    | 998   | 1081  |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 998   | -     |
| Stage 1                   | -      | -      | -      | -    | 1017  | -     |
| Stage 2                   | -      | -      | -      | -    | 1009  | -     |
| Approach                  | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s/v    | 3.21   | 0      | 8.34   |      |       |       |
| HCM LOS                   |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt     | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)          | 800    | -      | -      | -    | 1081  |       |
| HCM Lane V/C Ratio        | 0.003  | -      | -      | -    | 0.003 |       |
| HCM Control Delay (s/veh) | 7.2    | 0      | -      | -    | 8.3   |       |
| HCM Lane LOS              | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)     | 0      | -      | -      | -    | 0     |       |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 717      | 1652     | 252      | 31       |          |          |
| Demand Flow Rate, veh/h     | 731      | 1685     | 257      | 32       |          |          |
| Vehicles Circulating, veh/h | 23       | 257      | 670      | 1930     |          |          |
| Vehicles Exiting, veh/h     | 1939     | 670      | 84       | 12       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 5.0      | 17.0     | 8.3      | 15.9     |          |          |
| Approach LOS                | A        | C        | A        | C        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.471    | 0.529    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 344      | 387      | 792      | 893      | 257      | 32       |
| Cap Entry Lane, veh/h       | 1322     | 1393     | 1066     | 1141     | 803      | 275      |
| Entry HV Adj Factor         | 0.980    | 0.982    | 0.981    | 0.981    | 0.981    | 0.968    |
| Flow Entry, veh/h           | 337      | 380      | 777      | 876      | 252      | 31       |
| Cap Entry, veh/h            | 1295     | 1368     | 1045     | 1119     | 788      | 266      |
| V/C Ratio                   | 0.260    | 0.278    | 0.743    | 0.782    | 0.320    | 0.116    |
| Control Delay, s/veh        | 5.1      | 5.0      | 16.4     | 17.6     | 8.3      | 15.9     |
| LOS                         | A        | A        | C        | C        | A        | C        |
| 95th %tile Queue, veh       | 1        | 1        | 7        | 8        | 1        | 0        |

Intersection

Int Delay, s/veh 11.6

| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations      |      |      |      |      |      |      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 62   | 534  | 10   | 1    | 1365 | 27   | 32   | 0    | 2    | 21   | 0    | 110  |
| Future Vol, veh/h        | 62   | 534  | 10   | 1    | 1365 | 27   | 32   | 0    | 2    | 21   | 0    | 110  |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized           | -    | -    | None |
| Storage Length           | 315  | -    | -    | 150  | -    | -    | 150  | -    | -    | 0    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 67   | 580  | 11   | 1    | 1484 | 29   | 35   | 0    | 2    | 23   | 0    | 120  |

| Major/Minor          | Major1 | Major2 |   |      | Minor1 |   |      | Minor2 |      |      |      |      |
|----------------------|--------|--------|---|------|--------|---|------|--------|------|------|------|------|
| Conflicting Flow All | 1513   | 0      | 0 | 591  | 0      | 0 | 1465 | 2236   | 296  | 1926 | 2227 | 757  |
| Stage 1              | -      | -      | - | -    | -      | - | 721  | 721    | -    | 1501 | 1501 | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 744  | 1515   | -    | 425  | 726  | -    |
| Critical Hdwy        | 4.14   | -      | - | 4.14 | -      | - | 7.54 | 6.54   | 6.94 | 7.54 | 6.54 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Critical Hdwy Stg 2  | -      | -      | - | -    | -      | - | 6.54 | 5.54   | -    | 6.54 | 5.54 | -    |
| Follow-up Hdwy       | 2.22   | -      | - | 2.22 | -      | - | 3.52 | 4.02   | 3.32 | 3.52 | 4.02 | 3.32 |
| Pot Cap-1 Maneuver   | 438    | -      | - | 980  | -      | - | 90   | 42     | 701  | 40   | 43   | 350  |
| Stage 1              | -      | -      | - | -    | -      | - | 385  | 430    | -    | 128  | 183  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 373  | 180    | -    | 578  | 428  | -    |
| Platoon blocked, %   | -      | -      | - | -    | -      | - | -    | -      | -    | -    | -    | -    |
| Mov Cap-1 Maneuver   | 438    | -      | - | 980  | -      | - | 50   | 35     | 701  | 34   | 36   | 350  |
| Mov Cap-2 Maneuver   | -      | -      | - | -    | -      | - | 50   | 35     | -    | 34   | 36   | -    |
| Stage 1              | -      | -      | - | -    | -      | - | 326  | 364    | -    | 128  | 183  | -    |
| Stage 2              | -      | -      | - | -    | -      | - | 245  | 180    | -    | 487  | 362  | -    |

| Approach                  | SE    | NW    |       |     | NE     |       |     | SW     |     |       |
|---------------------------|-------|-------|-------|-----|--------|-------|-----|--------|-----|-------|
| HCM Control Delay, s/v    | 1.51  | 0.01  |       |     | 164.82 |       |     | 142.14 |     |       |
| HCM LOS                   |       |       |       |     | F      |       |     | F      |     |       |
| <hr/>                     |       |       |       |     |        |       |     |        |     |       |
| Minor Lane/Major Mvmt     |       | NELn1 | NELn2 | NWL | NWT    | NWR   | SEL | SET    | SER | SWLn1 |
| Capacity (veh/h)          | 50    | 701   | 980   | -   | -      | 438   | -   | -      | -   | 140   |
| HCM Lane V/C Ratio        | 0.698 | 0.003 | 0.001 | -   | -      | 0.154 | -   | -      | -   | 1.014 |
| HCM Control Delay (s/veh) | 174.5 | 10.2  | 8.7   | -   | -      | 14.7  | -   | -      | -   | 142.1 |
| HCM Lane LOS              | F     | B     | A     | -   | -      | B     | -   | -      | -   | F     |
| HCM 95th %tile Q(veh)     | 2.8   | 0     | 0     | -   | -      | 0.5   | -   | -      | -   | 7.4   |

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      | ↑↑   |      | ↔    | ↑↑   | ↔    |      |
| Traffic Vol, veh/h       | 548  | 7    | 2    | 1389 | 16   | 1    |
| Future Vol, veh/h        | 548  | 7    | 2    | 1389 | 16   | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 596  | 8    | 2    | 1510 | 17   | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |
|----------------------|--------|--------|--------|---|------|
| Conflicting Flow All | 0      | 0      | 603    | 0 | 1359 |
| Stage 1              | -      | -      | -      | - | 599  |
| Stage 2              | -      | -      | -      | - | 759  |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 |
| Pot Cap-1 Maneuver   | -      | -      | 970    | - | 140  |
| Stage 1              | -      | -      | -      | - | 511  |
| Stage 2              | -      | -      | -      | - | 423  |
| Platoon blocked, %   | -      | -      | -      | - | -    |
| Mov Cap-1 Maneuver   | -      | -      | 970    | - | 139  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 694  |
| Stage 1              | -      | -      | -      | - | 511  |
| Stage 2              | -      | -      | -      | - | 421  |

| Approach                  | SE    | NW    | NE    |     |     |
|---------------------------|-------|-------|-------|-----|-----|
| HCM Control Delay, s/v    | 0     | 0.05  | 33.16 |     |     |
| HCM LOS                   |       |       | D     |     |     |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT   | SET | SER |
| Capacity (veh/h)          | 146   | 5     | -     | -   | -   |
| HCM Lane V/C Ratio        | 0.126 | 0.002 | -     | -   | -   |
| HCM Control Delay (s/veh) | 33.2  | 8.7   | 0     | -   | -   |
| HCM Lane LOS              | D     | A     | A     | -   | -   |
| HCM 95th %tile Q(veh)     | 0.4   | 0     | -     | -   | -   |

Intersection

Intersection Delay, s/veh 8.2

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations



Traffic Vol, veh/h 170 2 4 17 9 128

Future Vol, veh/h 170 2 4 17 9 128

Peak Hour Factor 0.92 0.92 0.92 0.92 0.92 0.92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 185 2 4 18 10 139

Number of Lanes 0 1 1 0 1 0

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

Opposing Approach WB EB

Opposing Lanes 1 1 0

Conflicting Approach Left SB WB

Conflicting Lanes Left 1 0 1

Conflicting Approach Right SB EB

Conflicting Lanes Right 0 1 1

HCM Control Delay, s/veh 8.8 7.1 7.6

HCM LOS A A A

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

Vol Left, % 99% 0% 7%

Vol Thru, % 1% 19% 0%

Vol Right, % 0% 81% 93%

Sign Control Stop Stop Stop

Traffic Vol by Lane 172 21 137

LT Vol 170 0 9

Through Vol 2 4 0

RT Vol 0 17 128

Lane Flow Rate 187 23 149

Geometry Grp 1 1 1

Degree of Util (X) 0.229 0.025 0.16

Departure Headway (Hd) 4.41 3.957 3.875

Convergence, Y/N Yes Yes Yes

Cap 808 908 931

Service Time 2.471 1.968 1.877

HCM Lane V/C Ratio 0.231 0.025 0.16

HCM Control Delay, s/veh 8.8 7.1 7.6

HCM Lane LOS A A A

HCM 95th-tile Q 0.9 0.1 0.6

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 3.7    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       | W      |        | ↑     |        | ↔     |      |
| Traffic Vol, veh/h        | 0      | 7      | 10    | 0      | 4     | 3    |
| Future Vol, veh/h         | 0      | 7      | 10    | 0      | 4     | 3    |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 8      | 11    | 0      | 4     | 3    |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 23     | 11     | 0     | 0      | 11    | 0    |
| Stage 1                   | 11     | -      | -     | -      | -     | -    |
| Stage 2                   | 12     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 993    | 1070   | -     | -      | 1608  | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1011   | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 991    | 1070   | -     | -      | 1608  | -    |
| Mov Cap-2 Maneuver        | 991    | -      | -     | -      | -     | -    |
| Stage 1                   | 1012   | -      | -     | -      | -     | -    |
| Stage 2                   | 1008   | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.39   | 0      |       | 4.14   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1070  | 1029   | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.007 | 0.003  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection              |        |        |        |      |       |       |
|---------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh          | 2.9    |        |        |      |       |       |
| Movement                  | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations       |        |        |        |      |       |       |
| Traffic Vol, veh/h        | 1      | 3      | 4      | 0    | 0     | 3     |
| Future Vol, veh/h         | 1      | 3      | 4      | 0    | 0     | 3     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized            | -      | None   | -      | None | -     | None  |
| Storage Length            | -      | -      | -      | -    | 0     | -     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2     |
| Mvmt Flow                 | 1      | 3      | 4      | 0    | 0     | 3     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All      | 4      | 0      | -      | 0    | 10    | 4     |
| Stage 1                   | -      | -      | -      | -    | 4     | -     |
| Stage 2                   | -      | -      | -      | -    | 5     | -     |
| Critical Hdwy             | 4.12   | -      | -      | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.42  | -     |
| Follow-up Hdwy            | 2.218  | -      | -      | -    | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | 1617   | -      | -      | -    | 1010  | 1079  |
| Stage 1                   | -      | -      | -      | -    | 1019  | -     |
| Stage 2                   | -      | -      | -      | -    | 1018  | -     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver        | 1617   | -      | -      | -    | 1010  | 1079  |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 1010  | -     |
| Stage 1                   | -      | -      | -      | -    | 1018  | -     |
| Stage 2                   | -      | -      | -      | -    | 1018  | -     |
| Approach                  | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s/v    | 1.81   | 0      | 8.35   |      |       |       |
| HCM LOS                   |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt     | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)          | 450    | -      | -      | -    | 1079  |       |
| HCM Lane V/C Ratio        | 0.001  | -      | -      | -    | 0.003 |       |
| HCM Control Delay (s/veh) | 7.2    | 0      | -      | -    | 8.3   |       |
| HCM Lane LOS              | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)     | 0      | -      | -      | -    | 0     |       |

| Intersection                |          |          |          |          |          |          |
|-----------------------------|----------|----------|----------|----------|----------|----------|
| Approach                    | SE       | NW       | NE       | SW       |          |          |
| Entry Lanes                 | 2        | 2        | 1        | 1        |          |          |
| Conflicting Circle Lanes    | 2        | 2        | 2        | 2        |          |          |
| Adj Approach Flow, veh/h    | 1796     | 858      | 185      | 28       |          |          |
| Demand Flow Rate, veh/h     | 1831     | 875      | 188      | 29       |          |          |
| Vehicles Circulating, veh/h | 3        | 195      | 1565     | 1043     |          |          |
| Vehicles Exiting, veh/h     | 1069     | 1558     | 269      | 27       |          |          |
| Ped Vol Crossing Leg, #/h   | 0        | 0        | 0        | 0        |          |          |
| Ped Cap Adj                 | 1.000    | 1.000    | 1.000    | 1.000    |          |          |
| Approach Delay, s/veh       | 11.1     | 6.9      | 21.6     | 7.0      |          |          |
| Approach LOS                | B        | A        | C        | A        |          |          |
| Lane                        | Left     | Right    | Left     | Right    | Left     | Left     |
| Designated Moves            | LT       | TR       | LT       | TR       | LTR      | LTR      |
| Assumed Moves               | LT       | TR       | LT       | TR       | LTR      | LTR      |
| RT Channelized              |          |          |          |          |          |          |
| Lane Util                   | 0.470    | 0.530    | 0.470    | 0.530    | 1.000    | 1.000    |
| Follow-Up Headway, s        | 2.667    | 2.535    | 2.667    | 2.535    | 2.535    | 2.535    |
| Critical Headway, s         | 4.645    | 4.328    | 4.645    | 4.328    | 4.328    | 4.328    |
| A (Intercept)               | 1350     | 1420     | 1350     | 1420     | 1420     | 1420     |
| B (Slope)                   | 9.199e-4 | 8.501e-4 | 9.199e-4 | 8.501e-4 | 8.501e-4 | 8.501e-4 |
| Entry Flow, veh/h           | 861      | 970      | 411      | 464      | 188      | 29       |
| Cap Entry Lane, veh/h       | 1346     | 1417     | 1128     | 1203     | 375      | 585      |
| Entry HV Adj Factor         | 0.980    | 0.981    | 0.981    | 0.980    | 0.984    | 0.966    |
| Flow Entry, veh/h           | 844      | 952      | 403      | 455      | 185      | 28       |
| Cap Entry, veh/h            | 1320     | 1390     | 1107     | 1179     | 369      | 565      |
| V/C Ratio                   | 0.640    | 0.685    | 0.364    | 0.386    | 0.501    | 0.050    |
| Control Delay, s/veh        | 10.6     | 11.4     | 6.9      | 6.9      | 21.6     | 7.0      |
| LOS                         | B        | B        | A        | A        | C        | A        |
| 95th %tile Queue, veh       | 5        | 6        | 2        | 2        | 3        | 0        |

## Intersection

Int Delay, s/veh 2.3

Movement SEL SET SER NWL NWT NWR NEL NET NER SWL SWT SWR

## Lane Configurations

Traffic Vol, veh/h 50 1338 35 2 425 6 20 0 1 12 0 33

Future Vol, veh/h 50 1338 35 2 425 6 20 0 1 12 0 33

Conflicting Peds, #/hr 0 0 0 0 0 0 0 0 0 0 0 0

Sign Control Free Free Free Free Free Free Stop Stop Stop Stop Stop Stop

RT Channelized - - None - - None - - None - - None

Storage Length 315 - - 150 - - 150 - - 0 - -

Veh in Median Storage, # - 0 - - 0 - - 0 - - 0 - -

Grade, % - 0 - - 0 - - 0 - - 0 - -

Peak Hour Factor 92 92 92 92 92 92 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2 2 2 2 2 2 2

Mvmt Flow 54 1454 38 2 462 7 22 0 1 13 0 36

## Major/Minor Major1 Major2 Minor1 Minor2

Conflicting Flow All 468 0 0 1492 0 0 1817 2055 746 1305 2071 234

Stage 1 - - - - - - 1582 1582 - 470 470 -

Stage 2 - - - - - - 235 473 - 836 1601 -

Critical Hdwy 4.14 - - 4.14 - - 7.54 6.54 6.94 7.54 6.54 6.94

Critical Hdwy Stg 1 - - - - - - 6.54 5.54 - 6.54 5.54 -

Critical Hdwy Stg 2 - - - - - - 6.54 5.54 - 6.54 5.54 -

Follow-up Hdwy 2.22 - - 2.22 - - 3.52 4.02 3.32 3.52 4.02 3.32

Pot Cap-1 Maneuver 1089 - - 446 - - 49 55 356 118 53 768

Stage 1 - - - - - - 114 167 - 543 559 -

Stage 2 - - - - - - 747 557 - 328 164 -

Platoon blocked, % - - - - - - - - - - -

Mov Cap-1 Maneuver 1089 - - 446 - - 44 52 356 111 51 768

Mov Cap-2 Maneuver - - - - - - 44 52 - 111 51 -

Stage 1 - - - - - - 108 159 - 541 556 -

Stage 2 - - - - - - 708 554 - 311 155 -

## Approach SE NW NE SW

HCM Control Delay, s/v 0.3 0.06 143.95 19.47

HCM LOS F C

## Minor Lane/Major Mvmt NELn1 NELn2 NWL NWT NWR SEL SET SERSWLn1

Capacity (veh/h) 44 356 446 - - 1089 - - 298

HCM Lane V/C Ratio 0.496 0.003 0.005 - - 0.05 - - 0.164

HCM Control Delay (s/veh) 150.4 15.1 13.1 - - 8.5 - - 19.5

HCM Lane LOS F C B - - A - - C

HCM 95th %tile Q(veh) 1.8 0 0 - - 0.2 - - 0.6

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 0.3  |      |      |      |      |      |
| Movement                 | SET  | SER  | NWL  | NWT  | NEL  | NER  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 1342 | 9    | 1    | 737  | 7    | 1    |
| Future Vol, veh/h        | 1342 | 9    | 1    | 737  | 7    | 1    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 1459 | 10   | 1    | 801  | 8    | 1    |

| Major/Minor          | Major1 | Major2 | Minor1 |   |      |      |
|----------------------|--------|--------|--------|---|------|------|
| Conflicting Flow All | 0      | 0      | 1468   | 0 | 1866 | 734  |
| Stage 1              | -      | -      | -      | - | 1464 | -    |
| Stage 2              | -      | -      | -      | - | 403  | -    |
| Critical Hdwy        | -      | -      | 4.14   | - | 6.84 | 6.94 |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.84 | -    |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.84 | -    |
| Follow-up Hdwy       | -      | -      | 2.22   | - | 3.52 | 3.32 |
| Pot Cap-1 Maneuver   | -      | -      | 455    | - | 64   | 362  |
| Stage 1              | -      | -      | -      | - | 179  | -    |
| Stage 2              | -      | -      | -      | - | 644  | -    |
| Platoon blocked, %   | -      | -      | -      | - | -    | -    |
| Mov Cap-1 Maneuver   | -      | -      | 455    | - | 64   | 362  |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 64   | -    |
| Stage 1              | -      | -      | -      | - | 179  | -    |
| Stage 2              | -      | -      | -      | - | 642  | -    |

| Approach                  | SE    | NW    | NE    |     |     |  |
|---------------------------|-------|-------|-------|-----|-----|--|
| HCM Control Delay, s/v    | 0     | 0.06  | 62.37 |     |     |  |
| HCM LOS                   |       |       | F     |     |     |  |
| Minor Lane/Major Mvmt     | NELn1 | NWL   | NWT   | SET | SER |  |
| Capacity (veh/h)          | 71    | 5     | -     | -   | -   |  |
| HCM Lane V/C Ratio        | 0.122 | 0.002 | -     | -   | -   |  |
| HCM Control Delay (s/veh) | 62.4  | 12.9  | 0     | -   | -   |  |
| HCM Lane LOS              | F     | B     | A     | -   | -   |  |
| HCM 95th %tile Q(veh)     | 0.4   | 0     | -     | -   | -   |  |

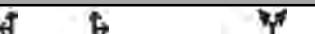
Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|----------|-----|-----|-----|-----|-----|-----|
|----------|-----|-----|-----|-----|-----|-----|

Lane Configurations



|                    |     |   |   |    |    |     |
|--------------------|-----|---|---|----|----|-----|
| Traffic Vol, veh/h | 185 | 5 | 4 | 13 | 23 | 203 |
|--------------------|-----|---|---|----|----|-----|

|                   |     |   |   |    |    |     |
|-------------------|-----|---|---|----|----|-----|
| Future Vol, veh/h | 185 | 5 | 4 | 13 | 23 | 203 |
|-------------------|-----|---|---|----|----|-----|

|                  |      |      |      |      |      |      |
|------------------|------|------|------|------|------|------|
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
|------------------|------|------|------|------|------|------|

|                   |   |   |   |   |   |   |
|-------------------|---|---|---|---|---|---|
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
|-------------------|---|---|---|---|---|---|

|           |     |   |   |    |    |     |
|-----------|-----|---|---|----|----|-----|
| Mvmt Flow | 201 | 5 | 4 | 14 | 25 | 221 |
|-----------|-----|---|---|----|----|-----|

|                 |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|
| Number of Lanes | 0 | 1 | 1 | 0 | 1 | 0 |
|-----------------|---|---|---|---|---|---|

| Approach | EB | WB | SB |
|----------|----|----|----|
|----------|----|----|----|

|                   |    |    |  |
|-------------------|----|----|--|
| Opposing Approach | WB | EB |  |
|-------------------|----|----|--|

|                |   |   |   |
|----------------|---|---|---|
| Opposing Lanes | 1 | 1 | 0 |
|----------------|---|---|---|

|                           |    |  |    |
|---------------------------|----|--|----|
| Conflicting Approach Left | SB |  | WB |
|---------------------------|----|--|----|

|                        |   |   |   |
|------------------------|---|---|---|
| Conflicting Lanes Left | 1 | 0 | 1 |
|------------------------|---|---|---|

|                            |  |    |    |
|----------------------------|--|----|----|
| Conflicting Approach Right |  | SB | EB |
|----------------------------|--|----|----|

|                         |   |   |   |
|-------------------------|---|---|---|
| Conflicting Lanes Right | 0 | 1 | 1 |
|-------------------------|---|---|---|

|                          |     |     |     |
|--------------------------|-----|-----|-----|
| HCM Control Delay, s/veh | 9.4 | 7.4 | 8.4 |
|--------------------------|-----|-----|-----|

|         |   |   |   |
|---------|---|---|---|
| HCM LOS | A | A | A |
|---------|---|---|---|

| Lane | EBLn1 | WBLn1 | SBLn1 |
|------|-------|-------|-------|
|------|-------|-------|-------|

|             |     |    |     |
|-------------|-----|----|-----|
| Vol Left, % | 97% | 0% | 10% |
|-------------|-----|----|-----|

|             |    |     |    |
|-------------|----|-----|----|
| Vol Thru, % | 3% | 24% | 0% |
|-------------|----|-----|----|

|              |    |     |     |
|--------------|----|-----|-----|
| Vol Right, % | 0% | 76% | 90% |
|--------------|----|-----|-----|

|              |      |      |      |
|--------------|------|------|------|
| Sign Control | Stop | Stop | Stop |
|--------------|------|------|------|

|                     |     |    |     |
|---------------------|-----|----|-----|
| Traffic Vol by Lane | 190 | 17 | 226 |
|---------------------|-----|----|-----|

|        |     |   |    |
|--------|-----|---|----|
| LT Vol | 185 | 0 | 23 |
|--------|-----|---|----|

|             |   |   |   |
|-------------|---|---|---|
| Through Vol | 5 | 4 | 0 |
|-------------|---|---|---|

|        |   |    |     |
|--------|---|----|-----|
| RT Vol | 0 | 13 | 203 |
|--------|---|----|-----|

|                |     |    |     |
|----------------|-----|----|-----|
| Lane Flow Rate | 207 | 18 | 246 |
|----------------|-----|----|-----|

|              |   |   |   |
|--------------|---|---|---|
| Geometry Grp | 1 | 1 | 1 |
|--------------|---|---|---|

|                    |       |       |      |
|--------------------|-------|-------|------|
| Degree of Util (X) | 0.269 | 0.022 | 0.27 |
|--------------------|-------|-------|------|

|                        |       |       |       |
|------------------------|-------|-------|-------|
| Departure Headway (Hd) | 4.683 | 4.232 | 3.962 |
|------------------------|-------|-------|-------|

|                  |     |     |     |
|------------------|-----|-----|-----|
| Convergence, Y/N | Yes | Yes | Yes |
|------------------|-----|-----|-----|

|     |     |     |     |
|-----|-----|-----|-----|
| Cap | 772 | 846 | 909 |
|-----|-----|-----|-----|

|              |       |       |       |
|--------------|-------|-------|-------|
| Service Time | 2.683 | 2.259 | 1.978 |
|--------------|-------|-------|-------|

|                    |       |       |       |
|--------------------|-------|-------|-------|
| HCM Lane V/C Ratio | 0.268 | 0.021 | 0.271 |
|--------------------|-------|-------|-------|

|                          |     |     |     |
|--------------------------|-----|-----|-----|
| HCM Control Delay, s/veh | 9.4 | 7.4 | 8.4 |
|--------------------------|-----|-----|-----|

|              |   |   |   |
|--------------|---|---|---|
| HCM Lane LOS | A | A | A |
|--------------|---|---|---|

|                 |     |     |     |
|-----------------|-----|-----|-----|
| HCM 95th-tile Q | 1.1 | 0.1 | 1.1 |
|-----------------|-----|-----|-----|

| Intersection              |        |        |       |        |       |      |
|---------------------------|--------|--------|-------|--------|-------|------|
| Int Delay, s/veh          | 2.7    |        |       |        |       |      |
| Movement                  | WBL    | WBR    | NBT   | NBR    | SBL   | SBT  |
| Lane Configurations       |        |        |       |        |       |      |
| Traffic Vol, veh/h        | 0      | 6      | 7     | 2      | 7     | 15   |
| Future Vol, veh/h         | 0      | 6      | 7     | 2      | 7     | 15   |
| Conflicting Peds, #/hr    | 0      | 0      | 0     | 0      | 0     | 0    |
| Sign Control              | Stop   | Stop   | Free  | Free   | Free  | Free |
| RT Channelized            | -      | None   | -     | None   | -     | None |
| Storage Length            | 0      | -      | -     | -      | -     | -    |
| Veh in Median Storage, #  | 0      | -      | 0     | -      | -     | 0    |
| Grade, %                  | 0      | -      | 0     | -      | -     | 0    |
| Peak Hour Factor          | 92     | 92     | 92    | 92     | 92    | 92   |
| Heavy Vehicles, %         | 2      | 2      | 2     | 2      | 2     | 2    |
| Mvmt Flow                 | 0      | 7      | 8     | 2      | 8     | 16   |
| Major/Minor               | Minor1 | Major1 |       | Major2 |       |      |
| Conflicting Flow All      | 40     | 9      | 0     | 0      | 10    | 0    |
| Stage 1                   | 9      | -      | -     | -      | -     | -    |
| Stage 2                   | 32     | -      | -     | -      | -     | -    |
| Critical Hdwy             | 6.42   | 6.22   | -     | -      | 4.12  | -    |
| Critical Hdwy Stg 1       | 5.42   | -      | -     | -      | -     | -    |
| Critical Hdwy Stg 2       | 5.42   | -      | -     | -      | -     | -    |
| Follow-up Hdwy            | 3.518  | 3.318  | -     | -      | 2.218 | -    |
| Pot Cap-1 Maneuver        | 971    | 1073   | -     | -      | 1610  | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 991    | -      | -     | -      | -     | -    |
| Platoon blocked, %        | -      | -      | -     | -      | -     | -    |
| Mov Cap-1 Maneuver        | 967    | 1073   | -     | -      | 1610  | -    |
| Mov Cap-2 Maneuver        | 967    | -      | -     | -      | -     | -    |
| Stage 1                   | 1014   | -      | -     | -      | -     | -    |
| Stage 2                   | 986    | -      | -     | -      | -     | -    |
| Approach                  | WB     | NB     |       | SB     |       |      |
| HCM Control Delay, s/v    | 8.38   | 0      |       | 2.31   |       |      |
| HCM LOS                   | A      |        |       |        |       |      |
| Minor Lane/Major Mvmt     | NBT    | NBR    | WBLn1 | SBL    | SBT   |      |
| Capacity (veh/h)          | -      | -      | 1073  | 573    | -     |      |
| HCM Lane V/C Ratio        | -      | -      | 0.006 | 0.005  | -     |      |
| HCM Control Delay (s/veh) | -      | -      | 8.4   | 7.2    | 0     |      |
| HCM Lane LOS              | -      | -      | A     | A      | A     |      |
| HCM 95th %tile Q(veh)     | -      | -      | 0     | 0      | -     |      |

| Intersection              |        |        |        |      |       |       |
|---------------------------|--------|--------|--------|------|-------|-------|
| Int Delay, s/veh          | 3.6    |        |        |      |       |       |
| Movement                  | EBL    | EBT    | WBT    | WBR  | SBL   | SBR   |
| Lane Configurations       |        |        |        |      |       |       |
| Traffic Vol, veh/h        | 4      | 5      | 3      | 0    | 0     | 3     |
| Future Vol, veh/h         | 4      | 5      | 3      | 0    | 0     | 3     |
| Conflicting Peds, #/hr    | 0      | 0      | 0      | 0    | 0     | 0     |
| Sign Control              | Free   | Free   | Free   | Free | Stop  | Stop  |
| RT Channelized            | -      | None   | -      | None | -     | None  |
| Storage Length            | -      | -      | -      | -    | -     | -     |
| Veh in Median Storage, #  | -      | 0      | 0      | -    | 0     | -     |
| Grade, %                  | -      | 0      | 0      | -    | 0     | -     |
| Peak Hour Factor          | 92     | 92     | 92     | 92   | 92    | 92    |
| Heavy Vehicles, %         | 2      | 2      | 2      | 2    | 2     | 2     |
| Mvmt Flow                 | 4      | 5      | 3      | 0    | 0     | 3     |
| Major/Minor               | Major1 | Major2 | Minor2 |      |       |       |
| Conflicting Flow All      | 3      | 0      | -      | 0    | 17    | 3     |
| Stage 1                   | -      | -      | -      | -    | 3     | -     |
| Stage 2                   | -      | -      | -      | -    | 14    | -     |
| Critical Hdwy             | 4.12   | -      | -      | -    | 6.42  | 6.22  |
| Critical Hdwy Stg 1       | -      | -      | -      | -    | 5.42  | -     |
| Critical Hdwy Stg 2       | -      | -      | -      | -    | 5.42  | -     |
| Follow-up Hdwy            | 2.218  | -      | -      | -    | 3.518 | 3.318 |
| Pot Cap-1 Maneuver        | 1619   | -      | -      | -    | 1001  | 1081  |
| Stage 1                   | -      | -      | -      | -    | 1020  | -     |
| Stage 2                   | -      | -      | -      | -    | 1009  | -     |
| Platoon blocked, %        | -      | -      | -      | -    | -     | -     |
| Mov Cap-1 Maneuver        | 1619   | -      | -      | -    | 998   | 1081  |
| Mov Cap-2 Maneuver        | -      | -      | -      | -    | 998   | -     |
| Stage 1                   | -      | -      | -      | -    | 1017  | -     |
| Stage 2                   | -      | -      | -      | -    | 1009  | -     |
| Approach                  | EB     | WB     | SB     |      |       |       |
| HCM Control Delay, s/v    | 3.21   | 0      | 8.34   |      |       |       |
| HCM LOS                   |        |        | A      |      |       |       |
| Minor Lane/Major Mvmt     | EBL    | EBT    | WBT    | WBR  | SBLn1 |       |
| Capacity (veh/h)          | 800    | -      | -      | -    | 1081  |       |
| HCM Lane V/C Ratio        | 0.003  | -      | -      | -    | 0.003 |       |
| HCM Control Delay (s/veh) | 7.2    | 0      | -      | -    | 8.3   |       |
| HCM Lane LOS              | A      | A      | -      | -    | A     |       |
| HCM 95th %tile Q(veh)     | 0      | -      | -      | -    | 0     |       |

## **APPENDIX D**

### **Fields Trip Generation**

| ITE<br>CODE | LAND USE                       | UNIT | TRIP GENERATION RATES |              |      |       |              |      |       |
|-------------|--------------------------------|------|-----------------------|--------------|------|-------|--------------|------|-------|
|             |                                |      | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|             |                                |      |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210         | Single-Family Detached Housing | DU   | 9.43                  | 0.18         | 0.53 | 0.70  | 0.59         | 0.35 | 0.94  |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

| ITE<br>CODE   | LAND USE                       | SIZE   | TOTAL TRIPS GENERATED |              |      |       |              |      |       |
|---------------|--------------------------------|--------|-----------------------|--------------|------|-------|--------------|------|-------|
|               |                                |        | 24<br>HOUR            | AM PEAK HOUR |      |       | PM PEAK HOUR |      |       |
|               |                                |        |                       | ENTER        | EXIT | TOTAL | ENTER        | EXIT | TOTAL |
| 210           | Single-Family Detached Housing | 118 DU | 1,113                 | 21           | 62   | 83    | 70           | 41   | 111   |
| -             | Rural Lots                     | 2 DU   | 29                    | 1            | 2    | 3     | 2            | 1    | 3     |
| -             | Rural Estate Lots              | 6 DU   | 78                    | 1            | 4    | 5     | 5            | 2    | 7     |
| <i>Total:</i> |                                |        | 1,220                 | 23           | 68   | 91    | 77           | 44   | 121   |

Key: DU = Dwelling Units.

Note: All data and calculations above are subject to being rounded to nearest value.

## **APPENDIX E**

### **Percent Contribution Calculation**

**Percent Contribution Calculations**

---

| Hilltop Road ADT (between Village & Merryvale) |        |
|------------------------------------------------|--------|
| Background 2044                                | 24,660 |
| Total 2044                                     | 25,220 |
| Percent Contribution                           | 2.22%  |

April 29, 2025

Mr. Kevin Lovelace, P.E.  
LIA Land Development  
1765 West 121<sup>st</sup> Avenue, Suite #300  
Westminster, CO 80234

RE: Will Serve Letter  
Ramblewood, South of Hilltop Road, Douglas County Previously  
known as Hilltop 177 renamed to "Ramblewood";  
Total of seventy lots, (sixty-eight standard SFE, two larger lots, exact size TDB)  
County of Douglas, State of Colorado.

Dear Mr. Lovelace:

The Parker Water & Sanitation District (PWSD) acknowledges its willingness and ability to serve Ramblewood as described above. The parcel is identified as future build out and will be part of PWSD upon successful completion of inclusion.

*COMMITMENT TO SERVE*

PWSD is committed to providing service to all future developments within its service area, based on the water supply sources available within the PWSD's water rights portfolio. Such commitment to provide service is conditioned upon compliance with all PWSD Rules and Regulations, Standard and Specifications, and/or conditions specific to the property; including payment of the appropriate fees and any charges related to water and/or sanitation service, as established from time to time by PWSD Directors.

*DISTRICT WATER DEMAND*

The current PWSD water demand is approximately 7,700 acre-feet per year (Acre Feet/yr), while at build out, the total of 23,500 Acre Feet/yr. The proposed development of **Ramblewood** will be included in our future projections.

*PROPOSED RAMBLEWOOD DEMAND (1805A)*

The projected demand based on PWSD Section 3, Rules and Regulations, Landscape/Irrigation worksheet is equivalent to 92.4 Acre feet/yr. The districts demand calculation of 1.1 Acre Feet/yr. Per SFE plus additional irrigation requirements require a higher standard than the Douglas County's 1805A of 0.75 Acre Feet/Yr per residence.

*DISTRICT WATER SUPPLY*

PWSD has an extensive water rights portfolio of adjudicated Denver Basin aquifer groundwater rights, both junior and senior tributary water rights, storage rights in Rueter-Hess Reservoir of 71,920 AF, return flows from effluent and lawn irrigation for use in the PWSD augmentation plan.

The attached Table 1 summarizes PWSD's adjudicated first-use rights, which indicates a total of 41,134 AF/yr (the anticipated yield of these rights in both an average and dry year (Section 1805A.01.2(2)b. of the DCZR). Not included in Table 1 are the rights associated with storage in

Rueter-Hess Reservoir or any of PWSD's reuse rights, which will provide significant additional supplies to PWSD.

In summary, with the estimated buildout demand of 23,500 AF/yr, and PWSD's 41,134 AF/yr of adjudicated first-use water rights and the Denver Basin groundwater that Ramblewood will dedicate with successful inclusion, PWSD has significant excess water supplies which can serve **Ramblewood**, and all future planned buildout within PWSD.

#### WATERQUALITY

PWSD is in compliance with the Colorado Department of Public Health and Environment testing and quality requirements and provides a high-quality water supply to all customers.

#### SANITARY SERVICE

PWSD shall provide sanitary service for all water taps requested for **Ramblewood**.

#### FEASIBILITY OF SERVICE

It is physically and economically feasible for PWSD to provide service to the proposed development of **Ramblewood**.

If you have any questions regarding any of the information provided or PWSD's ability to provide service to the proposed development, please do not hesitate to call us.

Sincerely,

Parker Water & Sanitation District



Heather Justus

Water Resource Manager

#### Attachments and Links:

Exhibit Plan

Table 1 Summary of PWSD Water Rights

Map of the existing PWSD's service area (Section 1805A.01.2(2)f. of the DCZR)

2022 Evidence of potability of PWSD's water supply for the subdivision (Section 1805A.01.2(3) of the DCZR). 2022

<https://www.pwsd.org/DocumentCenter/View/3584/2022-Consumer-Confidence-Report-PDF?bidId=>

2023 Consumer Confidence Report

<https://www.pwsd.org/DocumentCenter/View/3763/2023-PWSD-Consumer-Confidence-Report-PDF>



| LOT SIZE                    | TOTAL |
|-----------------------------|-------|
| SFD<br>(90' X 130' MINIMUM) | 68    |
| RANCH LOT 1<br>(25 ACRES)   | 1     |
| RANCH LOT 2<br>(58 ACRES)   | 1     |

## COMMUNITY SUMMARY

- 177 Acres
- 68 SFD Lots
- 2 Ranch Lots Totaling 83 Acres
- Approximately 60 Acres of Open Space
- Located in Unincorporated Douglas County
- Douglas County School District
  - Mountain View Elementary
  - Sagewood Middle School
  - Ponderosa High School



TABLE 1  
SUMMARY OF PWSO WATER RIGHTS



DECREE WATER AVAILABLE FOR PWSO USE

| SOURCE                              | Volume (ac-ft/yr) Decreed in Case No. |         |                          |                          |                       |                       |                       |                       |                       |                              |                       |                                | TOTAL                 |          |
|-------------------------------------|---------------------------------------|---------|--------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|-----------------------|--------------------------------|-----------------------|----------|
|                                     | 83CW348(A)                            | 95CW039 | 87CW104(A) <sup>2)</sup> | 87CW104(B) <sup>2)</sup> | 95CW089 <sup>2)</sup> | 99CW006 <sup>2)</sup> | 06CW179 <sup>2)</sup> | 02CW227 <sup>3)</sup> | 94CW042 <sup>4)</sup> | 03CW258, et al <sup>5)</sup> | 82CW434 <sup>6)</sup> | 85CW448, 04CW348 <sup>7)</sup> |                       |          |
| Cherry Creek alluvium <sup>1)</sup> | 726.7                                 | 132.3   |                          |                          |                       |                       |                       |                       |                       |                              |                       |                                | 24,130                | 859.0    |
| Lower Dawson-NT                     |                                       |         | 742.6                    | 631.8                    | 391.8                 | 430.2                 | 868.6                 | 30.6                  | 178.3                 | 821.0                        | 364.0                 |                                |                       | 4,458.9  |
| Lower Dawson-NNT                    |                                       |         | 219.4                    | 0.0                      | 79.5                  | 380.8                 | 807.6                 |                       |                       |                              |                       |                                |                       | 1,487.3  |
| Denver-NT                           |                                       |         | 430.1                    | 908.6                    | 272.6                 | 611.9                 | 235.6                 | 94.4                  | 104.0                 | 1258.0                       | 422.0                 |                                |                       | 4,337.2  |
| Denver-NNT                          |                                       |         | 1016.2                   | 9.0                      | 377.9                 | 616.1                 | 1980.6                |                       |                       |                              |                       |                                |                       | 3,999.8  |
| Arapahoe-NT                         |                                       |         | 1161.7                   | 627.0                    | 698.3                 | 1945.7                | 2447.1                | 64.5                  | 547.3                 | 2954.0                       | 487.0                 |                                |                       | 10,932.6 |
| Laramie-Fox Hills-NT                |                                       |         | 1044.1                   | 625.3                    | 419.2                 | 700.8                 | 1350.0                | 49.4                  | 16.0                  | 980.0                        | 310.0                 |                                |                       | 5,494.8  |
|                                     |                                       |         |                          |                          |                       |                       |                       |                       |                       |                              |                       |                                | TOTAL <sup>8)</sup> = | 31,569.6 |

DENVER BASIN WATER DEEDED AS PART OF INCLUSION (NOT CURRENTLY PART OF PWSO WELL FIELDS)

| SOURCE               | Annual Volume (ac-ft) Dedicated as Part of PWSO Inclusion <sup>9)</sup> |       |                        |                  |            |             |            |                       |                          |            |              |               | TOTAL |
|----------------------|-------------------------------------------------------------------------|-------|------------------------|------------------|------------|-------------|------------|-----------------------|--------------------------|------------|--------------|---------------|-------|
|                      | Carousel Farms                                                          | Cielo | Developmental Pathways | Dransfeldt Place | Gregg East | Harvie Park | Hess Ranch | Hess Road Galien Buck | Hess Road Town of Parker | Meadowlark | Miller Creek | Parker Parcel |       |
| Upper Dawson - NNT   | 13.8                                                                    |       |                        |                  |            | 4.1         | 38.4       |                       |                          |            |              |               |       |
| Lower Dawson-NT      | 41.8                                                                    | 0.4   |                        | 1.7              | 1.7        | 20.0        | 457.6      | 6.0                   | 4.7                      | 19.4       | 5.7          | 14.5          |       |
| Lower Dawson-NNT     | 11.2                                                                    |       |                        |                  |            |             |            |                       |                          |            |              |               | 51.0  |
| Denver-NT            |                                                                         | 73.4  |                        |                  |            | 3.1         | 24.6       | 655.0                 | 7.5                      | 6.1        | 89.1         | 7.9           | 20.4  |
| Denver-NNT           | 18.1                                                                    |       | 0.5                    |                  | 9.1        |             |            | 164.6                 |                          |            |              |               | 71.0  |
| Arapahoe-NT          | 17.6                                                                    | 75.2  | 0.5                    | 8.1              | 3.1        | 0.0         | 780.7      | 8.3                   | 6.6                      | 108.4      | 7.0          | 21.4          | 75.3  |
| Laramie-Fox Hills-NT | 11.3                                                                    | 47.4  | 0.3                    | 6.3              | 2.3        | 22.6        | 474.7      | 5.1                   | 4.0                      | 65.0       | 5.7          | 14.2          | 45.9  |

| SOURCE               | Annual Volume (ac-ft) Dedicated as Part of PWSO Inclusion <sup>9)</sup> |                          |                          |                          |                    |                   |              |                |                    |                            |  | TOTAL   |
|----------------------|-------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------|-------------------|--------------|----------------|--------------------|----------------------------|--|---------|
|                      | Parker Point                                                            | Public Service CO Sec 20 | Public Service CO Sec 21 | Public Service CO Sec 22 | Reata Ridge Parcel | Salisbury Heights | Sierra Ridge | Steven's Ranch | Stroh Ranch Parcel | Twenty Mile Town Center II |  |         |
| Upper Dawson - NNT   |                                                                         |                          |                          |                          |                    |                   |              | 43.8           |                    |                            |  | 100.1   |
| Lower Dawson-NT      | 4.2                                                                     |                          | 3.7                      |                          | 15.4               | 4.1               |              | 442.8          | 595.9              | 0.9                        |  | 1640.5  |
| Lower Dawson-NNT     |                                                                         | 4.4                      |                          |                          | 6.4                |                   |              | 77.9           |                    |                            |  | 150.9   |
| Denver-NT            | 5.8                                                                     |                          |                          | 10.4                     | 21.4               | 5.1               |              | 318.4          | 855.7              | 1.3                        |  | 2105.1  |
| Denver-NNT           |                                                                         | 6.6                      | 4.8                      |                          |                    |                   |              | 132.5          | 387.2              |                            |  | 794.4   |
| Arapahoe-NT          | 7.4                                                                     | 6.6                      | 4.9                      | 9.4                      | 26.4               | 5.4               | 143.1        | 724.0          | 920.3              | 1.2                        |  | 2960.8  |
| Laramie-Fox Hills-NT | 4.6                                                                     | 4.0                      | 3.2                      | 7.3                      | 16.5               | 3.5               | 89.6         | 431.5          | 546.7              | 0.9                        |  | 1812.6  |
|                      |                                                                         |                          |                          |                          |                    |                   |              |                |                    | TOTAL =                    |  | 9,564.4 |

GRAND TOTAL (DENVER BASIN AND CHERRY CREEK WATER RIGHTS)<sup>10)</sup> =

41,134.0

1) Water rights changed to municipal use. All of this water is fully consumable and reusable.

2) PWSO well field decree.

3) Hover parcel.

4) Well field established between PWSO and Stroh Ranch for full Stroh Ranch water supply, but water availability limited to volume of water deeded to PWSO from Stroh Ranch.

5) Rights also include water deeded in 82CW116, W-8033, 81CW403, 83CW333, and 98CW459. Water deeded to PWSO from RidgeGate property but not part of the PWSO well fields.

6) Water deeded to PWSO from Freshfields property but not part of the PWSO well fields.

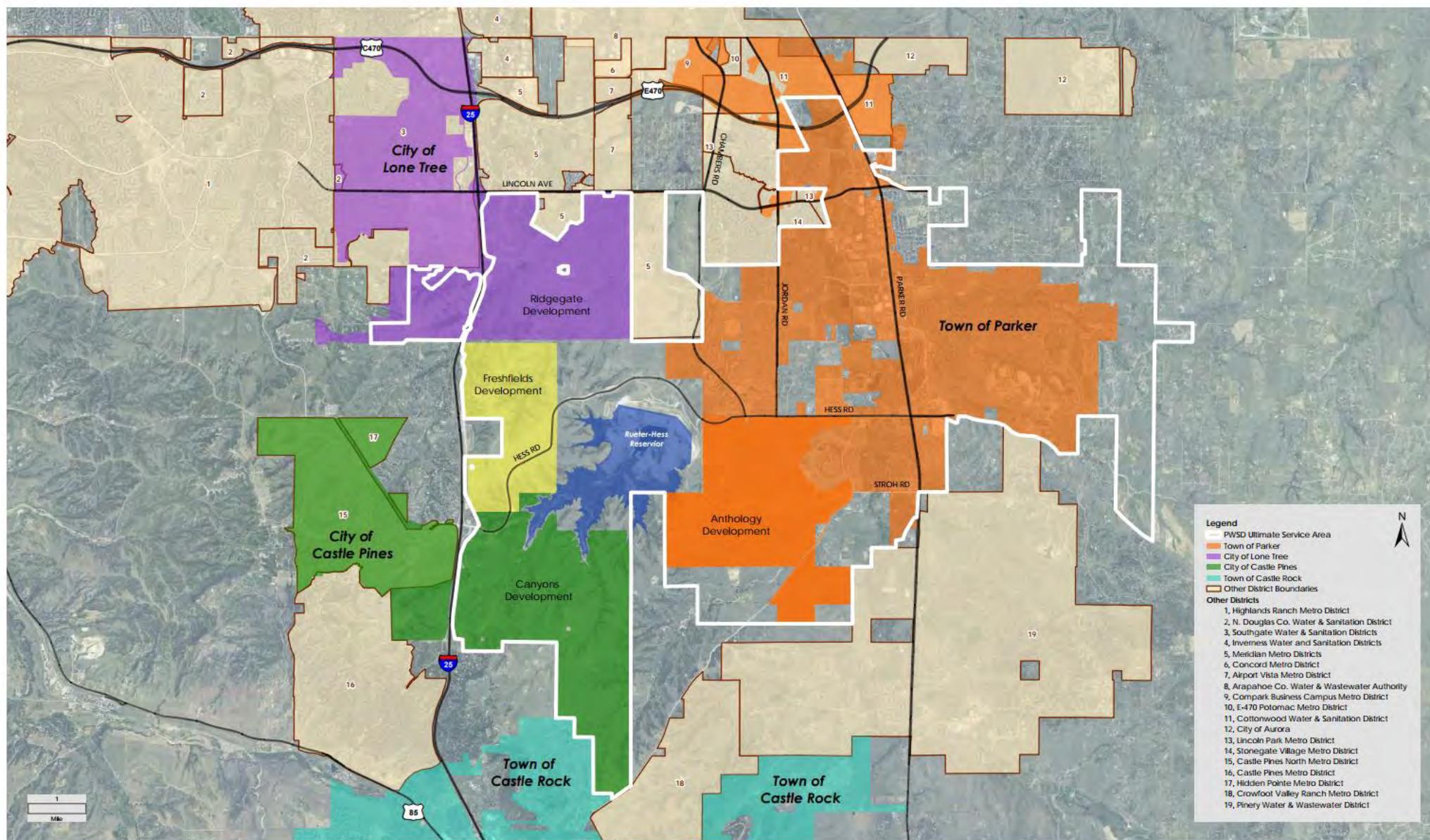
7) Combined RHR and Lake Gulch storage rights - RHR as alternate place of storage, not included in totals

8) Total potential yield of these rights

9) All wellfield inclusion volumes are preliminary and subject to change

10) Updated March, 2019

## PWSD Service Area



## **MEMORANDUM**

**TO:** Dan Sheldon  
**FROM:** Gina Burke  
**DATE:** May 1, 2025  
**SUBJECT:** Supplemental Water Supply Summary - Ramblewood  
**JOB NO:** 1075.1

---

The purpose of this Memorandum is to provide additional information to our March 11, 2025 Ramblewood Water Supply Summary and Demand analysis letter. The additional information is in regard to the two large lots, Ranch Lot 1 and Ranch Lot 2, in area PA-B of the Ramblewood Planned Development. These two lots will not be served by Parker Water and Sanitation District. Each of the lots will be served with individual well and septic systems. 2 af/yr from the Lower Dawson aquifer ground water will be conveyed to each lot which is sufficient to provide in-house (0.2 af/yr), irrigation (30,000 sqft of lawn and garden) and domestic animal watering (example: 4 horses) per lot. This also exceeds the Residential Demand Standards for lots this size as outlined in 1805A.02.1 of the Douglas County Zoning Resolution.

As stated in our original report, the ground water rights underlying 160-acres of the Property, which includes Ranch Lot 1 and Ranch Lot 2, were decreed in Division 1 Water Court in Case No. 2007CW107 for the Lower Dawson, Denver, Arapahoe and Laramie-Fox Hills aquifers. The decreed uses include domestic, industrial, commercial, irrigation, stock watering, recreational, fire protection, and augmentation purposes, both on and off the property.

The conveyance of Lower Dawson aquifer ground water outlined in this Memorandum to Ranch Lot 1 and Ranch Lot 2 within area PA-B of the Ramblewood Planned Development is more than sufficient to meet all demands.

Please feel free to contact our office with any questions or additional information.



June 13, 2025

Douglas County Department of Community Development  
Planning Service Division  
100 Third Street  
Castle Rock, CO 80104

Re: Water Supply – Ramblewood Subdivision Rezone, ZR2024-031

Dear Staff:

The purpose of this letter is to provide additional information for the 2025 Ramblewood Water Supply Summary and Demand analysis letter provided on March 11, 2025, as supplemented on May 1, 2025, by Juhn Water Consultants, Inc. This letter is intended to fulfill the requirements of Section 1806A.01.04 of the Douglas County Zoning Resolution dated April 17, 2017.

MU Hilltop is under contract for the purchase of property from Hilltop Jam, LLC as well as adjacent property from Brad and Joan Whittlesey (the "**Contract**"). The Contract includes water rights sufficient to support the proposed Development. The groundwater for the proposed Development identified in the Contract was adjudicated in Case No. 2007CW107, District Court, Water Division 1, on February 20, 2008 (the "**07CW107 Decree**"). A copy of the 07CW107 Decree is attached hereto.

If you have any questions or comments, please feel free to call.

Very truly yours,

MCGEADY BECHER CORTESE WILLIAMS P.C.

ENCLOSURE

DISTRICT COURT, WATER DIVISION 1, COLORADO

Court Address:  
901-9<sup>th</sup> Street  
Greeley, CO 80632

Concerning the Application of:

BRADLEY A. WHITTLESEY; DAVID C. WHITTLESEY;  
SUSAN L. WHITTLESEY; AND  
CYNTHIA L. WHITTLESEY;

Applicants,

IN DOUGLAS COUNTY.

  
2008022919 12 PGS

OFFICIAL RECORDS  
DOUGLAS COUNTY CO  
JACK ARROWSMITH  
CLERK & RECORDER  
RECORDING FEE: \$61.00  
12 PGS

# 2008022919  
03/31/2008 01:51 PM

▲COURT USE ONLY▲

Case Number: 07-CW-107

**FINDINGS OF FACT, CONCLUSIONS OF LAW, RULING OF THE REFEREE,  
JUDGMENT AND DECREE**

This claim for nontributary and not nontributary ground water, having been filed in May, 2007, and all matters contained in the application having been reviewed, and testimony having been taken where such testimony is necessary, and such corrections made as are indicated by the evidence presented herein, the following is hereby the Ruling of the Referee:

**FINDINGS OF FACT**

1. **Name, Address, and Telephone Number of Applicants:**

Bradley A. Whittlesey, David C. Whittlesey, Susan L. Whittlesey, and  
Cynthia L. Whittlesey  
c/o Joan V. Whittlesey, Esq.  
4700 East Princeton Avenue  
Englewood, CO 80113 [Telephone: 303-756-8266]

2. **Background:**

A. Applicants are the owners of a parcel of land consisting of 160 acres, more or less, in Douglas County, generally described as the E 1/2 of the SW 1/4 and the W 1/2 of the SE 1/4 of Section 6, Township 7 South, Range 65 West of the 6<sup>th</sup> P.M., as shown on the General Location Map, attached as **Exhibit A**, the Site Location Map, attached as **Exhibit B**, and as described in the Property Legal Description, attached as **Exhibit C**, hereto ("Applicants' Property").

B. Applicants certify that they own all such described parcel and that no other person or entity has a financial interest in such land. Accordingly, Applicants certify their compliance with the notice requirements of § 37-92-302(2), C.R.S.

3. **Objections:** One party, Parker Water and Sanitation District, filed a statement of opposition to the application in this case. Such party has consented to the entry of this ruling and decree. No other statements of opposition were filed in this matter and the time for filing such statements has expired.

4. **State and Division Engineer Comments:**

A. The Office of the State Engineer issued its Determination of Facts in this case on August 8, 2007. The findings of fact contained in this ruling and decree are consistent with such Determination of Facts.

B. The Division Engineer's Office for Water Division 1 submitted its Summary of Consultation Report in this case on August 22, 2007, and Applicants submitted and served their Responses thereto on August 28, 2007. This ruling and decree adequately addresses all issues raised in the Division Engineer's Summary of Consultation.

5. **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. The ground water adjudicated herein is not within the boundaries of a designated ground water basin.

**APPROVAL OF GROUND WATER RIGHTS**

6. **Wells and Well Permits:**

A. Well permit applications for wells to be constructed pursuant to this ruling and decree will be applied for at a later time pursuant to the terms herein. Applicants may construct such wells anywhere on the Applicants' property in order to recover the entire amount of ground water found to be available in each aquifer.

B. The groundwater may be withdrawn at rates of flow necessary to efficiently withdraw the amounts decreed herein. Applicants hereby waive any 600 foot spacing rule for wells located on the Subject Property, but must satisfy Section 37-90-137(4), C.R.S., for wells owned by others on adjacent properties.

**7. Average Annual Amounts:**

| <u>Aquifer</u>    | <u>Land Area</u> | <u>Saturated Thickness</u> | <u>Specific Yield</u> | <u>Average Annual Amount</u> |
|-------------------|------------------|----------------------------|-----------------------|------------------------------|
| Upper Dawson      | 160 Ac.          | 125 Feet                   | 20 %                  | -0- AF                       |
| Lower Dawson      | 160 Ac.          | 100 Feet                   | 20 %                  | 32.0 AF                      |
| Denver            | 160 Ac.          | 260 Feet                   | 17 %                  | 70.7 AF                      |
| Arapahoe          | 160 Ac.          | 250 Feet                   | 17 %                  | 68.0 AF                      |
| Laramie-Fox Hills | 160 Ac.          | 195 Feet                   | 15 %                  | 46.8 AF                      |

**Note:** The above values and amounts are consistent with the values and amounts referenced in the State Engineer's Determination of Facts ("Findings") in this case, dated August 8, 2007.

Pursuant to such Findings, there is no ground water available in the Upper Dawson aquifer at this location due to the existence of a prior-appropriation by Well No. 31958.

**8. Uses:** The groundwater decreed herein will be used and reused for domestic, industrial, commercial, irrigation, stock watering, recreational, fire protection, and augmentation purposes, both on and off the Subject Property. The ground water subject to this ruling and decree may also be used for municipal purposes if such ground water is conveyed to a municipality or a quasi-municipal entity.

**9. Final Average Annual Amounts of Withdrawal; Banking of Unused Amounts:**

A. Final determination of the applicable average saturated sand thicknesses and resulting average annual amounts available to Applicants will be made pursuant to the retained jurisdiction of this Court, as described in paragraph 25 below. The Court shall use the annual acre-foot amounts in shown Paragraph 7 above in the interim period, until a final determination of water rights is made.

B. The allowed annual amount of ground water which may be withdrawn through the wells specified above and any additional wells, pursuant to Section 37-90-137(10), C.R.S., 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.

**10. Sources of Ground Water and Limitations on Consumption:**

A. The ground water to be withdrawn from the Lower Dawson, Denver, Arapahoe, and Laramie-Fox Hills aquifers is "nontributary ground water" as defined in Section 37-90-103(10.5), C.R.S., and in the Denver Basin Rules, the withdrawal of which will not, within 100 years, deplete the flow of a natural stream, including a natural stream as defined in Section 37-82-101(2) and Section 37-92-102(1)(b), C.R.S., at an annual rate greater than 1/10 of 1% of the annual rate of withdrawal.

B. Applicants 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 Applicants and satisfactory to the State Engineer, so long as Applicants can demonstrate that an amount equal to 2% of such withdrawals (by volume) has been relinquished to the stream system.

C. The ground water to be withdrawn from the Upper Dawson aquifer is "not nontributary" as defined in Sections 37-90-103(10.7) and 37-90-137(9)(c), C.R.S. Such not nontributary ground water decreed herein may be withdrawn only pursuant to an augmentation plan to be sought separate from this ruling and decree. No such plan was sought in this case.

D. There is unappropriated groundwater available for withdrawal from the subject aquifers beneath the Applicants' 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 wells which will withdraw nontributary ground water or the exercise of the rights and limitations specified in this decree.

**11. Additional Wells and Well Fields:**

A. Applicants 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 ground water in the subject aquifers underlying the Subject Property. As additional wells are planned, applications shall be filed in accordance with Section 37-90-137(10), C.R.S.

B. Two or more wells constructed into a given aquifer shall be considered a well field. In effecting production of water from such well field, Applicants may produce the entire amount which may be produced from any given aquifer through any combination of wells within the well field.

C. In considering applications for permits for wells or additional wells to withdraw the ground water 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 this decree and Section 37-90-137(10), C.R.S.

D. In the event that the allowed average annual amounts decreed herein are adjusted pursuant to the retained jurisdiction of the Court, Applicants shall obtain permits to reflect such adjusted average annual amounts. Subsequent permits for any wells herein shall likewise reflect any such adjustment of the average annual amounts.

E. The ground water in the Upper Dawson aquifer is not nontributary and may not be withdrawn unless and until an augmentation plan has been applied for and approved by this Court in a separate proceeding.

12. **Well Construction Conditions:** For each well constructed pursuant to this decree, Applicants shall comply with the following conditions:

A. 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. Applicants 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.

B. 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. Applicants 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.

C. Groundwater production shall be limited to the subject aquifers. 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.

D. 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 easing or on the well's pumphouse.

13. **Additional Terms and Conditions:**

A. Applicants shall make available to the Opposer Parker Water and Sanitation District upon request for inspection or copying (at the expense of the requesting party) well production records, maps of well locations, well permits, pending well permit applications, and well logs.

B. Applicants shall develop the groundwater in each aquifer under the Subject Property only in accordance with the decreed water rights, and shall pursue any changes or additions to such rights by spacing wells, and producing water therefrom, in a reasonably uniform manner. Surface topography, land use, streets, existing and proposed reasonable alignments of water lines and other facilities, and other factors, will prevent complete uniformity. Also, local variations in aquifer characteristics, while not yet identified, may cause a reasonable deviation from uniformity. Applicants shall avoid a concentration of pumping which would have a substantially disproportionate effect on the aquifer or the Opposing Party hereto.

[See Voss v. Lundvall Bros., 830 P.2d 1061 (Colo. 1992) (an irregular drilling pattern can impact on the correlative rights of the [other] owners...in a common source or pool by exaggerating production in one area and depressing it in another)]. This condition applies to large capacity wells to withdraw amounts decreed in Paragraph 6 above and not to individual wells which may be constructed by individual lot owners as a water supply on their own lots.

C. In the event that Opposers believe that Applicants are operating or constructing, or proposing to operate or construct wells in a manner inconsistent with these conditions, they shall notify the Applicants of such concerns. If those concerns are not resolved with sixty (60) days, the party raising such concerns may bring such issues before this Court under retained jurisdiction in the appropriate proceeding, unless the parties mutually agree to arbitration.

D. These provisions shall be binding upon all successors in interest of Applicants.

14. **Recharge:** Nothing herein is intended to restrict the ability of Applicants to withdraw water that has recharged to an aquifer, consistent with law. It is not anticipated that such withdrawal would create any unreasonable localized depression or drawdown in the aquifer.

#### CONCLUSIONS OF LAW

15. The Water Court has jurisdiction over this proceeding pursuant to Section 37-90-137(6), C.R.S. This Court concludes as a matter of law that the application herein is one contemplated by law. Section 37-90-137(4), C.R.S.

16. The application for a decree confirming Applicants' right to withdraw and use all unappropriated ground water from the nontributary aquifers beneath the Subject Property as described herein pursuant to Section 37-90-137(4), C.R.S., should be granted, subject to the provisions of this decree. The application for a decree confirming Applicants' right to withdraw and use ground water decreed herein from the Upper Dawson aquifer, if any, should be granted pursuant to Section 37-90-137(4) and (9)(c), C.R.S., subject to the provisions of this decree.

17. The rights to ground water determined herein shall not be administered in accordance with priority of appropriation. Such rights are not "conditional water rights" as defined by Section 37-92-103(6), C.R.S., and findings of reasonable diligence are not applicable to the ground water rights determined herein. The determination of ground water rights herein need not include a date of initiation of the withdrawal project. See Section 37-92-305(11), C.R.S.

**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. 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.

20. The Applicants may withdraw the subject ground water herein through wells to be located anywhere on the Applicants' 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.

21. Applicants may not withdraw ground water from the not nontributary Upper Dawson aquifer until a plan for augmentation therefore is decreed by this Court pursuant to Section 37-90-137(9)(c), C.R.S.

22. Applicants have complied with all requirements and met all standards and burdens of proof, including but not limited to Sections 37-92-103(9), 37-92-302, 37-92-304(6), 37-92-305(1), (2), (3), (4), (6), (8), (9), C.R.S., to adjudicate their underlying ground water and are therefore entitled to a decree confirming such ground water rights as described herein.

23. The ground water rights described in the above Findings of Fact are hereby approved, confirmed, and adjudicated, including and subject to the terms and conditions specified herein.

24. No owners of or person entitled to use water under a vested water right or decreed conditional water right will be injured or injuriously affected by the pumping of Applicants' ground water resources as decreed herein.

**25. Retained Jurisdiction:**

A. The Court retains jurisdiction as necessary to adjust the average annual amounts of ground water available under the property to conform to actual local aquifer characteristics as determined from adequate information obtained from wells, pursuant to Section 37-92-305(11), C.R.S. Within 60 days after completion of any well decreed herein or any test hole(s), Applicants or any successor in interest to these water rights shall serve copies of such log(s) upon the State Engineer and the parties herein.

B. At such time as adequate data are available, any person, including the State Engineer, may invoke the Court's retained jurisdiction to make a Final Determination of Water Right.

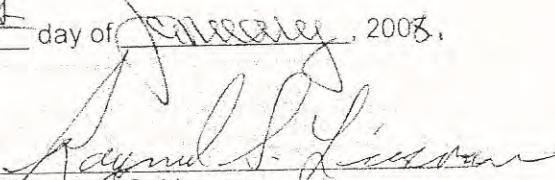
Plaintiff's Attorney - District Court  
2007-CW-107  
City Water Court, Michael C. Dunn, DCP, JD

C. 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, Applicants, and parties herein.

D. 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.

26. The ground water rights decreed herein are vested property rights decreed to the Applicants and shall be owned by the Applicants until such time as the Applicants expressly convey all the water underlying the Subject Property, or a portion of the water to another entity through a deed that identifies this case number, the specific aquifer, and the annual volume (based on a 100 year aquifer life) or a total volume of ground water being conveyed. 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 with the Subject Property, unless all or part of the water rights have been specifically reserved by the Grantor in that deed.

RULING ENTERED this 15 day of February, 2008.

  
Raymond S. Liesman  
Water Referee  
Water Division 1

THE COURT DOTH FIND THAT NO PROTEST TO THE RULING OF THE REFEREE HAS BEEN FILED. THE FOREGOING RULING IS CONFIRMED AND APPROVED AND IS HEREBY MADE THE JUDGMENT AND DECREE OF THIS COURT.

Date: FEB 20 2008

  
Honorable Roger A. Klein  
Water Judge  
Water Division 1  
State of Colorado

\*\*\*\*\*

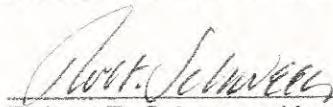
Table of Exhibits

|           |       |                             |
|-----------|-------|-----------------------------|
| Exhibit A | ..... | General Location Map.       |
| Exhibit B | ..... | Site Location Map.          |
| Exhibit C | ..... | Property Legal Description. |

**APPROVED AS TO FORM AND CONTENT:**

DUNCAN, OSTRANDER & DINGESS, P.C.

By:

  
Robert E. Schween, No. 12923  
3600 So. Yosemite Street, Suite 500  
Denver, Colorado 80237-1829  
Phone: 303.779.0200

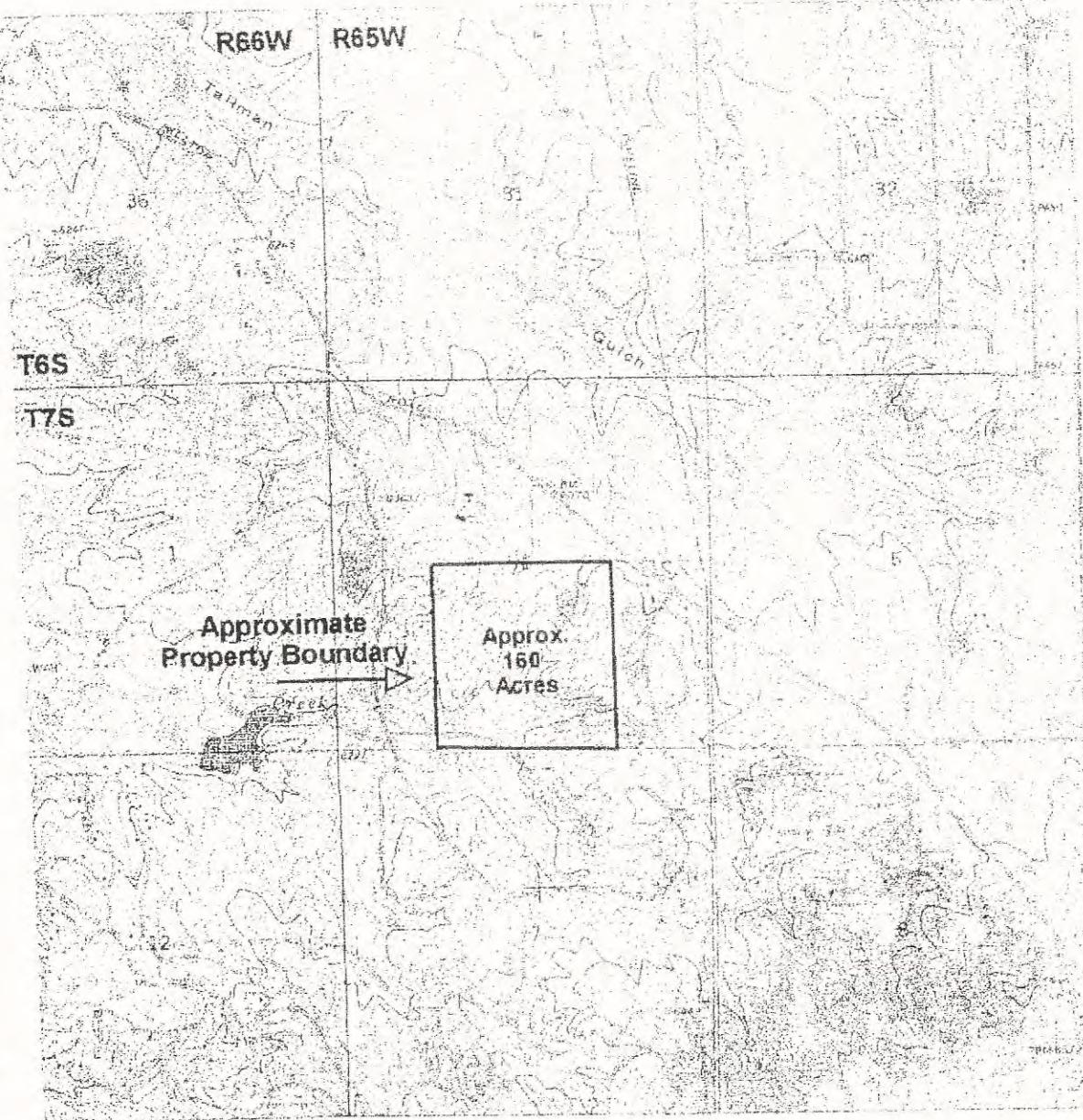
ATTORNEYS FOR APPLICANTS BRADLEY A. WHITTLESEY;  
DAVID C. WHITTLESEY; SUSAN L. WHITTLESEY; AND  
CYNTHIA L. WHITTLESEY

KRASSA & MILLER, LLC

By: See Stipulation Dated Oct. 18, 2007  
Robert F. T. Krassa, No. 7947  
2344 Spruce Street, Suite A  
Boulder, Colorado 80301-2611  
Phone: 303.442.2156

ATTORNEYS FOR OPPOSER  
PARKER WATER AND SANITATION DISTRICT

07CW107



Source: USGS 7.5 Minute Quadrangle Ponderosa Park, CO (PR 1978)

N

## EXHIBIT A

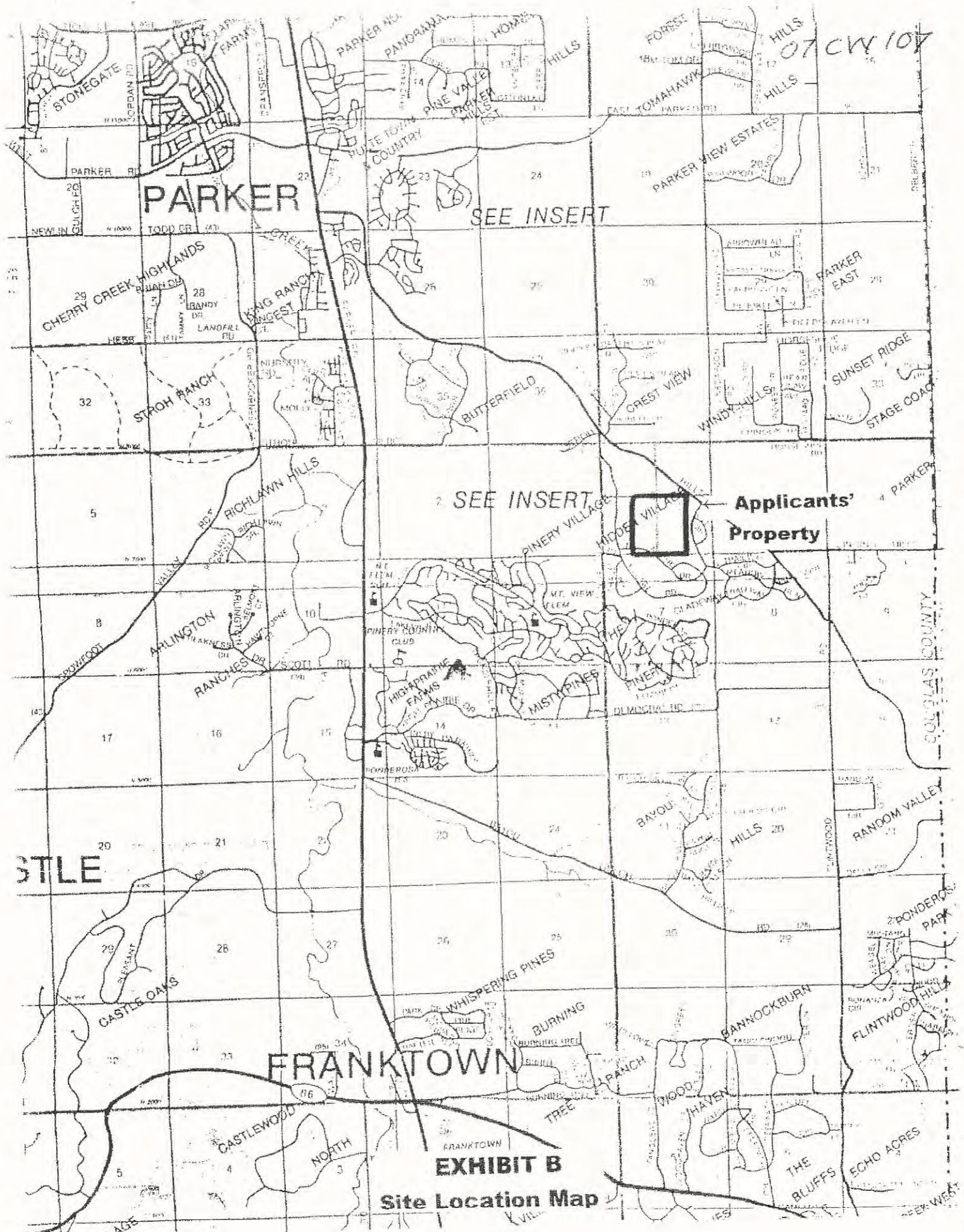
### General Location Map

WHITTLESEY PROPERTY LOCATION MAP  
Douglas County, Colorado

John Water Consultants, Inc.  
1565 Gilpin Street  
Denver, Colorado 80218

May 21, 1999

Job No. 4471



## PROPERTY LEGAL DESCRIPTION

**160 Acres, M/L, described as follows:**

**The E ½ of the SW ¼, and the W ½ of the SE ¼,  
Section 6, Township 7 South, Range 65 West,  
6<sup>th</sup> P.M.**

## **EXHIBIT C**

# RAMBLEWOOD PLANNED DEVELOPMENT

A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST  
OF THE 6TH P.M., DOUGLAS COUNTY, CO  
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031

## STATEMENT OF COMMITMENTS

THE FOLLOWING SECTIONS DESCRIBE THE REQUIRED DEVELOPMENT COMMITMENTS FOR THE RAMBLEWOOD PLANNED DEVELOPMENT. THE REQUIRED DEVELOPMENT COMMITMENTS MUST BE COMPLETED BY THE OWNER OR ITS SUCCESSORS OR ASSIGNS, AND SHALL BE BINDING UPON ITS HEIRS, SUCCESSORS, AND ASSIGNS WITH RESPECT TO THE LAND WITHIN THE RAMBLEWOOD PLANNED DEVELOPMENT.

1. **DEDICATIONS:** ALL DEDICATIONS OF PUBLIC FACILITIES, INCLUDED BUT NOT LIMITED TO PARK AND OPEN SPACE LANDS, STREETS, DRAINAGE FACILITIES, AND EASEMENTS SHALL BE DEDICATED AT NO COST TO DOUGLAS COUNTY. TITLE INSURANCE SHALL BE PROVIDED FOR ALL COUNTY-DEDICATED LAND. ALL REQUIRED UTILITY EASEMENTS SHALL BE DEDICATED TO THE SERVICE PROVIDER(S). DEDICATIONS SHALL BE MADE AT THE TIME OF FINAL PLAT OR AS REQUIRED BY DOUGLAS COUNTY. IN ACCORDANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION, AS AMENDED, DEDICATED LAND SHALL BE CONVEYED TO DOUGLAS COUNTY AND THE COUNTY MAY FURTHER CONVEY THE LAND TO THE APPROPRIATE AGENCY.
2. **SCHOOL LAND DEDICATION**
  - A. SCHOOL LAND DEDICATION SHALL BE IN COMPLIANCE WITH SECTION 1004 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
  - B. NO LAND SHALL BE DEDICATED FOR SCHOOL CONSTRUCTION ON THE PROPERTY.
  - C. THE OWNERS AND THEIR ASSIGNS SHALL PAY CASH-IN-LIEU OF LAND DEDICATION FOR SCHOOLS PRIOR TO RECORDING THE FIRST FINAL PLAT.
3. **PARK LAND DEDICATION**
  - A. LOCAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.1 AND 1003.11.3 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION, AS AMENDED.
  - B. REGIONAL PARK AND TRAIL DEDICATION REQUIREMENTS SHALL MEET THE CRITERIA PROVIDED IN ARTICLE 10, SECTION 1003.11.2 AND 1003.11.4 OF THE DOUGLAS COUNTY SUBDIVISION RESOLUTION.
4. THE DEVELOPER INTENDS ON FORMING A NEW TITLE 32 SPECIAL DISTRICT TO BE CALLED THE RAMBLEWOOD METROPOLITAN DISTRICT. WHILE THE APPLICATION, SERVICE PLAN, AND ANY OTHER SUPPORTING DOCUMENTS FOR THE DISTRICT ARE NOT INCLUDED WITH THIS PD APPLICATION, THE DEVELOPER DOES INTEND ON PROCESSING THE REVIEW AND APPROVAL OF THE DISTRICT CONCURRENT WITH THE PD ZONING.
5. **ROADWAY IMPROVEMENTS**  
ROADWAY IMPROVEMENTS WILL BE MADE AS DETERMINED NECESSARY BY DOUGLAS COUNTY ENGINEERING PUBLIC WORKS.
6. **ON AND OFF-SITE IMPROVEMENTS**
  - A. THE OWNERS AND THEIR ASSIGNS ARE RESPONSIBLE FOR THEIR FAIR SHARE CONTRIBUTION TOWARDS THE PAVING OF ALPINE DRIVE IN THE AMOUNT OF \$27,554.32 (THE "ALPINE DRIVE CONTRIBUTION"). SAID PAYMENT SHALL BE MADE PRIOR TO THE RECORDATION OF THE FINAL PLAT FOR THE RAMBLEWOOD DEVELOPMENT. IN THE EVENT THAT THE COUNTY HAS NOT COMPLETED THE PAVING OF ALPINE DRIVE BY DECEMBER 31, 2027, THE OWNER AND/OR ASSIGNS MAY REQUEST A REFUND OF THE ALPINE DRIVE CONTRIBUTION AND THE COUNTY AGREES TO REIMBURSE OWNER AND/OR ASSIGNS WITHIN 30 DAYS AFTER SUCH A REQUEST IS MADE.
  - B. THE OWNERS AND THEIR ASSIGNS SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE IMPROVEMENTS AT THE INTERSECTION OF HILLTOP ROAD AND THE ACCESS INTO THE RAMBLEWOOD DEVELOPMENT.
  - C. THE OWNERS AND THEIR ASSIGNS SHALL DEDICATE PUBLIC RIGHT-OF-WAY FOR HILLTOP ROAD AS DETERMINED BY THE COUNTY.
  - D. THE OWNERS AND THEIR ASSIGNS SHALL DEDICATE 80-FT. PUBLIC RIGHT-OF-WAY FOR ALPINE DRIVE.
7. **STORMWATER MANAGEMENT, FLOODPLAIN, AND DRAINAGE IMPROVEMENTS**  
STORMWATER MANAGEMENT SHALL ADHERE TO CURRENT STORMWATER MANAGEMENT PRACTICES AS REQUIRED IN THE DOUGLAS COUNTY STORM DRAINAGE AND TECHNICAL CRITERIA MANUAL. DEVELOPMENT WITHIN DESIGNATED FLOODPLAIN AREA IS EXPECTED TO BE AVOIDED.
8. **UTILITY IMPROVEMENTS**  
THE PROJECT WILL BE REQUIRED TO COMPLETE BOTH ON-SITE AND OFF-SITE WATER AND SANITARY SEWER IMPROVEMENTS, AS WELL AS ASSOCIATED STORMWATER IMPROVEMENTS ADJACENT TO HILLTOP ROAD IF REQUIRED AND AS NEEDED TO SERVE THE SITE.
9. **WATER AND SEWER**  
CENTRAL WATER AND SEWER WILL BE PROVIDED TO ALL FUTURE LOTS WITHIN PA-A BY PARKER WATER AND SANITATION DISTRICT OR OTHER CENTRAL SERVICES PROVIDER. WATER AND SEWER WILL BE PROVIDED TO PA-B THROUGH DOMESTIC WELL AND SEPTIC.

|  | Maintenance Responsibility | Ownership             |
|--|----------------------------|-----------------------|
|  | HOA OR METRO DISTRICT      | HOA OR METRO DISTRICT |
|  | HOA OR METRO DISTRICT      | HOA OR METRO DISTRICT |

## 10. FIRE PROTECTION

FIRE PROTECTION SHALL BE PROVIDED BY SOUTH METRO FIRE RESCUE.

## 11. WILDFIRE MITIGATION PLAN

A WILDFIRE MITIGATION PLAN SHALL BE COMPLETED FOR COMPLIANCE WITH THE DOUGLAS COUNTY ZONING RESOLUTION SECTION 17 - WILDFIRE HAZARD OVERLAY DISTRICT, AS AMENDED. OWNER, ITS SUCCESSORS AND ASSIGNS SHALL PROVIDE A WILDFIRE MITIGATION PLAN(S) CONCURRENT WITH PRELIMINARY PLAN AND COMPLETED WITH THE FINAL PLAT. IN PREPARATION OF WILDFIRE MITIGATION PLAN(S) ROADS SHALL MEET DOUGLAS COUNTY ROADWAYS STANDARDS. CUL-DE-SACS SHALL BE PROVIDED ON ALL DEAD-END ROADS, AND SECONDARY ACCESS SHALL BE PROVIDED TO ALLOW FOR EMERGENCY ACCESS AND EVACUATION IF NECESSARY.

## 12. PROJECT PHASING

THERE SHALL BE NO PHASING RESTRICTIONS.

## 13. FLOODPLAIN, RIPARIAN, AND WETLANDS PRESERVATION

OWNER, ITS SUCCESSORS AND ASSIGNS SHALL COMPLY WITH REQUIREMENTS OF REGULATORY AGENCIES DURING THE PRELIMINARY PLAN, FINAL PLATTING AND SUBSEQUENT PROCESSES.

## 14. WILDLIFE PRESERVATION

A. WILDLIFE FRIENDLY FENCING IS REQUIRED ADJACENT TO OPEN SPACES IN PLANNING AREA A. PLANNING AREAS B, C, D, AND E SHALL NOT REQUIRE WILDLIFE FRIENDLY FENCING, AS AGRICULTURAL AND OPEN SPACE USES ARE ALLOWED AND LIVESTOCK WILL NEED TO BE CONTAINED.  
B. AN ECOLOGICAL RESOURCES SURVEY WAS PREPARED BY WESTERN ENVIRONMENT AND ECOLOGY, INC. ON OCTOBER 17, 2024, TO ESTABLISH PRESENCE OR ABSENCE OF THREATENED AND/OR ENDANGERED SPECIES ON THE PROPERTY, AS WELL AS IDENTIFY ECOLOGICAL SENSITIVE AREAS, AND MAKE RECOMMENDATIONS BASED ON THIS STUDY. METRO DISTRICT OR OWNER SHALL IMPLEMENT AND ENFORCE RECOMMENDATIONS CONTAINED WITHIN THE PLAN AT TIME OF FINAL PLAT.

## 15. CULTURAL RESOURCES SURVEY

A CULTURAL RESOURCES SURVEY SHALL BE PREPARED AT THE TIME OF PRELIMINARY PLAN. THE FINDINGS OF THE SURVEY WILL BE EVALUATED AND NECESSARY ACCOMMODATIONS WILL BE PROVIDED AT THE TIME OF PRELIMINARY PLAN.

## 16. NOISE STUDY

A NOISE STUDY SHALL BE PREPARED AT THE TIME OF PRELIMINARY PLAN. THE FINDINGS OF THE STUDY WILL BE EVALUATED AND NECESSARY ACCOMMODATIONS WILL BE PROVIDED AT THE TIME OF PRELIMINARY PLAN.

## 17. OVERLOT GRADING

LAYOUT OF PROPOSED DEVELOPMENT AND IMPROVEMENTS SHALL BE EVALUATED TO PRESERVE THE NATURAL SITE FEATURES AND TOPOGRAPHY. OVERLOT GRADING SHALL BE EVALUATED AT THE TIME OF SUBDIVISION.

## OWNERSHIP CERTIFICATION

PARCEL 1 (COUNTY PARCEL #2347-061-00-001)

HILLTOP JAM, LLC  
JAMES HELFAND

STATE OF UTAH

COUNTY OF \_\_\_\_\_ )

ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ BY

MY COMMISSION EXPIRES \_\_\_\_\_.

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE \_\_\_\_\_, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY HILLTOP JAM, LLC AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL

(DATE)

## OWNERSHIP CERTIFICATION

PARCEL 2 (COUNTY PARCEL #2347-063-00-001)  
BRADLEY A WHITTLESEY

JOAN V WHITTLESEY

STATE OF COLORADO )

COUNTY OF \_\_\_\_\_ )

ACKNOWLEDGED BEFORE ME THIS \_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_ BY

MY COMMISSION EXPIRES \_\_\_\_\_.

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC

I/WE \_\_\_\_\_, (ONE OF THE FOLLOWING: QUALIFIED TITLE INSURANCE COMPANY, TITLE COMPANY, TITLE ATTORNEY, OR ATTORNEY AT LAW), DULY QUALIFIED, INSURED OR LICENSED BY THE STATE OF COLORADO, DO HEREBY CERTIFY THAT I/WE HAVE EXAMINED THE TITLE OF ALL LANDS DEPICTED AND DESCRIBED HEREON AND THAT TITLE TO SUCH LAND IS OWNED IN FEE SIMPLE BY BRADLEY A WHITTLESEY AND JOAN V WHITTLESEY AT THE TIME OF THIS APPLICATION.

NAME OF AUTHORIZED OFFICIAL

(DATE)

## COUNTY CERTIFICATION

THIS REZONING REQUEST TO PLANNED DEVELOPMENT HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH THE APPROVING THE PLANNED DEVELOPMENT AND ALL APPLICABLE DOUGLAS COUNTY REGULATIONS.

CHAIRMAN, BOARD OF COUNTY COMMISSIONERS

(DATE)

DIRECTOR, COMMUNITY DEVELOPMENT

(DATE)

## CLERK AND RECORDER CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN WAS FILED IN MY OFFICE ON THIS \_\_\_\_ OF \_\_\_\_\_, 20\_\_\_\_, A.D. AT \_\_\_\_ O'CLOCK A.M./P.M., AND WAS RECORDED PER RECEIPT NO. \_\_\_\_\_.

DOUGLAS COUNTY CLERK AND RECORDER

SHEET TITLE:  
COMMITMENTS  
& PROVISIONS

1 OF 3

DATE:  
11/15/2024 SUBMITTAL  
12/3/24 25% UPD. AL  
13/2/25 50% UPD. AL  
07/02/2025 SUBMITTAL

# RAMBLEWOOD PLANNED DEVELOPMENT

A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST  
OF THE 6TH P.M., DOUGLAS COUNTY, CO  
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031

**NORRIS DESIGN**  
PEOPLE + PLACEMAKING  
1101 BANNOCK STREET  
DENVER, CO 80204  
P 303.892.1166

[NORRIS-DESIGN.COM](http://NORRIS-DESIGN.COM)

**RAMBLEWOOD PD**

HILLTOP ROAD

DOUGLAS COUNTY, COLORADO

## LEGAL DESCRIPTION

### PARCEL 1

A PARCEL OF LAND LOCATED IN THE EAST HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST OF THE SIXTH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE EAST QUARTER CORNER OF SAID SECTION 6; THENCE N89°37'37"W ALONG THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 6, 1401.02 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON A LINE 63.72 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 6; THENCE S00°17'50"W ALONG SAID LINE, 10.98 FEET;

THENCE S89°37'54"W, 1148.45 FEET; THENCE N00°01'01"W, 25.84 FEET TO THE SOUTH LINE OF THE NORTHEAST QUARTER OF SAID SECTION 6, SAID POINT BEING S89°37'37"E, 123.96 FEET FROM THE SOUTHWEST CORNER OF THE NORTHEAST QUARTER OF SAID SECTION 6;

THENCE CONTINUING N00°01'01"W, 1175.26 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF HILLTOP ROAD; THENCE ALONG SAID SOUTH RIGHT-OF-WAY LINE THE FOLLOW TWO (2) COURSES:

1. THENCE S36°30'00"E, 180.00 FEET;
2. THENCE S50°03'47"E, 1359.35 FEET TO A LINE 63.72 FEET WEST OF AND PARALLEL WITH THE EAST LINE OF THE WEST HALF OF THE NORTHEAST QUARTER OF SAID SECTION 6; THENCE S00°17'50"W ALONG SAID LINE, 165.42 FEET TO THE POINT OF BEGINNING,

LESS AND EXCEPT THAT PORTION CONVEYED BY SPECIAL WARRANTY DEED RECORDED OCTOBER 3, 2023 UNDER RECEPTION NO. 2023042659,

COUNTY OF DOUGLAS, STATE OF COLORADO.

### PARCEL 2

A PARCEL OF LAND LOCATED IN THE SOUTHWEST QUARTER AND THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF DOUGLAS, STATE OF COLORADO, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

(THE BASIS OF BEARINGS FOR THIS DESCRIPTION IS SOUTH 00 DEGREES 00 MINUTES 27 SECONDS WEST ALONG THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 6)

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 6; THENCE SOUTH 88 DEGREES 58 MINUTES 23 SECONDS EAST ALONG THE NORTH LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 6 A DISTANCE OF 1426.97 FEET TO A POINT ON THE EAST BOUNDARY LINE OF HIDDEN VILLAGE FILING NUMBER ONE, A SUBDIVISION FILED WITH THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED APRIL 29, 1966 AT RECEPTION NO. 125234; THENCE SOUTH 01 DEGREES 03 MINUTES 11 SECONDS WEST ALONG THE EAST BOUNDARY LINE OF SAID HIDDEN VILLAGE FILING NUMBER ONE A DISTANCE OF 12.62 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED DECEMBER 26, 1995 AT RECEPTION NO. 9561360 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE, SAID POINT BEING THE POINT OF BEGINNING; THENCE SOUTH 88 DEGREES 26 MINUTES 07 SECONDS EAST ALONG THE SOUTH LINE OF THE PARCEL DESCRIBED AT SAID RECEPTION NO. 9561360 A DISTANCE OF 1408.26 FEET TO THE SOUTHEAST CORNER OF SAID PARCEL, SAID POINT ALSO BEING THE SOUTHWEST CORNER OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED DECEMBER 26, 1995 AT RECEPTION NO. 9561359 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE; THENCE SOUTH 89 DEGREES 42 MINUTES 56 SECONDS EAST ALONG THE SOUTH LINE OF THE PARCEL OF LAND DESCRIBED BY DEED RECEPTION NO. 9561359 AND THE SOUTH LINE OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED JUNE 8, 1995 AT RECEPTION NO. 9525595 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE A DISTANCE OF 1148.46 FEET TO THE SOUTHWEST CORNER OF A PARCEL OF

LAND DESCRIBED BY DEED RECORDED MAY 5, 1995 AT RECEPTION NO. 9519762 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE; THENCE NORTH 00 DEGREES 57 MINUTES 00 SECONDS EAST ALONG THE WEST LINE OF THE PARCEL OF LAND DESCRIBED AT SAID RECEPTION NO. 9519762 AND THE WEST LINE OF A PARCEL OF LAND DESCRIBED BY DEED RECORDED MAY 5, 1995 AT RECEPTION NO. 9519760 FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE A DISTANCE OF 176.40 FEET, SAID POINT ALSO BEING ON THE SOUTHWESTERLY RIGHT OF WAY LINE OF HILLTOP ROAD; THENCE SOUTH 49 DEGREES 24 MINUTES 37 SECONDS EAST ALONG THE SOUTHWESTERLY RIGHT OF WAY LINE OF HILLTOP ROAD AS DESCRIBED AT SAID RECEPTION NO. 9519760 (AND ALONG SAID DESCRIBED COURSE EXTENDED SOUTHEASTERLY) A DISTANCE OF 272.68 FEET TO A POINT ON THE NORTH LINE OF LOT 98, HIDDEN VILLAGE FILING NO. 4, A SUBDIVISION FILED WITH THE DOUGLAS COUNTY CLERK AND RECORDER AND RECORDED NOVEMBER 12, 1968 AT RECEPTION NO. 131583; THENCE NORTH 89 DEGREES 42 MINUTES 56 SECONDS WEST ALONG THE NORTH LINE OF SAID LOT 98 A DISTANCE OF 118.17 FEET TO THE NORTHWEST CORNER OF SAID LOT 98; THENCE SOUTH 01 DEGREES 16 MINUTES 51 SECONDS WEST ALONG THE WEST LINE OF SAID HIDDEN VILLAGE FILING NO. 4 A DISTANCE OF 2633.91 FEET TO THE SOUTHWEST CORNER OF LOT 102 OF SAID HIDDEN VILLAGE FILING NO. 4, SAID POINT ALSO BEING ON THE NORTH LINE OF LOT 58-A, HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED APRIL 13, 2005 AT RECEPTION NO. 2005032337; THENCE NORTH 89 DEGREES 04 MINUTES 32 SECONDS WEST ALONG THE NORTH LINE OF SAID HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT A DISTANCE OF 950.95 FEET TO THE NORTHWEST CORNER OF LOT 59-A OF SAID HIDDEN VILLAGE FILING NO. 2, 2ND AMENDMENT; THENCE NORTH 89 DEGREES 01 MINUTES 58 SECONDS WEST ALONG THE NORTH LINE OF HIDDEN VILLAGE FILING NUMBER TWO, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED FEBRUARY 20, 1966 AT RECEPTION NO. 127014 A DISTANCE OF 1686.96 FEET TO THE SOUTHEAST CORNER OF TRACT B OF HIDDEN VILLAGE FILING NUMBER ONE AMENDED, A SUBDIVISION FILED IN THE DOUGLAS COUNTY CLERK AND RECORDER'S OFFICE AND RECORDED AUGUST 2, 1966 AT RECEPTION NO. 125878; THENCE NORTH 01 DEGREES 03 MINUTES 11 SECONDS EAST ALONG THE EAST BOUNDARY OF SAID HIDDEN VILLAGE FILING NUMBER ONE AMENDED AND THE EAST LINE OF SAID HIDDEN VILLAGE FILING NUMBER ONE A DISTANCE OF 2634.49 FEET TO THE POINT OF BEGINNING.

NOT FOR  
CONSTRUCTION

DATE:  
11/15/2024 SUBMITTAL  
12/03/2024 SUBMITTAL  
13/12/2024 SUBMITTAL  
07/02/2025 SUBMITTAL

SHEET TITLE:  
DEVELOPMENT  
STANDARDS

2 OF 3

## LOT STANDARDS

| MINIMUM SETBACKS FROM <sup>1,2,3</sup> : |                                                                                                |                                                                                                |  | MAXIMUM BUILDING HEIGHT <sup>4</sup> |
|------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--|--------------------------------------|
|                                          | SIDE LOT LINE                                                                                  | REAR LOT LINE                                                                                  |  |                                      |
|                                          | 5'                                                                                             | 15'                                                                                            |  | PRINCIPAL: 35'<br>ACCESSORY: 20'     |
|                                          | 50' FROM PLANNING AREA-A;<br>100' FROM EXTERNAL PROPERTY LINES<br>TO THE WEST, SOUTH, AND EAST | 50' FROM PLANNING AREA-A;<br>100' FROM EXTERNAL PROPERTY LINES<br>TO THE WEST, SOUTH, AND EAST |  | 35'                                  |
|                                          | 15'                                                                                            | 15'                                                                                            |  | 35'                                  |

THE SETBACK IS MEASURED FROM THE LOT LINE TO THE WALL OF THE STRUCTURE HORIZONTALLY AND PERPENDICULAR TO THE LOT LINE.

A CORNICE, CANOPY, EAVE, FIREPLACE, WING WALL OR SIMILAR ARCHITECTURAL FEATURE MAY EXTEND 3 FEET INTO A REQUIRED SETBACK.  
A COVERED OR UNCOVERED DECK OR PORCH MAY EXTEND 6 FEET INTO A REQUIRED SETBACK, EXCEPT FOR A SIDE SETBACK.

FOUNDATION ANCHORING AND FOUNDATION REPAIR SYSTEMS MAY BE LOCATED WITHIN A REQUIRED SETBACK.

A BUILDING PERMIT SHALL NOT BE ISSUED FOR ANY STRUCTURE WHICH IS TO BE LOCATED WITHIN AN EASEMENT UNLESS WRITTEN APPROVAL BY THE EASEMENT HOLDER(S) IS PROVIDED.  
UTILITY DISTRIBUTION LINES AND RELATED EQUIPMENT COMMONLY LOCATED ALONG PROPERTY LINES MAY BE LOCATED WITHIN A REQUIRED SETBACK. A NEIGHBORHOOD SUBSTATION OR GAS REGULATOR/METER STATION SHALL MEET THE

, STRUCTURES THAT DO NOT REQUIRE BUILDING PERMITS MAY ENCROACH INTO A REAR SETBACK. ANY ENCROACHMENT INTO AN EASEMENT REQUIRES PERMISSION FROM THE EASEMENT HOLDER.  
THE MAXIMUM BUILDING HEIGHT SHALL NOT APPLY TO BELFRIES, CUPOLAS, PENTHOUSES OR DOMES NOT USED FOR HUMAN OCCUPANCY, ROOF-MOUNTED CHURCH SPIRES, CHIMNEYS, SKYLIGHTS, VENTILATORS, WATER TANKS, SILOS, PARAPET WALLS, CORNICES, ANTENNAS, UTILITY POLES, AND NECESSARY MECHANICAL APPURTENANCES USUALLY CARRIED ABOVE THE ROOF LEVEL.

**RAMBLEWOOD PD**

HILLTOP ROAD

DOUGLAS COUNTY, COLORADO

OWNERS:  
HILLTOP JAM, LLC  
2554 ASPEN SPRINGS DRIVE  
PARK CITY, UT 84060  
435.649.6686  
BRADLEY A WHITTLESEY &  
JOAN V WHITTLESEY  
4700 E PRINCETON AVE  
ENGLEWOOD, CO 80113  
720.205.6441

DEVELOPER:  
MILLER UNITED REAL ESTATE, LLC  
6009 E BELLEVUE AVE, STE 300  
GREENWOOD VILLAGE, CO 80111  
303.886.2838

NOT FOR  
CONSTRUCTION

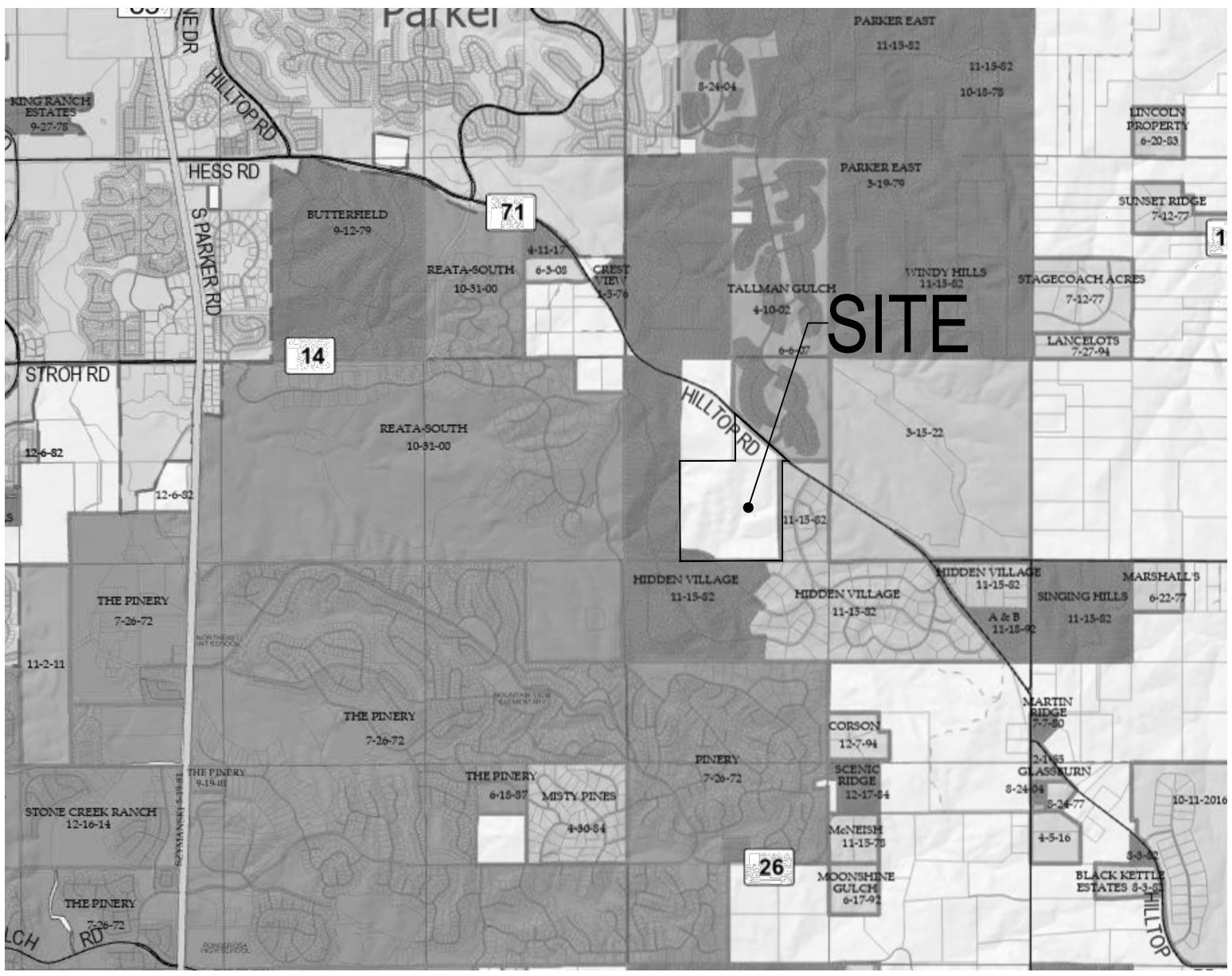
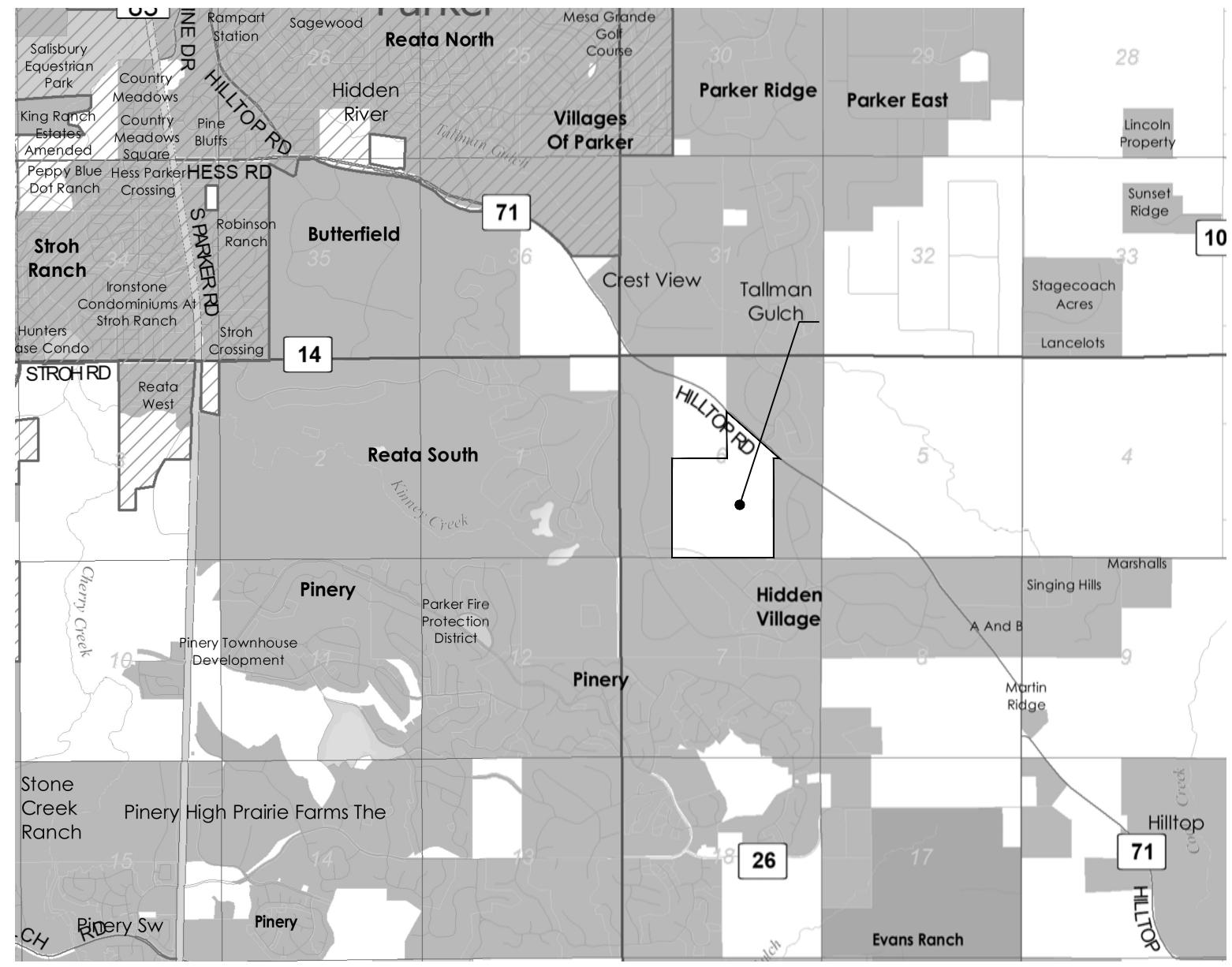
DATE:  
11/15/2024 SUBMITTAL  
12/3/25 UPLIFT AL  
1/3/25 UPLIFT AL  
07/02/2025 SUBMITTAL

SHEET TITLE:  
DEVELOPMENT  
PLAN

3 OF 3

# RAMBLEWOOD PLANNED DEVELOPMENT

A PART OF THE NORTHEAST 1/4 AND THE SOUTH HALF OF SECTION 6, TOWNSHIP 7 SOUTH, RANGE 65 WEST  
OF THE 6TH P.M., DOUGLAS COUNTY, CO  
176.79 +/- ACRES - 70 DWELLINGS - ZR2024-031



|  | GROSS DENSITY | DWELLING UNITS |
|--|---------------|----------------|
|  | 0.88 DU / AC  | 68             |
|  | 0.02 DU / AC  | 2              |
|  | 0 DU / AC     | 0              |
|  | 0 DU / AC     | 0              |
|  | 0 DU / AC     | 0              |
|  | 0.39 DU / AC  | 70             |

ACCESS POINTS SHOWN ARE CONCEPTUAL. FINAL ALIGNMENTS AND CIRCULATION WILL BE DETERMINED THROUGH THE SUBDIVISION FINAL PLAT

THIS PLAN DEPICTS THE GENERAL LOCATION AND SIZE OF PARKS, TRAILS, AND OPEN SPACE AREAS. FINAL SIZE, LOCATION, ALIGNMENT, AND

