



Lone Tree City Council Agenda Tuesday, April 5, 2016

Meeting Location: City Council Meeting Room, Lone Tree Civic Center, 8527 Lone Tree Parkway.

Meeting Procedure: The Lone Tree City Council and staff will meet in a public Study Session at 4:30pm. At 6:00pm and following the meeting, if necessary, the Council Meeting will adjourn and convene in Executive Session. If an Executive Session is not necessary, Council will recess for dinner. The Regular Session will be convened at 7:00pm. Study Sessions and Regular Sessions are open to the public, Executive Sessions are not. Comments from the public are welcome at these occasions: 1. Public Comment (brief comments on items not scheduled for a public hearing) 2. Public Hearings. To arrange accommodations in accordance with the Americans with Disabilities Act at public meetings, please contact the City Clerk at least 48 hours prior to the meeting.

4:30pm Study Session Agenda

1. Sales Tax Simplification Update – Geoff Wilson and Sam Mamet/CML
 2. Teen Court Update
 3. Mobile Food Vending Follow-up
-

6:00pm Executive Session Agenda

1. Roll Call
 2. Executive Session
-

7:00pm Regular Session Agenda

3. Opening of Regular Meeting/Pledge of Allegiance
 4. Amendments to the Agenda and Adoption of the Agenda
 5. Conflict of Interest Inquiry
 6. Public Comment
 7. Announcements
 8. Consent Agenda
 - a. Minutes of the March 15, 2016 Regular Meeting
 - b. Claims for the Period of March 7-28, 2016
 9. Community Development
 - a. Approval of Tract GG Preliminary Plan and Sub-Area Plan Amendment, RidgeGate Sec. 22 Filing 1 Project SB16-12R
 10. Council Comments
 11. Adjournment
-

City of Lone Tree Upcoming Events

More info available at www.cityoflonetree.com and www.lonetreeartscenter.org

- Arts in the Afternoon: Broadway Favorites, Wednesday, April 6, 1:30 p.m., LTAC Main Stage
- National Geographic Live: Coral Kingdoms and Empires of Ice, April 8, 8:00 p.m., LTAC Main Stage
- Passport to Culture: Red Riding Hood, April 17th, 1:30 p.m. and SF Family Tree show, 4:00 p.m. LTAC Event Hall

**MINUTES OF A REGULAR MEETING
OF THE COUNCIL OF THE
CITY OF LONE TREE
HELD
March 15, 2016**

A regular meeting of the Council of the City of Lone Tree was held on Tuesday, March 15, 2016, at 6:00 p.m., at the Lone Tree City Council Chambers located at 8527 Lone Tree Parkway, Lone Tree, Colorado 80124.

Attendance

In attendance were:

James D. Gunning, Mayor
Jacqueline Millet, Mayor Pro Tem
Harold Anderson, Council Member
Kim Monson, Council Member
Susan Squyer, Council Member

Also in attendance were:

Seth Hoffman, City Manager
Jennifer Pettinger, City Clerk
Steve Hebert, Deputy City Manager
Torie Brazitis, Assistant to the City Manager
Jeff Holwell, Economic Development Director
Chief Jeffery Streeter, Lone Tree Police Department
Kristin Baumgartner, Finance Director
Kelly First, Community Development Director
Lisa Rigsby Peterson, Lone Tree Arts Center Director
Gary White, City Attorney, White, Bear and Ankele, P.C.
Neil Rutledge, Assistant City Attorney, White, Bear and Ankele, P.C.
John Cotten, Public Works Director, TTG Corp.

Call to Order

Mayor Gunning called the meeting to order at 6:11 p.m., and observed that a quorum was present.

Executive Session

Mayor Gunning announced City Council intends to convene in Executive Session. Neil Rutledge, Assistant City Attorney, stated the Executive Session was to discuss the purchase, acquisition, lease, transfer, or sale of real, personal, or other property

interest under C.R.S. Section 24-6-402(4)(a) concerning two separate properties and as a result of these discussions they may also be determining positions relative to matters that may be subject to negotiations, developing strategy for negotiations, and/or instructing negotiators, under C.R.S. Section 24-6-402(4)(e). Council Member Squyer moved, Council Member Anderson seconded, for City Council to recess and convene in Executive Session for the reasons stated. The motion passed with a 5 to 0 vote.

Council adjourned to an Executive Session at 6:12 p.m.

The Executive Session was adjourned at 6:22 p.m.

Mayor Gunning reconvened the meeting in Regular Session at 7:00 p.m., following a short recess.

Pledge of Allegiance

Mayor Gunning led those assembled in reciting the Pledge of Allegiance.

Amendments to the Agenda

There were no amendments to the agenda.

Conflict of Interest

There was no conflict of interest.

Public Comment

Bill Robertson, 9278 E. Aspen Hill Circle, congratulated the unopposed candidates: Wynne Shaw, Cathie Brunnick and Jackie Millet.

Presentations

Welcome Home Vietnam Veteran's Day Proclamation

Mayor Gunning read and signed the Welcome Home Vietnam Veteran's Day Proclamation

Colorado Asphalt Pavement Association (CAPA) Award

John Cotten presented the Colorado Asphalt Pavement Association (CAPA) Award to Council.

Announcements

Nikki Tripler, Youth Commissioner, gave Council an update on the Youth

Commission.

Mayor Gunning announced upcoming events.

Consent Agenda

Mayor Gunning noted the following items on the Consent Agenda, which consisted of:

- *Minutes of the March 1, 2016 Regular Meeting*
- *Claims for the Period of February 22 – March 7, 2016*
- *January 2016 Treasurer's Report*

Council Member Squyer moved, Council Member Anderson seconded, to approve the Consent Agenda. The motion passed with a 5 to 0 vote.

Community Development

Approval of RidgeGate Filing 19, Lot 3 "Urban Villas" Preliminary Plan #SB15-98R

Jennifer Drybread, Senior Planner, introduced the item. Keith Simon, Coventry Development, spoke about the project and introduced the applicant; John Keith, Harvard Communities, and Rich Laws, Berkley Homes, who also spoke about the project.

Council Member Monson moved, Mayor Pro Tem Millet seconded, to approve RidgeGate Filing 19, Lot 3 "Urban Villas" Preliminary Plan #SB15-98R subject to 1. Final approval by the Lone Tree Public Works Department, 2. A cash-in-lieu of local parks in the amount of \$16,388, required prior to the issuance of the first residential building permit for this development, 3. The applicant constructing a 4-foot metal fence above the retaining walls for safety purposes and the added requirement for "Private Drive" be added to the monument signs. The motion passed with a 5 to 0 vote.

Administrative Matters

Resolution 16-10, APPOINTING A MEMBER TO THE ARTS COMMISSION

Council Member Squyer and Council Member Anderson introduced the item.

Council Member Squyer moved, Council Member Anderson seconded, to approve **Resolution 16-10, APPOINTING A MEMBER TO THE ARTS COMMISSION** (Damian Gonzalez). The motion passed with a 5 to 0 vote.

Adjournment

There being no further business, Mayor Gunning adjourned the meeting at 8:07 p.m.

Respectfully submitted,

Jennifer Pettinger, CMC, City Clerk

DRAFT



CITY OF LONE TREE

FINAL STAFF REPORT

TO: Mayor Gunning and City Council

FROM: Kelly First, Community Development Director
Jennifer Drybread, Senior Planner

DATE: March 16, 2016

SUBJECT: RidgeGate Section 15, Filing 19, Lot 3-A
Preliminary Plan, Project File #SB15-98R

Owner:
RidgeGate Investments, Inc.
10270 Commonwealth St., Suite B.
Lone Tree, CO 80124

Representative:
Caisson Investments, Inc.
Jeffrey Willis
10630 E. Bethany Drive, Suite B
Aurora, CO 80014

Planning Commission Meeting Date:
City Council Meeting Date:

February 23, 2016
March 15, 2016

A. CITY COUNCIL ACTION:

The City Council unanimously approved the application, subject to the following conditions:

1. Final approval by the Lone Tree Public Works Department
2. A cash-in-lieu of local parks in the amount of \$16,388, required prior to the issuance of the first residential building permit for this development.
3. The applicant constructing a 4-foot metal fence above the retaining walls for safety purposes.
4. The monument sign(s) for the project should include the words, "private drive", intended to indicate that the motor court is privately owned and maintained.



CITY OF LONE TREE STAFF REPORT

Project Summary

Date: April 5, 2016 City Council Meeting

Project Name: RidgeGate Section 22, Filing 1, Preliminary Plan
(Tract GG, also known as the Retreat at RidgeGate)

Location: The property is located in RidgeGate, in a small valley located generally southwest of the I-25/RidgeGate Parkway interchange - southwest of the RidgeGate Commons development and south of the Montecito residential neighborhood.

Project Type / #: Preliminary Plan, Project SB16-12R

Staff Contacts: Kelly First, Community Development Department Director
Jennifer Drybread, Senior Planner

Meeting Type: Public Meeting

Summary of Request:

1. Preliminary Plan (step one in a two-step subdivision process); subdividing 48.95 acres into 50 residential lots and 14 tracts; and
2. Sub-Area Plan amendment (amending the existing RidgeGate Residential West Village Sub-Area Plan to include more specific guidelines and standards for how the property is developed).

Planning Commission Recommendation:

Unanimous recommendation for approval, with staff's recommended conditions.

Suggested Action:

Approval, subject to conditions in the staff report.



**CITY OF LONE TREE
STAFF REPORT**

TO: City Council
James Gunning, Mayor

FROM: Kelly First, Community Development Director
Jennifer Drybread, Senior Planner

DATE: March 30, 2016

FOR: April 5, 2016 City Council Meeting

SUBJECT: RidgeGate Section 22, Filing 1, Preliminary Plan
(Also known as Tract GG or The Retreat at RidgeGate)
Project SB16-12R

Owner:
RidgeGate Investments, Inc.
10270 Commonwealth St., Suite B.
Lone Tree, CO 80124

Representative:
Century Communities, Lisa Albers
8390 E. Crescent Pkwy, Suite 650
Greenwood Village, CO 80111

Planning Commission Meeting Date: March 22, 2016
City Council Meeting Date: April 5, 2016

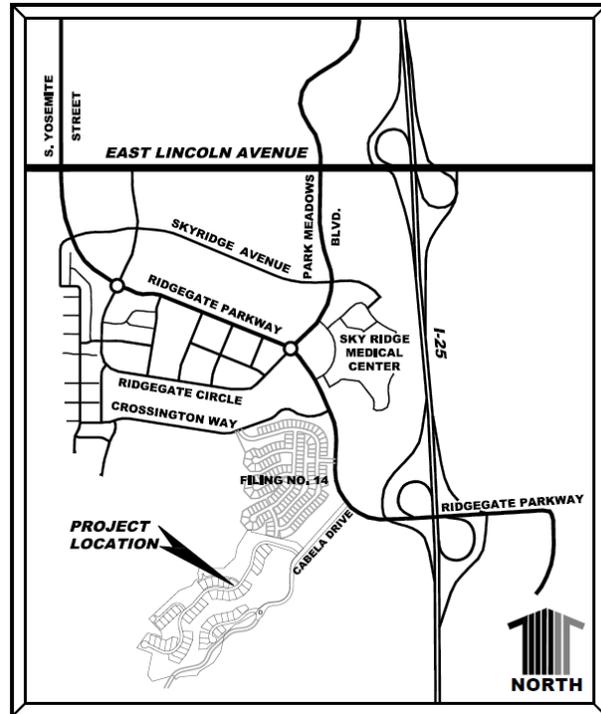
B. REQUEST

The nature of this application is two-fold:

1. Preliminary Plan (step one in a two-step subdivision process); subdividing 48.95 acres into 50 residential lots and 14 tracts; and
2. Sub-Area Plan amendment (amending the existing RidgeGate Residential West Village Sub-Area Plan to include more specific guidelines and standards for how the property is developed).

C. LOCATION

The property is located in RidgeGate, in a small valley located generally southwest of the I-25/RidgeGate Parkway interchange - southwest of the RidgeGate Commons development and south of the Montecito residential neighborhood.



D. BACKGROUND

The previous submittal.

This property was the subject of a Preliminary Plan and Sub-Area Plan amendment application processed in 2015 and early 2016. That application proposed 70 lots, and was heard by the Planning Commission on October 13, 2015 and continued to October 27, 2015, when a motion to recommend approval of the project resulted in a split 3-3 vote. The application went to the City Council without a recommendation.

The City Council heard the application on December 1, 2015 and continued the application to January 19, 2016, expressing concerns regarding the intensity of development relative to the overall massing, the need for a transition to the bluffs, and the extent of retaining walls. Subsequently, the applicant reduced the number of lots from 70 to 65. At the Council's meeting on January 19th, the City Council continued to express concerns regarding the same issues. Prior to the Council taking action on the application, Century Communities (the applicant), withdrew the application.

The current application. This application by Century Communities proposes a revised plan that is intended to respond to previous concerns. The current application differs from the previous application heard by the City Council on January 19th in several ways including:

- Total number of lots proposed has been reduced from 65 to 50 lots.
- Wider gaps between clusters of development in several areas (including the removal of a tier of homes that were farther up on the bluffs and close to Montecito)

- A reduction in the number and height of retaining walls
- Overall wider lots
- A change to the location and nature of local parks
- Depicting the road segment in Tract GG that connects to Montecito as for emergency access only
- Revising the access between cul-de-sacs to be a 10-foot wide crusher fine path for access to the underlying water lines, for access to the regional trail connector, and for emergency access when snow is not present
- Deletion of the requirement for ranch style homes on selected lots

The attached project narrative and overlay plan provides more specific comparisons between the current and previous plans.

Underlying Zoning. The proposed residential use is permitted by zoning in the RidgeGate Planned Development. The property is zoned PD and is within a Residential-Mixed Use (R/MU) Planning Area, a Commercial-Mixed Use (C/MU) Planning Area, and a small portion of an Open Space (OS) Planning Area. Refinements to planning area boundaries are permitted through the platting process, provided there is no net loss of open space to the PDD (there is no net loss of open space with this application). A rezoning application is not required in association with this development. The zoning does not prescribe or designate the maximum number of dwelling units planned for this area.

The property is predominantly part of Planning Area 11 (Residential Mixed Use), and is governed by the planning framework of the RidgeGate PDD, 4th amendment and standards outlined in Sec. 4.1.9 of the RidgeGate Residential West Village Sub-Area Plan. Given the natural topography, drainage and vegetation of the site, additional studies and considerations are called for in the review of development proposed in this area (see attachment for complete excerpt from the Sub-Area Plan).

The Sub-Area Plan states that, “All development proposed within Planning Area #11 is subject to review by the City of Lone Tree Planning Commission and approval by the City Council prior to or concurrent with platting.” Through the Sub-Area Plan, the Planning Commission and City Council are expressly able to review:

...building massing (which may include height limitations and/or low-profile and stair-stepped buildings); architectural elevations; materials; colors; landscaping; fencing and lighting. Other information necessary to determine the overall design, character and quality of the project for consistency with the Sub-Area Plan, the City of Lone Tree Design Guidelines, and the overall goal of providing a natural transition to the bluffs may be required.

The Sub-Area Plan also calls for a Wildfire Hazard Assessment, and that design of the development is prepared in consultation with the Division of Wildlife.)

See attached existing RidgeGate Residential West Village Sub-Area Plan excerpt.

E. DESCRIPTION:

Site Characteristics. The 48.95-acre property is located in a sloping valley bounded on three sides by the bluffs and on the north side by the residential community of Montecito. The Cottonwood Creek drainage runs from south to north through the property. Gambel Oak (scrub oak) and some Cottonwood trees line the drainage, and Gambel Oak can also be found on the side slopes principally at the south end of the property. Otherwise, native grasses blanket the bluff side slopes. The high lot corner has an elevation of 6,187 feet with a low point at the bottom of the existing 100-year flood detention pond of 6,080 feet. A local trail connector to the East-West Regional Trail is located on the property's eastern boundary.

No federally threatened plant species were found on the property, based on a 2014 Natural Resources Assessment of the property conducted by ERO Resource Corporation for the applicant (see attachment). One wetland was identified in the northeastern portion of the site (see Figure 2, Wetland 1 of the assessment). This wetland is located in the 100-year flood retention pond that the District will own and maintain.

Preliminary Plan Overview. The proposed Preliminary Plan provides for the subdivision of land into 50 single-family detached lots and 14 tracts, with development proposed on either side of the Cottonwood Creek drainage. In comparison to the nearby Montecito residential community the proposed development would have larger lots and homes, on average, and the property would have a density less than 1/3 that of Montecito:

	Montecito	Tract GG @ 70 lots	Tract GG @ 50 lots
Average Lot SF	6,616	9,862	10,600
Average House SF	2,261-3,682	2,700 -4,400	2,700 -4,400
Average Lot Coverage	44.91%	36.00%	33.50%
DUs/Acre	3.40	1.45	1.02
Total Project Area (ac)	41.72	48	48.9
Total # of Lots	142	70	50

Tract D is the Cottonwood Creek drainage that runs through the valley, and the preservation of which was the subject of considerable discussion with the RidgeGate Design Review Committee (DRC) and Planning staff. The applicant addressed DRC and staff concerns by largely preserving this drainage and the large stands of Gambel Oak along its center. Tract D is now proposed as 10.431 acres (previously 9.6 acres), and provides habitat for small mammals and birds. It will be platted for the purpose of subsequently conveying the land to the Rampart Range Metropolitan District for maintenance. The District will prune the vegetation as necessary for fire mitigation, as called for in the applicant’s Wildfire Management Plan (see attachment).

Tract E adjoins the main entrance into the development. It was the subject of concern by adjacent residents in Montecito. The applicant is proposing landscaping within this tract to help screen views of traffic and car lights along this access road (the Park Plan shows landscaping intent and the Final Plat will include the landscape plan for the development).

Tracts C, F, G, and L are planned for small passive park areas (see attached Park Plan), and will be maintained by the Homeowners Association. Note: Tract C is not indicated on the Park Plan, but constitutes the trail between lots 21 and 48.

The required local park land dedication is 0.74 acres. The applicant is providing 0.88 acres. Staff reserves the right to make a determination that they have met the local park dedication requirement after we receive the design of these spaces in the Final Plat process.

Tract N includes a pump house station for water service to the property. The pump house location was initially a subject of concern by neighboring residents in Montecito. As a result, the pump house was relocated to be sited into a hill, east of the Cabela road access, where visual and noise impacts to Montecito residents will be reduced.

The primary access to the development is from Cabela Drive, which will extend to serve the lots east of the drainage (and ultimately extend to serve future development to the south as further described in this report). A new public street intersection with Cabela Drive will serve lots west of the drainage. The streets in the proposed development are designed to meet RidgeGate Street Standards, with the exception of the narrower private drives that are identified as Tracts A and B of the Preliminary Plan. These private drives would be maintained by the HOA.

A view corridor in this area is identified on the RidgeGate Planned Development, and is shown on the vicinity map of the first sheet of the Preliminary Plan, and on the (50/65) lot comparison sheet. Though the entrance road is partially located here, all proposed housing and structures are located outside the established view corridor.

Service Providers:

Water:	Southgate Water District
Sanitation:	Southgate Sanitation District
Police:	Lone Tree Police
Fire:	South Metro Fire Rescue Authority
Metro District:	Rampart Range Metropolitan District

F. ROADWAY NETWORK CONNECTIONS AND TRAFFIC IMPACT

Alicante Road Connection to Montecito. This preliminary plan proposes the road connection between Tract GG and Montecito via Alicante Road as an emergency/pedestrian-only connection. The applicant is proposing that in response to some Montecito residents, who have expressed opposition to a full public access based on concerns about cut-through traffic into their neighborhood from Tract GG. Planning and Public Works staff continue to support a full access connection between Montecito and Tract GG for several reasons.

- Alicante Road was designed and constructed to eventually connect with future development, and was platted as part of the Montecito neighborhood. Unlike a cul-de-sac, the street was intentionally designed as a connection between neighborhoods.
- Connections between neighborhoods provide the residents of connecting neighborhoods more choice and efficiency in trip routes.
- It enhances emergency response time (though in this case it is not required by South Metro Fire Rescue).
- It provides for more efficient service delivery such as snow plowing and is more efficient for other service providers.

While a grid network of connected streets is not practical in some areas due to topographic constraints, connections between neighborhoods are supported, where possible. Connections are addressed in the City's Comprehensive Plan, the RidgeGate zoning intent language, and the RidgeGate roadway standards:

Lone Tree Comprehensive Plan:

"Provide safe and convenient vehicular, pedestrian, and bicycle access and connections between neighborhoods and destinations throughout the City for people of all ages and abilities."

RidgeGate PDD zoning:

"Emphasis is placed on connecting neighborhoods and individual uses with each other by employing a modified urban grid form with a hierarchy of through streets, and sharing access drives between projects. Gated residential communities are not in keeping with interconnectedness and public access and are generally discouraged, except in locations where neighborhood interconnectivity is prohibited by topography."

RidgeGate Roadway Standards:

4.28 Encourage Connectivity

4.28.1 Cul-de-sacs and dead-end streets do not contribute to connectivity or the ease of emergency response and are therefore discouraged."

Traffic Impact Analysis:

According to the Traffic Impact Analysis conducted by LSC Transportation Consultants for the applicant (see attached), Montecito residents would generate the bulk of the traffic at this connection. The Traffic Impact Analysis shows minimal traffic impact generated by residents from the proposed development through Montecito. According to the study, there would be approximately 1-2 trips per hour generated during peak AM and peak PM periods, and an approximately 40 trips generated over a 24-hour weekday period from the proposed development into and out of Montecito (with about half entering and half exiting the site). *Note: the Traffic Impact Analysis has not been updated, so these trip numbers will now be less as the total number of dwelling units for Tract GG has been reduced from 70 units to 50 units.*

Montecito residents would generate approximately 250 trips per 24-hour period, presumably to use this connection to get to the traffic signal at Cabela Drive and RidgeGate Parkway and head north or west on RidgeGate Parkway. The total trips in and out of Montecito at the proposed connection between neighborhoods would be approximately 290

trips per 24-hour period (250 + 40). That equates to the number of trips generated by approximately 29 homes (at the estimated 10 trips per day per household). 290 trips is less than some of the residents on Ladera Drive in Montecito likely experience today and is about the same some number as other residents on Montecito Drive likely experience today. It is not a high traffic number for a residential street, though Montecito residents who live close to the connection would see more trips per day than they do now if the connection is constructed.

Residents in Montecito have also expressed concern for additional cut-through traffic from development on top of the bluffs in RidgeGate. In response to that issue, the applicant's traffic engineer provided the following reply in a follow up email:

The traffic study did not assume cut-through traffic from future Bluffs homes through Montecito because we expect the demand for cut-through trips to be low. Cut-through traffic typically occurs because a driver determines it is faster, easier or both faster and easier to turn from a collector or arterial street onto a local street to connect to another collector or arterial street rather than using the collector/arterial grid between their origination and their destination.... We would not expect more than a token number of cut-through trips as long as the Ridgegate/Cabela intersection is operating at acceptable levels of service because a large percentage of cut-through traffic is drivers trying to bypass gridlocked intersections or corridors. The Ridgegate Tract GG traffic study and the much larger Cabela (Tract O) traffic study both estimate acceptable operations at the signalized intersection of Ridgegate Parkway and Cabela Drive through 2035.

For the reasons stated above, staff (including Public Works staff) recommends that the connecting road from Tract GG to Montecito via Alicante Road be depicted on the Preliminary Plan as a public through street. **This is proposed as a recommended condition of approval (#1).**

Public Works staff and the Fire District have reviewed the applicant's emergency-only access design option and would not object to that design, should the Council decide that the road should be restricted as emergency-only.

As proposed by the applicant and shown on the plan, the road segment within Tract GG would be privately owned and maintained by the Tract GG HOA. Public Works staff, in their referral response, is also recommending that, if the road is approved as emergency-only, then:

...Alicante, south of Montecito Drive, be vacated as Public Road ROW. The section of Alicante would then be considered a private roadway, and the City would no longer maintain nor plow that section of Alicante Drive. The Montecito HOA then would need to take over maintenance and plowing for that section of Alicante Drive.

Century Communities is in discussions with the Montecito HOA to address maintenance responsibilities.

Path/secondary point of access. A secondary point of access is required by the South Metro Fire Rescue when residential development exceeds 39 dwelling units along any street extension. Since the applicant now proposes 38 units for the main access road into the development, a secondary access connecting the two cul-de-sacs is no longer required. However, a 10-foot wide crusher fine path connecting the two cul-de-sacs is being proposed to provide access to the underlying water mains serving the development. This path will also serve as an emergency access road, primarily late spring through early fall, when snow is not on the road. This will help to provide fire access during the driest months of the year when wildfire danger is typically highest.

It will be constructed so that it is capable of supporting a minimum 15,000 lb. emergency vehicle, as recommended by South Metro Fire Rescue Authority. It is likely that residents in the south portion of the development will use this path on a frequent basis when weather permits it, if residents find it a more convenient means to get to Cabela Drive or the regional trail connector. The HOA will be required to maintain this path, but will not plow snow in the winter months.

Extension of Cabela Drive. Cabela Drive is planned to eventually extend south beyond its alignment shown with this development, to provide access to future residential development on the mesa tops. The land is zoned for up to 346 units, which includes zoning in the RidgeGate PDD and Southridge Preserve PD. According to the applicant's Traffic Impact Analysis, the future development on the mesa tops will generate approximately 3,300 trips per day (at approximately 10 trips per household).

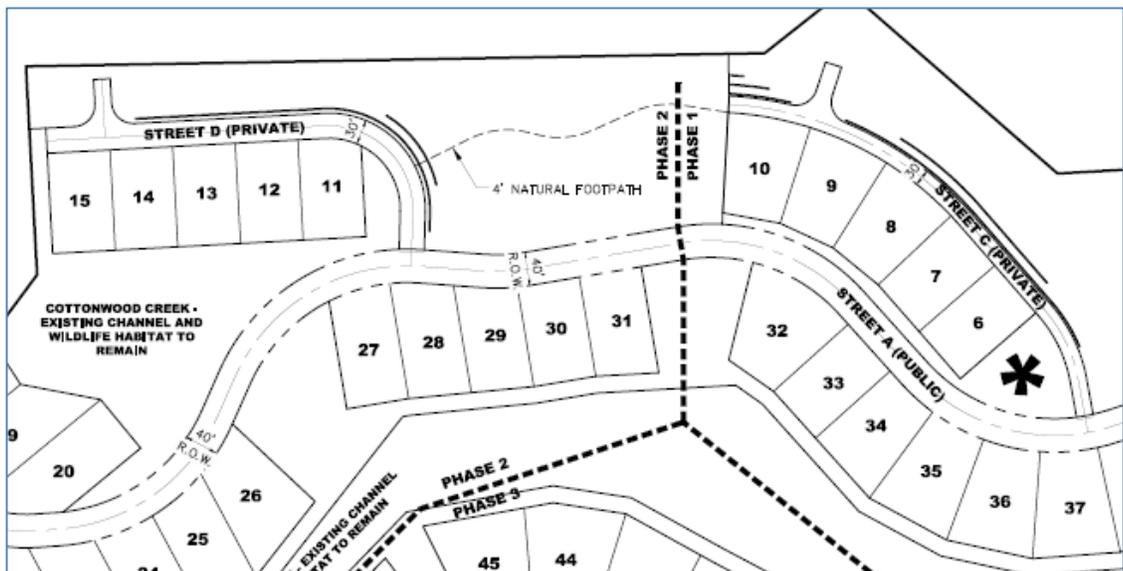
Preliminary plans for the final roadway extension alignment have been developed showing that the homes will be in close proximity to this extension (as shown on Sheet 6 of the Preliminary Plan). Staff feels it is imperative that future residents are given full disclosure of the roadway extension prior to purchasing their lots. Staff recommends, as a condition of approval, that the applicant commit to posting a map in the sales office

and in marketing materials showing the roadway extension and describing the 3,300 average daily trips expected on that road.

Staff has also recommended that signs be erected at the temporary end of the road and at other locations along the road facing the lots, stating that this road will eventually be constructed for the purpose of providing access for up to 346 residential homes zoned for development on the mesa tops. Signs could be designed and located in a way to be readily visible but unobtrusive to homeowners. These noticing requirements are added as a recommended condition of approval.

G. PUBLIC/PRIVATE STREET ISSUE

The applicant proposes two private drives along the slope on the western side of the property, (Streets C and D on the Preliminary Plan below). These drive sections are designed be 20-feet to 30-feet wide with no sidewalk. The public street standard section for this area would be 40-foot wide (28-foot driving surface), with a sidewalk on one side.



Staff initially supported private streets for this portion of the site to reduce the amount of retaining walls and the visual impacts of walls, which has been a concern throughout the review process. Also, the Comprehensive Plan discusses minimizing the impacts of constructing roads in geographically sensitive areas. However, if the streets can be designed to meet public street standards and not create significantly more impacts with retaining walls, staff would be supportive of converting them to public streets. Having all public streets within the community would lend greater

consistency in maintenance operations, and minimize potential HOA problems in the future, as was discussed at the Planning Commission meeting.

Based on preliminary grading analysis, the applicant has indicated to staff that public street standards would likely result in additional walls as follows (*these estimates may change upon final engineering plans that would be submitted at the Final Plat stage*):

	Private Street	Public Street	Cumulative change
Street C north	(2) 8 ft. walls	(2) 8 ft. walls and a 6.5-foot wall	16 ft. to 22.5 ft. (+6.5 feet)
Street C south	(2) 8 ft walls and a 4 ft wall	(3) 8 ft walls	20 ft. to 24 ft. (+ 4 feet)
Street D	(1) 8 ft. wall and (1) 7 ft wall	(3) 8 ft walls and (1) 2.5 ft wall	15 ft. to 26.5 ft (+11.5 feet)

The applicant has prepared photo sims of the retaining wall difference in the case of private vs public streets (included as an attachment to the packet).

There has been some concern expressed by council members with regard to private streets in HOAs where residents are not aware of the private streets and related costs, or may not want to continue to incur such costs over time, in which case the City may be asked to take over maintenance. Based on the City's life-cycle cost estimates, if these two private streets were to be brought up to public standards by the HOA in the future, the cost to the City would be about \$25,000 annually, or about \$1 million over a 50-year time period (based on 2016 cost estimates).

The applicant points out that they have developed projects with similar private/public street conditions and have been in contact with their outside management company, who said they do not anticipate a concern regarding maintaining the private roads or with the budget necessary to maintain them. The applicant also points out that the HOA would incur additional costs associated with additional retaining walls, as the HOA is the entity responsible for maintaining walls in this area.

Given the above considerations, staff would support converting the proposed private streets (C and D) to public streets, *provided it does not result in the need for substantially more retaining walls than what is currently estimated based on preliminary grading. The street*

design, grading and walls will be evaluated as part of the Final Plat review process. Condition of approval number 8 is recommended to address this change, should the Council agree with that approach.

Should the Council wish to permit private streets here, staff recommends additional disclosure through a plat note and signage on the streets clearly indicating the streets are to be private in perpetuity, with no City maintenance.

H. ENVIRONMENTAL ISSUES

Wildlife. The RidgeGate West Village Sub-Area Plan, Planning Area 11 section, states that the plan for development on this property should be prepared in consultation with the Division of Wildlife. During the review period of the initial application in 2015 for Tract GG, a referral packet was sent to the Division of Wildlife. Mr. James Romero, the Acting Area Wildlife Manager for Colorado Parks and Wildlife responded. He provided general comments, and stated that District Wildlife Manager, Justin Olson, had analyzed the site and suggested we contact him with questions.

Staff contacted Mr. Olson and met with him on the site. He had no major concerns with the development proposal, and said that preserving the Cottonwood Creek drainage was a positive step. He said that much of the wildlife will vacate the property during construction, but many will return once residents have moved in and development activity diminishes. Staff noted that deer have been observed in the area. Mr. Olson responded that deer will likely come back once development is concluded as they are drawn to the landscape vegetation in yards. Mr. Olson reinforced the need to provide information to residents about living with wildlife when they buy their homes.

With this new proposal, staff once again contacted Mr. Olson, and he indicated that the reduction in lots would be a better outcome for wildlife. He stated that he did not feel it necessary to send an additional referral response.

The Natural Resources Assessment conducted by ERO for Tract GG (see attachment) speaks to an inventory of wildlife surveyed in Planning Area 11. The survey found no threatened or endangered species or potential candidate species. They did find three unoccupied and one potentially active magpie nest along Cottonwood Creek in their 2014 site visit. The report recommends that "removing vegetation be conducted, "...from September through February, which is typically outside of the active breeding season [for migratory birds]." The report concludes that:

Species likely to decline [as a result of development] include some raptors and possibly coyotes. Species likely to increase include red fox, raccoon, and great horned owl. Overall, surrounding and continuing development contributes to a decline in the number and diversity of wildlife species nearby and to a change in species composition to favor species that adapt better to human disturbance.

Wildfire. The RidgeGate Residential West Village Sub-Area Plan, Planning Area 11 section calls for a wildfire hazard assessment, consistent with Douglas County's Wildfire Mitigation Standards, at the time of subdivision for this area. The Sub-Area Plan states that "mitigation measures may be required as a condition of subdivision approval," and "on-going maintenance measures to minimize the potential for wildfire may be required to be incorporated in the Covenants, Conditions and Restrictions (CC&Rs)" for the property.

The applicant contracted Anchorpoint Wildland Fire Solutions, a consulting firm, to conduct a Wildfire Management Plan for the property (see attachment). The study concludes that the overall wildfire risk of the community is considered moderate. "The majority of the area to be developed is low [risk for wildfire], with some moderate risk in the drainage... due to the presence of Gambel Oak shrubs...." The report mentions that the retaining walls along the drainage will serve as a fuel break to the back yards of homes lining the drainage. The study recognizes that South Metro Fire Rescue Authority (SMFRA) that provides firefighting service to the area is "...capable of catching and extinguishing most fires before they get to a size where they will be a threat to structures."

The study proposes mitigation measures (p. 9 of the Sub-Area Plan). The mitigation measures will also be incorporated in the future CC&Rs for the development, and will be recorded with the Final Plat (a recommended condition of approval). The developer will be required to comply with building related standards, such as installing only non-wood, Class B or better roofs. The HOA will be responsible for mowing common areas, thinning and low-limbing Gambel Oak outside the drainage, and monitoring some compliance dealing with precluding wood fencing, ensuring residents don't dump yard clippings and yard waste into the open space land and landscaping; maintaining a 3-foot non-combustible perimeter around the base of all structures and roofline projections, including decks, and landscaping that provides a defensible space around the home. The Rampart Range Metropolitan District plans to take title to the Cottonwood Creek drainage through Tract GG, and will be responsible for thinning and low-limbing the Gambel Oak stands in this area, and alerting SMFRA when conditions are such that Gambel Oak becomes

receptive to burning. Taken together, these measures will help mitigate the risk to the homes in this development.

Vegetation. For the most part, vegetation has been preserved on site as a result of the drainage channel being preserved. Two areas that have extensive vegetation include the crossing between lots 26 and 27. This area will provide access to the drainage at the south end of the development for maintenance purposes. The other area is between lots 48 and 21. While this area would require the removal of some vegetation, this land would largely be graded anyway to provide the extension of Cabela Drive up to the top of the bluffs for access to future development there.

I. ARCHITECTURAL ELEMENTS

Retaining Walls. The construction of retaining walls in this valley will be visually significant, though far less than what was proposed previously (the previous plan showed cumulative wall heights as high as 40 feet). Preserving the drainage, coupled with steep slopes in this area, requires the use of retaining walls throughout the project. Most of these walls are proposed as tiered walls, with individual wall heights ranging as high as 8 feet. The cumulative wall heights are now, for the most part, 16 feet, and in one area east of lots 3 and 4 with three walls with a cumulative height of 23 feet. See the Preliminary Plan that shows the location and height of the retaining walls. Should Council decide that the two private streets should be converted to public streets, the accumulated wall height could be as high as 26.5 feet (see section G for more information on this).

For comparison, the walls behind the future Marriott Town Place Suites in RidgeGate have a combined 48 feet at the highest (19 feet is the highest individual wall). Behind Cabela's, the highest combined height is 44 feet (17 foot is the highest individual wall in that area). The retaining walls at their highest in Montecito across from Cabela Drive have a cumulative height of 25 feet.

To reduce the visual impact of walls, vegetation is proposed to be planted along the wall tiers, irrigated with a drip system. Landscaping and irrigation will be maintained by the Homeowners Association. The homes along the west side will be designed to stair-step up the hill, which will also help to screen the walls in places as they will help shield views of the walls with the homes.

The Public Works Department is requiring additional measures to be taken to ensure water does not sheet off the retaining walls in a heavy rain. The design of all walls will be detailed in construction plans that are subject to final review by Public Works, with stringent inspection during construction.

Pump House. A pump house for water supply is proposed east of the property on land owned by the Rampart Range Metro District. This location is proposed by the applicant following concerns expressed by some neighboring Montecito residents over noise and visual impacts. This location is supported by the staff of Southgate Water District (subject to District Board approval), the Rampart Range Metro District, Coventry Development Corporation, and the residents of Montecito in their response to the previous application. This facility will be operated and maintained by the Southgate Water District.

As proposed, the pump house and the location of the two trees proposed on the park plan will be located on land within the Southgate Water District. The remainder of the property is located in the Parker Water and Sanitation District. For that reason, and the fact that water cannot be supplied for landscaping when located outside the Southgate Water District, no additional landscaping is proposed around the pump house.

The applicant proposes wrought iron fencing instead of chain link and barbed wire fencing that is typically associated with these facilities. The applicant proposes to locate parking and supplies behind the building, should that be necessary, though the Southgate District Manager, Dave Irish, in his testimony to the Planning Commission, said he does not expect storage will be necessary.

The applicant has submitted a graphic of the pump house that shows the architectural character (see attachment). This design will be finalized at the time of Final Plat.

Regarding noise impacts, the backup generator for the pump is proposed to be located outside and behind the pump house, constructed of concrete masonry units, and set inside the hill with walls on the east, south, and north sides. The applicant estimates that the generator (that runs once a month for testing or as needed for maintenance), will run at approximately 10 decibels or less. According to staff research, this decibel level is barely audible and equates to the sound of someone breathing. The generator at the proposed location is located 372 feet away from the nearest Tract GG house and 500 feet away from the nearest Montecito house.

Building Elevations. The RidgeGate West Village Residential Sub-Area Plan provisions for Planning Area 11 call for the evaluation of such things as "...building massing (which may involve height limitations and/or low-profile and stair-stepped buildings); architectural elevations; materials; [and] colors" to "determine the overall design, character and quality of the project for consistency with the Sub-Area Plan, the City of Lone Tree Design Guidelines, and the overall goal of providing a natural transition to the bluffs...."

Architectural designs were evaluated at some length with the RidgeGate Design Review Committee. The designs provide for stair-stepped homes to conform to the topography; a mix of one- and two- story homes with walk-out basements, including ranch-style homes with walk-out basements; and low-roof profiles. Included in the attachments are a mix of proposed elevations. Staff and the DRC finds that these designs are consistent with the Sub-Area Plan standards and guidelines for architecture in this development. The renderings show the materials and colors and the applicant will bring along a color sample board to the public meeting.

J. PARK DEDICATION

The RidgeGate West Village Residential Sub-Area Plan regarding local/neighborhood park dedication requires 5 acres per 1,000 population. At 50 residential units, and a household family multiplier of 2.95, this equates to:

- 50 units x 2.95 people per unit = 147.5 total people
- At 5 acres/1,000, 0.74 acres is required

Staff reserves the right to evaluate the park improvements/park dedication at the time of Final Plat.

K. SUB-AREA PLAN

The proposed Sub-Area Plan for Planning Area 11 includes expanded guidelines and standards for development in this area. If approved, this Sub-Area Plan will replace the existing page in the RidgeGate West Village Residential Sub-Area Plan that addresses Planning Area 11. The proposed standards and guidelines are intended to "... reduce the environmental and visual impacts of development and to guide the quality and character of the architecture."

Some of the standards will be reviewed and enforced by City Staff when applicants apply for building permits, such as building setbacks. Staff will also ensure that the landscaping in common areas is accomplished according to Plan, and that the building structures and community features such as the pump house, park plans, and lighting are constructed according to plan. The RidgeGate DRC will review such things as landscaping in residential yards and architectural plans. The Sub-Area Plan will be expanded to include the final landscape plan at the time of Final Plat.

L. REFERRALS:

The RidgeGate West Village HOA responded with no comment. Comments have been received from 3 Montecito residents, and they are included in this packet. Resident concerns relate to density, location of homes, landscaping, and support for maintaining the connection between Tract GG and Montecito for emergency use only. The applicant has met with some of the nearby Montecito residents and members of the Montecito HOA Board to discuss this new proposal. The response by Century Communities to the resident comments are included as an attachment.

The South Metro Fire Rescue Authority responded in an email dated February 16, 2016 (attached), with the note that they are compliant with District standards for access, but with the concern regarding the long cul-de-sac length and emergency access in this wildland interface area. In response, the applicant has agreed to install crusher fines on the 10-foot wide path between the cul-de-sacs sufficient to sustain 15,000 pound emergency vehicles. The Authority's follow-up referral response dated March 7, 2016 states that they have no unresolved issues.

The Southgate Water and Sanitation District response states that the property is within the boundaries of Southgate and is serviceable by them. The applicant will address Southgate's comments prior to building permit issuance.

The response from the Cherry Creek Basin Water Quality Authority states that they cannot complete their review until an updated Preliminary Drainage Report is submitted. This report be required at the time of Final Plat, and the Authority will be sent a referral. In response to the question by the Authority regarding who will maintain the channel, the Rampart Range Metro District will assume maintenance responsibility.

The applicant has responded to Lone Tree Public Works comments (see attachment). Any remaining issues will be addressed as a condition of final approval.

M. PLANNING COMMISSION MINUTES

Following is an excerpt of the minutes from the Planning Commission meeting held on March 22, 2016, regarding their discussion and recommendations on the Tract GG application.

Ms. Drybread introduced the item, preliminary plan approval for 50 single family detached homes and approval of an amendment to the RidgeGate Residential West Village Sub-Area Plan. She described that the preliminary plan has been

reduced from 70 lots, as shown on an earlier submittal to the Planning Commission. She provided an overview of the preliminary plan, including access via the future extension of Cabela Drive, and relocation of the trail. She also outlined the history of the preliminary plan, including a previous submittal which was withdrawn during a City Council Meeting due to multiple concerns, and the public outreach, referral, and sub-area plan review process.

She described that planning staff and Public Works continues to support a full public access connection between the proposed development and the Montecito neighborhood via Alicante Road; however, in response to concerns from residents, the applicant proposes an emergency-only connection. The resubmittal contained fewer and lower retaining walls. The architecture, which has received RidgeGate Design Review Committee (DRC) approval was also presented.

Staff finds that the Preliminary Plan is in conformance with the Subdivision Code, the Zoning Code, the Comprehensive Plan, the RidgeGate PDD 4th Amendment, and the RidgeGate West Village Residential Sub-Area Plan. Staff finds that the proposed amendments to the RidgeGate West Village Sub-Area Plan regarding Planning Area 11 are in keeping with the overall intent of the Plan and the RidgeGate Planned Development.

Staff recommended the Planning Commission recommend approval to the City Council of the Preliminary Plan, including the Sub-Area Plan amendment, subject to the following:

1. The Final Plat shall depict the connection between Tract GG and Montecito at Alicante Road as a full public access.
2. The Final Plat application shall include a detailed landscape plan, including detailed plans for the parks, retaining walls, entryways, and pump house.
3. The applicant shall provide wildfire mitigation measures as called for in the proposed Sub-Area Plan chapter on Planning Area 11 in the CC&Rs to be recorded with the Final Plat.
4. The applicant shall post a large map in the sales office and provide a map to purchasers and prospective purchasers of lots in Tract GG that shows the extension of Cabela Drive to the bluffs, with a note that states that there are a maximum of 346 residential units zoned for development on the mesa tops. The applicant will also post signs with the same information and a map along the extension of Cabela Drive, with such signs to be maintained by the Rampart Range Metro District.
5. The developer shall provide information to residents about living with wildlife when they buy their homes, available through the Colorado Parks and Wildlife offices.
6. Construction inspection reports, as-built records and a final written and sealed certification shall be provided (by a licensed professional structural engineer and/or professional Geotechnical Engineer) demonstrating that the

retaining walls as constructed are in conformance with the approved structural engineer design provided. This Certification shall be provided before approvals for issuance of associated building permits.

7. Final approval by the Public Works Department.

Ms. Drybread then introduced Mr. Darryl Jones with Coventry Development to speak from the perspective of the landowner. He clarified that they did not expect future development on the bluffs for some time due to the lack of utility infrastructure, as Parker Water and Sanitation District is the provider here for that service. He also clarified that the trail would be relocated by the Rampart Range Metropolitan District and that the land for the pump house would be dedicated by the District. Mr. Jones stated that Coventry continues to support the project, and it meets their long-range planning objectives.

Ms. Lisa Evans, Managing Director of Century Communities, accompanied by her design team, presented the project. She stated that they believe they have addressed all concerns from the previous submittal. The community would be called the Retreat at RidgeGate. Homes would range in size from 2,800 – 4,400 square feet and would be priced between \$800,000 and \$1,200,000. The density would be 1.2 dwelling units per acre. She provided an overlay comparing the lower density of the Retreat at RidgeGate with the existing Montecito community. She also showed a graphic overlaying the revised preliminary plan with the original submittal, visually depicting the reduction in the number of lots from 70 to 50. There were two ranch and three two-story home plans.

The resubmittal includes gaps between five clusters (A-E) of homes to preserve views of the drainage channel and views of open space. Ms. Evans showed photo simulations to illustrate reduced massing and density of homes – highlighting the increased contiguity of open space. Also, she highlighted how one would now have a nearly unobstructed view of the bluffs from Alicante Road; whereas on the previous submittal, houses were in this viewshed. The homes would be stair stepped and integrated into the topography.

She presented a park plan that showed entry landscaping at the primary and secondary entrances – including public art – and two smaller pocket parks within the community. All lots would have access to the regional trail connector.

Key issues during the previous Planning Commission hearing on the former application were the emergency access-only connection between Montecito and the Retreat at Alicante Road, and locating the pump station in a commercial area across (east) Cabela Drive from the neighborhoods. She showed a graphic of the pump house.

Ms. Evans showed a graphic depicting the location of informative signage showing where future growth would occur. She then submitted a copy of her presentation for the record and reiterated that they believe the development met the zoning requirements and Comprehensive Plan.

Commissioner Dodgen sought clarification of the number of units that could eventually go on the mesa tops above the bluffs. If Southridge Preserve were

included, there could be up to 346 future residential units on the bluffs. He wanted to ensure that Century Communities would inform future residents of the development potential on top of the mesa.

He also sought clarification that each home would receive DRC approval. Ms. Evans responded that they would submit multiple homes at a time to DRC – but that this was correct.

Also, Commissioner Dodgen inquired about the fire access road from the original submittal. It was determined to no longer be necessary per the Fire District's analysis since they only have 38 homes on the main street in the development. The 10-foot wide access between the two cul-de-sacs could consist of crusher fines and could accommodate vehicles up to 15,000 lbs. Ms. Drybread stated that this could serve as fire access in the summer, early fall and late spring, when there would be no snow on the path. Ms. Evans stated that this connection is intended to serve as access for the Southgate Water and Sanitation District to their water main underlying the path.

Commissioner Dodgen inquired about who would maintain the drainage channel – this would be the Rampart Range Metro District (RRMD).

Commissioner Dodgen inquired about the impacts of future development on the mesas on drainage and flow rate through the channel. Mr. Cotten responded that detention facilities would be required on top of the mesas to reduce the flow of water through the channel.

Commissioner Dodgen further inquired whether the pump station would contribute to the entry-way architecture of the subdivision – on the same level as Montecito. Ms. Evans responded that the pump station was small and would be set back off the road. He wanted to make sure that the pump station had an appealing look. Ms. Evans responded that it would be designed within Southgate's regulations, and Century would make it as visually appealing as possible. She also added that the main thing that you will see as you enter the subdivision is the future Marriott TownePlace Suites hotel. Commissioner Dodgen asked if Southgate would park vehicles there – yes, during maintenance of the pump station, but Southgate would not house vehicles there.

Commissioner Dodgen inquired about the coordination of the relocation of the trail with the construction of the roadway. His concern was damage to the trail and a gap in connectivity during the time of construction. Mr. Jones responded that the realignment of the trail would be coordinated with the road construction and that there would not be a gap in trail connectivity during construction.

Commissioner Dodgen inquired of the applicant's traffic engineer, Chris McGranahan, about the reduced trip generation of the resubmitted plan. Mr. McGranahan stated that the average single family home produced approximately ten vehicle trips per day, so the total would be about 500 trips now– as opposed to 700 trips with the original 70 lot submittal. He stated that this wouldn't change much of the impact on Montecito if the Alicante Road connection were to remain open – as the number of homes from Tract GG potentially taking this connection was only changing from 40 to 30 per day.

Commissioner Dodgen inquired about who was responsible for monitoring fire danger levels and communicating with SMFRA. Further, Commissioner Dodgen asked the applicant if it would be mandatory in the HOA documents that residents could only choose plants from the Firewise list provided by SMFRA. Ms. Evans responded that notice of this would be in the sale documents, including a fire-wise plant list. She stated that would be a part of the homeowner documentation.

Commissioner Dodgen inquired about the potential vacation of the portion of Alicante Road in Montecito and who that would go to. Mr. Cotten stated that State Statute requires it revert to the properties on either side, which would be the adjoining lots. However, it is his hope that the Montecito HOA would step up and accept ownership. As proposed by the applicant, there would be an agreement in place between the HOAs whereby the Retreat will provide snow removal and Montecito would take care of long-term maintenance costs of that segment of Alicante Road.

Commissioner Dodgen inquired about whether lot premiums and upgrades would increase the price of homes from the \$800,000 to \$1,200,000 range. Ms. Evans responded that the homes were semi-custom, and that it could. Commissioner Dodgen inquired what the minimum lot premium would be. Ms. Evans stated that they had not set this.

Liesel Cooper, Executive Vice President for Century Communities, responded that the \$800,000 to \$1,200,000 would be the expected finish price for the homes with lot premiums and upgrades. Ms. Evans stated that 50% to 60% of the buying public chooses the same model as the model homes.

Commissioner Dodgen inquired about the varied streetscape and the breakdown of ranch to two-story homes. Ms. Evans stated that they would facilitate the desire of the public; however, did not want to designate certain lots as ranches as this could lead to a monotonous streetscape. He further inquired about the height differential between ranches and two-story homes. Paul Brady, the project architect, responded that the smaller ranch model would not include a raised volume above the house like in Montecito; however, the ranch would have a clerestory that could be as high as 16 feet.

Commissioner Carlson addressed the concept of a monotonous streetscape. She felt that limiting homes within a cluster to no more than 30% seems limiting and that she was hoping for more of a commitment to allow for low-profile homes as provided in the sub-area plan. She suggested an exception to allow more than 30% ranch models within a cluster, provided the elevations vary.

Ms. Evans responded that if all the homes in a cluster were a ranch, this would violate the streetscape diversity requirements. Commissioner Carlson wanted there to be more support for low-profile massing. Ms. Evans responded that they would look at this. Ms. Evans stated that the homes would not rest on a flat plane, but would be recessed into the topography to reduce mass.

Commissioner Carlson recommended that the applicant use drought tolerant plantings as provided in the sub-area plan, and replace Kentucky/Texas Hybrid Sod (not native to Colorado high desert) with Tall Fescue (or offer Tall Fescue as

an option), as it uses 50% less water, is disease resistant, is widely available, and features the same green color. Ms. Evans appreciated this and indicated that the landscape plan was forthcoming.

Commissioner Carlson inquired whether there would be a bridge for road crossing over the Cottonwood Creek (wetland area), between lots 26 & 27, to support rather than diminish wildlife movement and preserve the creek. The applicant and Mr. Cotten responded that the road crossing will be elevated and graded, allowing drainage underneath. Mr. Cotten responded that there would be side slopes from the road, which would go down into the valley and ascend out of it. He said they had looked at using retaining walls that would have reduced impact on vegetation, but created more of a barrier for wildlife. Ms. Evans stated that the side slopes off the crossing would allow for access to the drainage for maintenance and would be native and revegetated. Chair Kirchner inquired if there would be a culvert beneath the road. Mr. Cotten responded there would, and that water would flow under the road in a flood, not over.

Commissioner Carlson inquired about building setbacks per the sub-area plan. She asked what the minimum side setback would be from the building to the closest retaining wall. In a prior meeting, the walls were as close as 3 feet. Ms. Evans responded that the distances between homes would be 15, 20, and in some cases 25 feet. The minimum distance between a home and a side retaining wall would be 7.5 feet. Commissioner Carlson asked about the distance between Lot 50 and the future road. The distance from the lot to the right-of-way will be 25' to 30' and from the home to the right-of-way will be about 50 to 60 feet. Fencing and landscaping by the homeowners could provide some separation.

Commissioner Carlson further asked, since lots 48-50 are close to (the future) Cabela Drive, will there be a fence separating the road from the community? The applicant responded that home owners will be responsible for installing a fence in their back yard. It would be an open rail fence as called for in the sub-area plan. Ms. Evans stated that they would post a sign by the road there clearly stating there would be a road extension.

Commissioner Carlson added that City Council raised several concerns in the previous public meeting, including providing a transition to the bluffs, given this is an environmentally sensitive area. She asked the applicant for their interpretation of a "transition to the bluffs" and how have they satisfied this concern?

The applicant responded that they were not cutting into the bluffs, but working with the natural topography and protecting natural resources. They have satisfied this concern by removing the homes where they were previously cutting into the bluffs, and removed the retaining walls that were cumulatively as high as 40 feet.

Commissioner Carlson asked if the applicant will use the same retaining wall material they used in Montecito. Ms. Evans responded that they will use the same material used at Bluffmont Heights. Commissioner Carlson asked if the applicant can reduce the height of the individual walls, similar to Bluffmont Heights, where the total 25-foot high retention wall was built with 5-6-foot terraced walls (instead of using 3 – 8-foot tiers)? The applicant responded that

such might be possible, but the area where the accumulated wall height is 23 feet would not be perceived as tall, as the walls would be built into the channel, and one stretch of the wall at the bottom is very short in length.

Commissioner Carlson supports connected streets, per staff recommendation and in compliance with the City's Comprehensive Plan.

Commissioner Heskin inquired regarding the colors of the homes. Ms. Evans responded that choices of colors were not tied to specific model homes, but that prospective home buyers would have a choice of colors. He stated that some of the colors were "vanilla" and asked whether there were other color schemes available. Ms. Evans responded that there were a variety of color schemes available.

Commissioner Heskin said he wrestled with the randomness of the market choosing where two-story and one-story homes would go. His concern was specifically regarding two-story homes being predominantly located near the high-points of the subdivision. Ms. Evans stated that the tallest side of the house was never towards the bluffs; walkouts would be towards the channel. The proximity to the road would determine the main elevation of the house, so they step down away from the bluffs.

Commissioner Heskin appreciated the reduction in lots from 70 to 50, and felt this opened up views between the homes and better transitioned to the bluffs. He also commended the architect on the high-quality materials and architecture of the homes. He did express a concern over EIFS. Paul Brady, the project architect, stated that the majority of stucco would be cementitious with EIFS-like materials used in very limited applications under protrusions, window sills, etc. Commissioner Heskin cautioned to be sure that material was properly waterproofed, and said he appreciated the use of stucco.

Commissioner Heskin inquired as to the slope of the walkouts to the retaining walls. Commissioner Heskin was concerned that retaining walls that were close to the back of lots would need fencing for safety so people did not fall over the walls. Ms. Evans responded that this would be in the covenants. Commissioner Heskin wanted fencing to be constructed over the retaining walls concurrent with development so there would be no gaps in the fencing for safety. Ms. Evans stated that the fencing would go in likely with the development of each cluster.

Commissioner Steele stated that there were many good changes since last time. He stated that the different remediation measures were positive. He felt that the clustering of houses in the current configuration would foster community interaction.

Commissioner Steele sought clarification of whether the pump house was recessed into the hillside. Ms. Evans responded that this was the case, and that there would be 360-degree fencing around the pump house for security. He inquired if there could be solid fencing as opposed to open-rail, to achieve better screening. Lisa Albers, project engineer, responded that a taller, solid fence would require concertina wire. Commissioner Steele inquired if the pump house fencing would be consistent with the allowed fencing for the homes – both will be

black metal and the only difference would be spikes on top of the pump house fencing. The pump house would require lighting. Commissioner Steele did not want the building to be illuminated at night and impacting the residences. Ms. Albers stated that the lighting would be downcast, in conformance with City standards.

Commissioner Steele inquired as to how the lots would be priced, and the expected relationship between higher-priced lots and higher-priced, larger homes. Ms. Cooper stated that sometimes people would sometimes choose a smaller home after going for a really high lot premium. Therefore, higher-priced lots did not necessarily dictate that this would correspond with the most expensive house.

Commissioner Steele expressed concern, having served on several HOA boards, that as complexity was added to the maintenance responsibilities, clarification would be needed for the future HOAs boards. HOA maintenance responsibilities would include the pocket parks, common landscaping, retaining walls, the two private roads, and snow removal of the Alicante Road connection. He said that maintaining financial reserves would be really important versus just having an annual budget.

Commissioner Steele expressed concern over a small HOA maintaining the private streets into perpetuity, given that only 10 of the 50 lots are served by private streets. Ms. Evans provided a multipronged response. First, private maintenance of these roads would be disclosed. Second, there would be a plat note added, per request of staff, that these would be private roads into perpetuity. Ten homes would be on private streets that did not meet minimal city width standards. Commissioner Steele expressed concern that the majority of residents in the HOA would complain about maintaining the private streets. He expressed concern about the ongoing maintenance of the sidewalks on these private roads as well. Commissioner Steele inquired as to why these roads were so narrow. Ms. Evans responded that this was partially due to the desire to avoid requiring more retaining walls. If the private roads were wider to meet public standards, retaining walls would need to be added. She said it was also a trade-off that the HOA would have private roads, but fewer walls to maintain.

Commissioner Steele stated that there were three options: (1) that these would all be private roads and walls, (2) that they would be all public streets and walls, and (3) that there would be mixture of both HOA and city responsibilities. Commissioner Steele stated that his position was to keep things simple, that these would all be public streets with sidewalks. Ms. Cooper replied that part of the reason private streets were proposed was to minimize the impact of the bluffs. Ms. Cooper stated that this would all be disclosed to prospective home buyers. Commissioner Steele expressed concern about the availability and willingness of snow-removal contractors to contract for such a small job. Ms. Evans responded that the same contractor removing the snow, would likely be the same contractor maintaining the common landscaping at the entries and in the parks, and did not feel that would be a problem.

Commissioner Steele stated that he was conflicted about what to do with the Alicante Road connection. He asked of Mr. Cotten, if instead of the two HOAs

maintaining the two halves of the connection, if the City could maintain the connection but discourage through traffic of cars by installing speed bumps or other change in street material. The Montecito streets are narrow and there are on-street parking, child safety, and other concerns. Mr. Cotten responded that for this to be a public street it would have to be available for any member of the public to drive down. Mr. Cotten stated that, after investigation, there are two alternatives (1) that it stays a public street without surface modification or (2) that it be private and maintained by the HOAs.

Mr. Jones stated that Council Member Millet is against private roads, and expressed this in a recent application in RidgeGate. She has concern that the HOA will want the City to maintain the roads in the future.

There was a question regarding maintenance responsibility for Tract M. The entity responsible will be the HOA, although the preliminary plan incorrectly stated it would be the RRMD. This will be corrected.

Chair Kirchner appreciated the work by the applicant to address public, City Council, and Planning Commission comments. He stated that the plan was more in line with what they were looking for.

He said that private roads are of concern to the City Council as subsequent buyers may not be aware of them or what it would take to bring them up to City standards. Ms. Albers stated that bringing these up to standard width would result in an additional 5 foot-8 foot retaining wall, with a potential cumulative height of 21 – 24 feet. Commissioner Kirchner thinks that wall trade-off will be a decision for City Council. He recommends all public roads to avoid problems in the future.

In terms of the Alicante Road connection, for reasons given by City and Public Works staff, he tends to go along with staff in suggesting it be open to the public, as 85% of the traffic on between these developments would be Montecito residents, and it was designed as a connected road.

Chair Kirchner also stated that the mitigation efforts in the sub-area plan calling for ranches was good, and that the new wall heights were well thought through.

Chair Kirchner opened the meeting for public comment.

Jeff Nodland, of the Board of Directors for the Montecito HOA, with David Williams, commented on the Alicante Road connection. His position continued to be that it be emergency access only. He emphasized that no residents are requesting it be a public road. He felt it may be inaccurate that traffic patterns will alter [if the connection is made a public access], as Montecito residents are used to driving around [to Crossington Drive]. The reasonable solution at hand was what Century was proposing.

Greg Fong, 10660 Montecito, stated that his house was right at the intersection of Alicante Road, with a view of the bluffs. He was told this would be open space. He had three requests, (1) remove lots 1-5 as they were directly in his view corridor, (2) to continue looking at the massing of the homes, and (3) that

Alicante Road be closed to through traffic. His concern was that retail traffic will not want to wait for the light, and will instead use Alicante Road.

Commissioner Dodgen inquired of the Montecito HOA representatives if they have discussed the added cost of maintaining their portion of Alicante Drive and generally what the level of involvement on these issues has been with residents versus just the Board. He asked whether they would have to get a 2/3rds vote of the HOA to take over their portion of Alicante Drive.

Jeff Nodland said that approximately 20% of their residents have attended the HOA meeting where the connection was discussed. Residents that expressed the most concern, were residents next to Tract GG. Many homeowners have contacted the board and that they feel confident they can obtain the necessary votes, provided the costs are not significant.

Chair Kirchner closed the period for public comment.

Commissioner Dodgen offered a follow up question of the HOA representative regarding whether he felt residents wanted the connection to be emergency access only. Mr. Nodland indicated that the connection was the top concern he has heard, and that some members have even discussed the possibility of making all the roads private in Montecito. They have not had a formal meeting determining full community support to make their portion of the Alicante connection private.

Commissioner Dodgen inquired of Mr. Cotten if speed bumps would be an option – to discourage through traffic on Alicante Road. Mr. Cotten responded that this was not out of the question, but something that was discouraged. He stated that people do not like to live next to speed bumps.

Commissioner Carlson was concerned with the 30% restriction on ranch homes within a cluster. A straw poll was taken and none of the other Commissioners expressed concern over the streetscape diversity standards. Again, Commissioner Carlson's concern was that perhaps the market would want more ranches. Ms. Evans suggested that perhaps they could exclude ranches from this provision.

Commissioner Dodgen moved to recommend approval of the application for preliminary plan and sub-area plan amendment, with staff conditions. Commissioner Heskin seconded. Chair Kirchner opened discussion on whether the Alicante Road should be public. Commissioner Dodgen was conflicted. Commissioner Carlson supported the connection being public. Commissioner Steele stated that although the Comprehensive Plan encouraged connected communities, he also respects the wishes of local communities, however he supported full public access. Commissioner Heskin felt very strongly that the provisions of the Lone Tree Comprehensive Plan be followed. He felt it should be a public street. Chair Kirchner stated that it should be a public street.

Commissioner Steele inquired as to making an amendment that all the streets in the Retreat be made public. There was discussion on this issue. Commissioner Steele stated that the applicant should provide full details to the City Council on

both options (walls or private streets). Commissioner Carlson felt that if changing them to public roads would result in more retaining walls, she would advocate they be private roads. Chair Kirchner stated that this should be left to Council. Commissioner Carlson added that native grasses be considered. Commissioner Heskin reiterated that the developer build fence on top of the retaining walls. Commissioner Dodgen stated that the developer be sure to educate residents about the wildfire risk and the plant materials they can use. He also said that the sales staff should be trained to tell prospective buyers about the future development on the bluffs. They accepted staff conditions with a separate recommendation that the decision of public-private roads be left to the City Council. The motion passed unanimously.

N. STAFF FINDINGS AND RECOMMENDATION:

Staff finds that the Preliminary Plan is in conformance with the Subdivision Code, the Zoning Code, the Comprehensive Plan, the RidgeGate PDD 4th Amendment, and the RidgeGate West Village Residential Sub-Area Plan.

Staff finds that the proposed amendments to the RidgeGate West Village Sub-Area Plan regarding Planning Area 11 are in keeping with the overall intent of the Plan and the RidgeGate Planned Development.

Staff recommends approval of the Preliminary Plan, including the Sub-Area Plan amendment, subject to the following:

1. The Final Plat shall depict the connection between Tract GG and Montecito at Alicante Road as a full public access.
2. The Final Plat application shall include a detailed landscape plan, including detailed plans for the parks, retaining walls, entryways, and pump house.
3. The applicant shall provide wildfire mitigation measures as called for in the proposed Sub-Area Plan chapter on Planning Area 11 in the CC&Rs to be recorded with the Final Plat.
4. The applicant shall post a large map in the sales office and provide a map to purchasers and prospective purchasers of lots in Tract GG that shows the extension of Cabela Drive to the bluffs, with a note that states that there are a maximum of 346 residential units zoned for development on the mesa tops. The applicant will also post signs with the same information and a map along the extension of Cabela Drive, with such signs to be maintained by the Rampart Range Metro District.
5. The developer shall provide information to residents about living with wildlife when they buy their homes, available through the Colorado Parks and Wildlife offices.
6. Construction inspection reports, as-built records and a final written and sealed certification shall be provided (by a licensed professional structural engineer and/or professional Geotechnical Engineer)

demonstrating that the retaining walls as constructed are in conformance with the approved structural engineer design provided. This Certification shall be provided before approvals for issuance of associated building permits.

7. Final approval by the Public Works Department.
8. Proposed private streets (Tracts C and D) shall be designed to meet the City's public street standards per Public Works Department requirements, provided the resulting impact of retaining walls is not substantially greater than the applicant's current estimates (described in this report). The street design, grading and walls will be evaluated as part of the Final Plat review process, which will require City Council approval.

O. ATTACHMENTS:

- Application and Letter of Authorization
- Project narrative
- DRC approval letter
- Referral responses
- Applicant's response to Montecito resident comments
- Applicant's response to Public Works comments
- Preliminary Plan
- Aerial Context Plan
- Graphic comparison of 50 lots over 65 lots
- Photo simulations (70 vs 50 homes)
- Photo simulations (private vs public streets)
- Cluster Map
- Existing RidgeGate Residential West Village Sub-Area Plan excerpt
- Proposed Sub-Area Plan section for Planning Area 11, including:
 - Cluster Map
 - Overall Landscape Plan
 - Park Plan
 - Pump house
 - Retaining wall material (photo)
- Natural Resource Assessment RidgeGate Tract GG, prepared by ERO Resources Corp
- Traffic impact study, prepared by LSC Transportation Consultants, Inc.
- Emergency access exhibit
- Wildfire Management Plan, conducted by Anchorpoint Wildland Fire Solutions
- Building elevations

City of Lone Tree

Department of Community Development
9220 Kimmer Drive Suite 100
Lone Tree, CO 80124
Ph: 303-708-1818 Fax 303-225-4949

DEVELOPMENT APPLICATION FORM

PROJECT NAME: Ridgegate Tract GG ◆ OFFICE USE ONLY ◆

PROJECT FILE # SB16-12R

REQUEST: Preliminary Plan & Sub-Area Plan

SITE LOCATION: End of Cabelas Drive and
(Nearest Intersections) Alicante Drive

DATE SUBMITTED: 2-26-2016

OWNER:

Name: Ridgegate Investments, Inc.
Address: 10270 Commonwealth St, Suite B
Lone Tree, CO 80124

FEES: 1,500 # 80996

Phone: 720.279.2581 FAX:

(Engineering fees are not included)

AUTHORIZED REPRESENTATIVE:

Name: Century Communities/Lisa Albers Fax:
Address: 8390 E. Crescent Pkwy, Suite 650 Email: lisaa@centurycommunities.com
Greenwood Village, CO 80111
Phone: 303.268.8373 Business/Project Name: Ridgegate Tract GG

LEGAL DESCRIPTION (site address): TR IN N1/2NW1/4 & NE1/4NE1/4 22-6-67 32.564 AM/L

PROJECT INFORMATION:

Subdivision Name: Ridgegate Tract GG Filing #: N/A Lot # (if appropriate): N/A Block #: N/A
Planning Area # (if PD) Planning Area #11

PRESENT ZONING: PD (When rezoning) – PROPOSED ZONING N/A

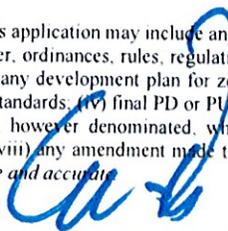
GROSS ACREAGE: 48 acres # of units (residential) 50
Unit type: Single Family Detached

FIRE DISTRICT: South Metro Fire Rescue METRO DIST: Rampart Range MD

WATER: Southgate Water and Sanitation District ELEC: Xcel Energy

SEWER: Southgate Water and Sanitation District GAS: Xcel Energy

Further submissions pursuant to this application may include any and all development proposals, submissions, applications and procedures that may be made or initiated under the City of Lone Tree Charter, ordinances, rules, regulations, guidelines or policies including, without limitation, those for any of the following: (i) annexation; (ii) zoning or re-zoning, including any development plan for zoning within the Planned Development (PD) District; (iii) preliminary PD or PUD site plan, or related design guidelines or development standards; (iv) final PD or PUD site plan; (v) Site Improvement Plan; (vi) any master or general development plan, sub-area plan, site plan or similar development plan, however denominated, which may be provided for under any PD development plan or any other zoning; (vii) Sketch Plan, Preliminary Plat or Final Plat, or (viii) any amendment made to any of the foregoing, as applied for or as approved. To the best of my knowledge, the information contained on this application is true and accurate.

APPLICANT SIGNATURE: 

Date: 2-22-2016

Letter of Authorization

Regarding Development Applications for Land Use Entitlements
(Form must be Filled Out if the Applicant is not the Property Owner)

City of Lone Tree
9220 Kimmer Drive #100
Lone Tree, CO 80124

RE: Property Address: RidgeGate Tract GG (TR IN N1/2NW1/4 & NE1/4NE1/4 22-6-67 32.564 AM/L

To Whom It May Concern:

I/We, the owner(s) of the above described real property, authorize Lisa Albers of Century Communities to act as an agent on my/our behalf for the purpose of creating, filing and/or managing an application for Preliminary Plan and Final Plat/CDs for RidgeGate Tract GG (type of development or permit application).

The undersigned hereby certifies to being the fee owner(s) or legally authorized representative of the fee owner(s) of the real property described above.

Keith D. Simon

(Print Name of Owner)

[Handwritten Signature]

(Signature of Owner or Authorized Representative)

State of Colorado

County of Douglas

The foregoing instrument was acknowledged before me this 26th day of May, 2015
by Keith D Simon

Elizabeth Matthews
(Notary's official signature)

NOTARY SEAL

May 12, 2016
(Commission expiration date)

ELIZABETH MATTHEWS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20004014222
MY COMMISSION EXPIRES 05/12/2016

1. Discussion of Site Features

The proposed RidgeGate Tract GG project is a 48.9 acre neighborhood located in the RidgeGate Planned Development District. It is bound by Montecito at RidgeGate to the north, the Bluffs Regional Open Space to the west, Open Space to the east, and future Residential Rural planned development to the south.

The topography for the area surrounding this parcel is generally steep towards the channel located through the center of the proposed project. The proposed development sits on either side of the channel. The existing site contours range from a high point of 6,215 feet along the side of the Bluffs, and 6,080 feet at the bottom of the existing 100 year flood detention pond.

Existing vegetation is largely comprised of native grasses with some shrubs located on the slopes at the south end of the development. Trees and shrubs are located along the Cottonwood Creek drainage that bisects the site.

The proposed preliminary plan is a result of working with both the RidgeGate DRC and City of Lone Tree staff to create a plan that is responsive to the site's natural conditions including the drainage corridor, existing vegetation, view corridors, topography, surrounding environment and the requirements of the RidgeGate PD, as well as City Council comments at the January 19th, 2016 Hearing related to the transition to the bluffs, massing, and retaining walls.

2. Evidence Establishing Soil Suitability

Please refer to the Preliminary Geotechnical Investigation prepared by CTL Thompson on June 12, 2014 included with the Preliminary Plan application.

3. Geologic Characteristics Report

Please refer to the Phase 1 Environmental Site Assessment prepared by CTL Thompson on May 2, 2014 and the Geotechnical Investigation prepared by CTL Thompson on June 12, 2014 included with the Preliminary Plan application.

4. Phase II Drainage Analysis

A Phase II Drainage Report has been prepared by Calibre Engineering, Inc. and will be updated prior to City Council Hearing.

5. Evidence of Adequate Water Supply

Please refer to the enclosed will-serve letter from the Southgate Water District.

6. Evidence of Sanitation Capability

Please refer to the enclosed will-serve letter from the Southgate Sanitation District.

7. Existing Infrastructure Narrative

Fire Protection: Fire Protection will be provided by South Metro Fire Rescue Authority.

Police Protection: Police Protection will be provided by the City of Lone Tree Police Department.

Schools: The neighborhood will be serviced by the Douglas County School District and is located in the attendance boundary for Eagle Ridge Elementary School, Cresthill Middle School, and Highlands Ranch High School.

Recreation: A variety of recreation opportunities are provided throughout the RidgeGate community. More than 1,000 acres of parks, trails, and natural habitat and open space are located throughout RidgeGate. The 54,000 square-foot Lone Tree Recreation Center and associated ball fields (Prairie Sky Park) are located just northwest of the project site. The Douglas County East West Trail trailhead is located at the entrance to the project and wraps around the proposed project. Connections from the existing trail to the project site are planned, as well as passive seating areas for casual resident gathering.

Utilities: The storm, sanitary, water, gas, electrical and communication systems will be designed and constructed per the appropriate agency standards and regulations. The systems will be designed to provide efficient and easy to maintain infrastructure. Below is an outline of how these major systems will be accommodated in the civil design.

Storm Drain System

An internal storm drainage system will be designed in general accordance with the previously approved master and site reports to collect and detain and redistribute the required minor and major storm events. The systems will incorporate swales, curb and area inlets, manholes, existing channel system and underground pipes. Water detention will be handled by the site improvements as well as the existing 100 year detention pond owned and maintained by the metropolitan district. Upstream detention will be provided to counter the developed flows within the development to historic levels through the existing channel to reduce any further degradation or the need for channel improvements that would obliterate the existing channel vegetation and central open space corridor for the project. Water quality will be handled by regional improvements constructed off-site by the Rampart Range Metropolitan District.

Water and Fire Protection

New water lines and fire hydrants will be provided in a manner meeting the requirements of Southgate Water District and South Metro Fire Rescue Authority. Hydraulic network calculations will be performed to ensure proper system performance and appropriate pressure delivery to the buildings and hydrants. A booster pumping system will be required to provide adequate water pressure for service.

8-inch water mains will be incorporated in all streets with the exception of the dead end/alleyway streets. The cul de sacs will incorporate 6-inch mains per Denver Water to assist in providing better water quality.

Sanitary Sewer

New 8-inch sanitary sewer mains will be constructed within the development to the connection point of Cabelas Drive. Service connections will be made to the new main.

Hydraulic calculations will be performed to ensure proper system performance and generally designed according to Southgate Sanitation District standards.

Gas, Electricity, Communication

New systems will be brought to the site by the appropriate service providers to service this and potentially future adjacent projects. Gas lines will be located within the front yards with the electrical and communication lines also located in the front yards. All infrastructure located within lots or tracts will be constructed within public utility easements.

Open Space and Park Dedication: There is approximately 15.5 acres of open space throughout Tract GG, not including the preserved channel that will be dedicated to the metropolitan district. There will also be a minimum of 0.74 acres of park space located in key areas. The current plan shows approximately 0.88 acres. The park space will include the creation of small parks and associated trail amenity.

8. Traffic Study

Please refer to the attached traffic study which analyzed 70 lots versus the now submitted 50 lots. The lot reduction of 20 lots diminishes the total trips per day by approximately 200 trips. We do not believe that an additional study is necessary; however, we can have our traffic consultant write a supplemental letter to their study if required.

9. Discussion of Cultural, Archeological and Historical Resources

Please refer to the enclosed Natural Resource Assessment RidgeGate Tract GG prepared by ERO Resources Corp. on April 21, 2014, in addition to the updated report as prepared by Denise Larson from ERO Resources Corp. on July 8, 2015.

10. Preliminary Plan Proposal

RidgeGate Tract GG consists of 50 single family detached units located within a heavily sloped portion of the Bluffs in Douglas County, and is completely surrounded by the Douglas County East-West Regional Trail. This neighborhood will offer secluded living with easy access to I-25, DTC, and Light Rail station. The architecture is tailored Modern Colorado with unique attributes targeting both the 50+ housing market and working families who want direct access to employment opportunities with a remote setting.

Adjacent Property Owner Concerns:

We have been able to address each of the Montecito homeowner concerns. The proposed alternative of the pedestrian and emergency access only has been well received by the Montecito homeowners. This alternative was vetted and approved by both Public Works and the Fire Department. Therefore, we are recommending that City Council approve the alternative connection as proposed.

A formal neighborhood meeting will be held in March prior to the Planning Commission hearing.

Architecture:

RidgeGate GG consists of 5 new home plans ranging from 2,700 sf to 4,800 sf developed to integrate into the distinctive site. From strategically placed outdoor spaces, to stepped living spaces and non-rectangular building forms that better align with the site's contours, the architecture is both inspired by, and embraces the sites natural features making the architecture unique. Also embracing the unique theme, the architecture incorporates many features more

common in custom homes like covered outdoor living integrated into the floor plan, expansive fenestration, and varied and broken massing. The elevations for the home plans are designed with a contemporary tilt, featuring 3 style options all incorporating natural materials and low profile roofs and massing.

Trail Connectivity:

This neighborhood is completely enveloped by the existing East-West Regional trail and will provide connections to it throughout the site. A planned crusher fines trail will also connect two portions of the project.

Sustainability:

With our current building practices, all Century Communities' homes currently being built in Colorado meet or exceed the Energy Star 2.0 requirements. This energy rating system, a government-backed program, far exceeds the 2008 Built Green requirements.

The site plan focuses on open space and outdoor living. All homes are located adjacent to open space and residents can enjoy Colorado's temperate weather on their rear yard patios.

Public Art Dedication:

The neighborhood will also present a piece of public art, which is currently planned at the entrance to the community. The proposed art piece is shown graphically on the Park Plan.

Planning Area #11

Ridgegate Tract GG is located within Planning Area #11 of the Ridgegate Residential District West Sub-Area Plan. Under this planning area, the following principles apply.

- *“The detailed site plan for R/MU Planning Area #11 will provide for the reconfiguration of the southern portion of that parcel, surrounded by the bluffs, to allow for its shifting to the northern half of the valley area, thereby preserving the middle and southern area. It is recognized that such shifting may entail development on slopes exceeding 20 percent in this particular parcel (irrespective of previous references indicating that slopes greater than 20 percent would be in open space), in which case appropriate mitigation measures for development shall be employed. The site plan for this parcel will be prepared in consultation with the Division of Wildlife. Additional requirements in this area may involve the maintenance of natural vegetation and restricted landscaping through building envelopes and the consideration of a regional trail through the area. The site plan will consider alternative residential development design, including reduced street width, common open space areas, and a mix of housing types. The design shall also incorporate common building materials and a palette of building colors for homes in this area. Low-profile and stair-stepped buildings will be considered in the areas that are located along the toes of the bluffs, in order to conform to the topography.”*

- The revised site plan moves the proposed home sites away from the channel which aids in preserving the existing native vegetation within the channel. Maintaining the majority of the channel and the native vegetation provides for the conveyance of drainage while maintaining the established drainage corridor and natural habitat. The native vegetation also creates a natural buffer between the rears of the homes. The rear lot lines are well over 130 feet from the centerline of the channel on both sides. The homes are further separated from the lots on the opposing side of the channel and low-water demand vegetation is proposed for the retaining walls needed to accommodate the natural grades of the site. The revised site plan also mitigates the excessive slopes greater than 20% with the use of homes with walkout basements and other architectural elements that aid in blending the homes with the site.
 - A natural and cultural resource study has been completed and is attached. The study and the latest preliminary plan were sent to the Division of Wildlife. They had no issues with the proposed plan when it was first submitted as a 70 lot plan. Therefore, there is not issue with the 50 lot plan.
 - The development proposes to use native vegetation and restricted landscaping.
 - The regional trail relocation, if necessary, will be coordinated with the metropolitan district and Douglas County. Connections to the trail through the subdivision are proposed.
 - The site plan has proposed reduced street widths, common open space areas (community park, trails, entrance feature, and pedestrian bridge), and a mix of housing types.
 - From the original 70 lot plan, the revised plan has removed most of the lots that cut into the bluffs, and realigned the remaining lots to follow the topography in order to reduce the retaining wall required. Low-profile and walk out buildings are proposed along the toes of the bluffs to conform to the topography.
- *“Planning Area #11 boundaries may be reconfigured or reduced to preserve tree and brush vegetation, wildlife areas, and significant views to the south from Planning Area #11 and views to the west from Interstate 25.”*
 - The attached site plan has reconfigured the boundaries of Tract GG in order to preserve tree and brush vegetation and wildlife areas.
 - The proposed site plan is not located within the view corridor as shown in the approved PDD.
 - *“All development proposed within Planning Area #11 is subject to review by the City of Lone Tree Planning Commission and approval by the City Council prior to or concurrent with platting. Plats in these areas may include designation of building envelopes. Submittal requirements may include (but are not limited to) proposed building massing (which may involve height limitations and/or low-profile and stair-stepped buildings);*

architectural elevations; materials; colors; landscaping; fencing; and lighting. Other information necessary to determine the overall design, character and quality of the project for consistency with the Sub-Area Plan, the City of Lone Tree Design Guidelines, and the overall goal of providing a natural transition to the bluffs may be required.”

- The Retreat at Ridgegate includes home sites that are clustered. Within each cluster, the houses are staggered to create a varied streetscape and sight lines, unlike traditional subdivisions, such as Montecito, where homes are aligned down the ROW of the street.
- A number of streets in the proposed preliminary plan are single-loaded instead of the traditional double-loaded single-family detached subdivision. This allows the clusters of homes to uniquely engage the site’s topography.

- *“In addition to all development in Planning Area #11, residential development located adjacent to the southern open space planning areas along the toe of the bluffs is subject to the above City review and approval process. This shall apply to development located within 250 feet from the open space, or the average depth of the lot, whichever is greater.”*
 - The attached preliminary plan will go through the City review and approval process.

- *“A Wildfire Hazard Assessment, consistent with Douglas County’s Wildfire Mitigation Standards, will be required to be submitted to the Lone Tree Community Development Department at the time of subdivision of any plat for Planning Area #11. Suggested mitigation measures may be required as a condition of subdivision approval. On-going maintenance measures to minimize the potential for wildfire may be required to be incorporated in the Covenants, Conditions and Restrictions (CC&Rs) for Planning Area #11.”*
 - The proposed development is located within the moderate wildfire hazard potential area as indicated in the Douglas County Wildfire Hazard Assessment. The project is also located in a low ignition zone. A Wildfire Hazard Assessment was performed by the Anchor Point Group and is attached.
 - Mitigation measures to minimize the potential will be incorporated in the CC&Rs for the project once approved.
 - A coordination meeting with the Rampart Range Metropolitan District and Douglas County was set up to discuss mitigation measures for the channel which will be owned and maintained by the District.

Criteria for Preliminary Plan Approval

1. The application is consistent with the City's Comprehensive Plan, Zoning Code and, where applicable, planned development sub-area plans.
 - a. As stated at the two preceding City Council Hearings (December 1, 2015 and January 19, 2016), the proposed preliminary plan for Ridgegate Tract GG is consistent with the City's Comprehensive Plan and the current zoning under the Ridgegate Planned Development District (PDD).
2. The application is in compliance with the requirements of this subdivision code and achieves its purpose as set forth in Section 17-1-20 of this Chapter.
 - a. The section below describes how the proposed Tract GG plan is in compliance with Section 17-1-20 of the City of Lone Tree's Land Development Code.
3. The application is in conformance with the City's Roadway Design and Construction Standards, the Storm Drainage Design and Technical Criteria Manual, the Grading, Erosion and Sediment Control Manual and other applicable regulations as determined by the City.
 - a. The proposed preliminary plan will meet all of the standards for roadway design and construction, storm drainage design, and erosion control. A full set of construction documents will be submitted for Public Work's review pending City Council's approval of the preliminary plan.

Sec. 17-1-20. Purpose

1. To promote the general health, safety and welfare of the present and future inhabitants of the City. Land proposed for subdivision shall be such that it can be used safely for the intended purpose without danger to health or peril from fire, flood, geologic hazards or other natural hazards.
 - a) Retreat at RidgeGate meets all criteria above.
 - b) The land has gone through significant testing for fire, flood and geological hazards. No significant issues were found.
2. To ensure that the necessary services and facilities are available and have sufficient capacity to serve the proposed subdivision. Land proposed for subdivision shall not be approved until the necessary provisions have been made for: road improvements, access and traffic controls; water supply and wastewater disposal; police and fire protection; parks, trails and recreation; drainage and water quality and other reasonably necessary improvements and services. The cost and installation of such improvements, which primarily benefit the land being subdivided, shall be borne by the owners/developers of such land.
 - a) The proposed roads meet the criteria of both Public Works and the Fire Department.
 - b) The emergency access only connection to Montecito also meets Public Works and Fire Department criteria.
 - c) Water supply and wastewater disposal is available.
 - d) Police and Fire Protection are both available.
 - e) A 0.60 acre park will be dedicated within the subdivision meeting the PLD criteria.

- f) A drainage study will be sent to the City prior to the City Council hearing and for review by Public Works.
 - g) All costs of improvements will be borne by the Developer.
3. To provide for the preservation and conservation of unique or distinctive natural areas, topographic features and landmarks; significant stands of vegetation; critical wildlife habitats, including breeding grounds, nesting areas, migration routes and wintering areas; drainage, riparian and wetland areas; scenic views; historic features and archeologically sensitive sites as determined by the City, recognizing the irreplaceable character of such resources and their importance to the quality of life in the City.
 - a) The proposed preliminary plan has preserved the unique and distinctive natural area known as the Cottonwood Creek drainage channel, at a substantial cost to Century.
 - b) Significant stands of vegetation have been preserved within the channel. Only (one) 1 channel crossing and some grading uphill will affect the stands of vegetation. The vegetative stands on the uphill section are significantly smaller and younger than the preserved areas within the channel.
 - c) The View Corridor as designated in the RidgeGate Planned Development District has been preserved in its entirety.
 - d) The site has been surveyed for archeological sites, and none were found.
4. To design subdivision with lots that are of an appropriate size and configuration for the site characteristics and intended uses with: adequate connections between neighborhoods, services, shopping and recreational areas when possible; a road system designed to preserve the integrity and function of the roadway network and minimization of road cuts and fills; the conservation of water, land and energy resources; and to encourage a diversity of housing types and densities in order to assure adequate housing for all persons.
 - a) The average size of the proposed lots is 10,574 sf. Almost double the size of the adjacent Montecito lots, providing a diversity of housing types.
 - b) The site is connected to Cabelas Drive and the commercial area, and is only proposing a pedestrian and emergency vehicle access connection to Montecito.
 - c) Road cuts and fills have been minimized through the use of retaining walls.
 - d) By clustering the 50 lots, approximately 10 acres will be preserved in perpetuity, and another 24 acres will remain as open space. Water will be conserved through the use of native landscaping on the rear lots and other common areas.
 - e) The 50 proposed homes are semi-custom, which is the first of its kind in the RidgeGate PDD. The proposed density of 1.03 units per acre is also the lowest density currently proposed within the RidgeGate PDD.
5. To provide for an adequate and accurate system to record land subdivisions, ensuring proper legal descriptions and survey monumentation, in order to inform the public and especially future residents of the facts about the subdivision, thereby safeguarding the interests of the public, the homeowner, the subdivider and the City.
 - a) The proposed project will be platted ensuring proper legal descriptions and survey monumentation.

- b) The proposed project will distribute disclosures about the adjacent proposed developments to the South, will stake the proposed roadway with signage describing the amount of units proposed to the South, and will post a map showing the location of the future roadway to the proposed homesites to the South.

Ridgegate Planned Development District

Ridgegate Tract GG is a combination of the 27 acres of R/M-U, Planning Area #11 and 11 acres of C/M-U. Even though only 27 acres of the Tract GG project is within Planning Area #11, we have developed the preliminary plan to adhere to all of the criteria required for Planning Area #11. As discussed in the prior section, our preliminary plan accommodates the reconfiguration of the southern portion of the parcel, surrounded by the bluffs, which allowed for the shifting to the northern half of the valley area, thereby preserving the middle and southern area. In order to save the middle area (also known as the channel), the preliminary plan shows development on slopes exceeding 20%. The PDD further speaks to this within the description of Planning Area #11, "It is recognized that such shifting may entail development on slopes exceeding 20 percent in this particular parcel (irrespective of previous references indicating that slopes greater than 20% would be in open space), in which case appropriate mitigation measures for development shall be employed." Tract GG has addressed these appropriate mitigation measures by performing significant geological studies with accompanying design criteria.

The proposed preliminary plan is comprised of 50 lots with an average lot size of 10,574 square feet over 48 acres of C-M/U and R-M/U. The proposed density is 1.03 units per acre, 70% less than the density of its neighboring community Montecito, which is 3.5 units per acre. The proposed density of 1.03 units per acre provides a nice transition from 3.5 units per acre to the north and 1 unit per acre to the south in the Mesa Area (Rural Residential Planning Area). The Plan for the Rural Residential area to the south establishes the integrity of the bluffs and their function as a natural transition between urban growth to the north (i.e. Montecito and Tract GG) and relatively non-urban conditions to the south.

Adjacent Density Summary

Belvedere	12 dus/acre
North Sky	3.34 dus/acre
Montecito	3.40 dus/acre
Retreat at Ridgegate	1.02 dus/acre
Future Rural Residential	<1 du/acre

Conclusion

We believe the proposed preliminary plan for Ridgegate Tract GG meets all criteria of the Ridgegate PDD as well as the City of Lone Tree Comprehensive Plan, meets all criteria as laid out for Planning Area #11, preserves the integrity of the bluffs as well as the channel, and provides an excellent transition from the higher density Montecito neighborhood and the Cabelas commercial area to the north to the Rural

Residential Planning Area to the south. In addition, Tract GG fills the gap in home values from \$800K to over \$1 million as well as the option to purchase a larger home. The current average home size in Ridgegate is 3,000 square feet and the proposed average for Tract GG is at 3,500 square feet. Tract GG will also provide the option to buy a larger homesite as compared to other developments within Ridgegate or Lone Tree, with a semi-custom home plan that is designed to meet the restrictions of Planning Area #11.

City Council Hearings December 1, 2015 and January 19, 2016:

As stated at these two hearings, council members expressed concerns over the massing (and density) of the project, the transition to the bluffs and the views of the community from the East West connector trail users.

First and foremost, the total number of lots has dropped from 70 (and 65) down to 50 house lots. This is a density of 1.02 DU/Acre.

The massing of the houses has also decreased. To highlight some specific examples:

- The current plan has Lots 1 thru 5 by themselves. In the prior site plans and from the trail, when viewing these same lots at the entry of the community, above these lots used to be seven lots, higher on the bluffs.
- The current plan – between Lots 5 and 38 – there is now a wider than typical lot width break in the row of lots.
- The same is true between lots 32 and 31.
- The current plan – Lots 27 to 31 – when viewing these from the East West Trail connector, now there are 5 lots beyond but further south. In the prior site plans, there were several lots beyond and above these and higher into the bluffs.

Further contributing to the reduction in massing, the minimum lot width is now 75 feet wide (previously the minimum lot width was 72 feet wide). With a 75 foot lot width as the minimum, typical building separation is now 15 feet from face of building to face of building. The previous plan minimum separation was 12 feet. Some of the wider lots will have over 20 feet of building separation.

With the reduction in the number of lots, the overall amount of retaining walls – quantity of face feet and wall heights and cumulative heights of tiered walls – are all reduced. The reduction in the retaining walls coupled with the reduction in the number of houses combines to increase the amount of open space and native and natural planting areas. With much less development – houses and retaining walls – the transition to the bluffs above and the interface to channel in between is more natural and open.



August 4, 2015

Ms. Lisa Evans
Century Communities
8390 E. Crescent Parkway, Suite 650
Greenwood Village, CO 80111

RE: Tract GG DRC Approval

Dear Lisa:

The RidgeGate Design Review Committee (DRC) has reviewed your Design Development (DD) submittal package and approves the submittal subject to revisions reflected in the DRC meeting minutes of July 31, 2015. The approval includes the proposed building color palette, architecture, the site plan including public spaces and amenities, and the sub-area plan. Final site specific details and architecture are required to be reviewed and approved by the RidgeGate DRC prior to submitting plans to the City of Lone Tree for a building permit.

The DRC approval allows your plat and related materials to be submitted to the City of Lone Tree for review of the preliminary and final plan. The DRC will confirm incorporation of any remaining design elements as part of the Construction Document (CD) plot plan review stage of the DRC approval process.

Regards,

Darryl Jones
RidgeGate DRC Administrator

cc: Jennifer Drybread, City of Lone Tree
Project file



9222 Teddy Lane
Lone Tree, Colorado
80124



Ph: 303-662-8112
Fax: 303-792-9489
www.cityoflonetree.com

CITY OF LONE TREE

Department of Public Works

March 14, 2016

City of Lone Tree
Jennifer Drybread
9220 Kimmer, Suite 100
Lone Tree, CO 80124

Re: SB16-12R (Century – Tract GG)
RidgeGate Sec 22, Fil. 1
Project No. 061-423

Dear Jennifer:

We have reviewed the Preliminary Plan package referred to Public Works on Feb. 29, 2016 for the above referenced Project.

The package as submitted and reviewed consists of the following documents:

- Preliminary Plan (6 sheets), dated 2/26/16, by Calibre Engineering, Inc.
- Preliminary Plan Narrative (10 pages) dated 2/18/16.

Our comments are provided below:

GENERAL COMMENTS

1. The Public Works/Engineering Preliminary Plan (& associated reports) Review fee for this Project is \$3,750.00, per the attached Fee Schedule. The normal fee for a Preliminary Plan (for area >25 acres) is \$7,500.00. However, Public Works has agreed to reduce the fee in this instance to 50% of the normal fee, since this submittal is, in essence, a “revised resubmittal” on the prior Tract GG submittal from last year.
2. This Preliminary Plan package submittal is the initial step in the City’s review and evaluation of Century Communities’ revised development proposal for Tract GG. This revised proposal is for a 50 lot subdivision on what currently is known as RidgeGate Tract GG. Tract GG is located southwest of the current Montecito Subdivision and the RidgeGate Commons (Cabela’s, et. al.) developments. As this proposed Project moves through the subsequent approvals processes (Final Platting, Engineering Plans approvals, etc.), and prior to construction, the following items will need to be addressed appropriately:
 - a. A Subdivision Improvement Agreement (SIA) and appropriate sureties will be required for the proposed Project.

- b. A Grading, Erosion and Sedimentation Control (GESC) Permit and applicable surety will be required for this Project. No site work may begin prior to issuance of the applicable GESC Permit(s).
 - c. Since this site exceeds one (1) acre of disturbed area, the developer must obtain a State Stormwater Construction Permit from the Colorado Department of Public Health and Environment (CDPHE), in addition to the City of Lone Tree issued GESC Permit. Documentation of the State Permit coverage issuance will be required prior to issuance of the applicable City site GESC Permit.
3. We have provided the following comments referenced to the indicated sheets within the documents we were reviewing at the time the item commented upon was noted. Comments provided also may apply to other sheets/locations in the Project documents. The applicant's professional(s) should verify that the item(s) are addressed throughout the related Project documents consistently, as applicable.

SPECIFIC COMMENTS

Preliminary Plan

Sheet 1 – Title Sheet

1. The Title on all sheets reference SB15-57R. That was the assigned Planning number for the prior 70 lot Tract GG submittal. City Planning has assigned SB16-12R to the current Preliminary Plan submittal. The Plan Sheet titles should be revised accordingly.
2. We recommend the Section Lines and applicable labels (Section 5 & Section 22) be clearly shown on the documents, including the Vicinity Maps on Sheet 1, as well as the rest of the plan sheets as applicable.
3. Public Works has previously recommended inclusion of sidewalks along at least one side of all of the streets within the development, with the sidewalk(s) located within the associated ROW and/or within public access easement(s) adjacent to the streets. The typical Public Street section includes attached sidewalk along one side. The typical Private Drive section does not include a sidewalk. We would recommend sidewalk be included along at least one side of the private roads.
4. The Typical Private Street Section shows 20-30' widths (re: See Plan) with two 10-lanes. The Typical Section does not identify where / how the 20' paved section falls within the 30' width in these areas where the plans show 30' private road way. The Typical Section should be updated appropriately to clarify.
5. The Typical Public Street Section shows a proposed 40' Public Access Easement. If, as indicated, Street A and Street B are to be dedicated Public Streets, then this 40' wide section must be dedicated/platted to the City of Lone Tree as public road right-of-way. Additionally, the ROW line should extend to 1' behind the back of walk on the sidewalk side (e.g. either 41' ROW, or revise the opposite side for the ROW to be 5' behind the curb face, rather than 6').

6. General Note #4 references the Geologic Hazard Areas Plan on Sheet 6. The correct reference should be to Sheet 5.
7. General Note #6 references Tracts A, B & C. Tracts A & B are the Private Streets. Tract C (see Sheet 4 of 6) appears to be primarily open space and drainage channel. This Tract contains a proposed 10-foot wide crusher fines trail, and a water main loop between the two public roads. Listing Tract C for "Access and Utilities" therefore may be appropriate. (Note – in the prior Tract GG concept, this connection was proposed as a 20' wide paved emergency fire access "road". However, it is our understanding that the fire department no longer is requiring this emergency fire connection.) Typically, Denver Water / Southgate Water require either a 30-foot hard surfaced easement or a 50-foot non-surfaced easement along their water mains. Neither water main easement seems to be indicated. If required, it would seem appropriate to indicate/show the water main easement. Given the open space/drainage channel nature of this Tract, perhaps consideration of whether the overall Tract should be owned and maintained by the HOA, or by the RRMD, with an appropriate Public Access and Water Main easement across it, would be appropriate. An alternate approach might be to make the Public Access and Water Main easement section a separate Tract for HOA ownership and maintenance, with the remainder of the "open space" area being a Tract to the RRMD.
8. General Note #7 indicates Tract M as being transmitted to the HOA for ownership and maintenance. However, the Tract Summary Table indicates the RRMD as the ownership & maintenance entity for Tract M. This discrepancy should be resolved. (Given the apparent nature/location of Tract F (as Tract GG Park/Open Space) ownership and maintenance by the HOA would seem to be the anticipated intent.)
9. General Note #8 indicates Tract F as being transmitted to the RRMD for ownership and maintenance. However, the Tract Summary Table indicates the HOA as the ownership & maintenance entity for Tract F. This discrepancy should be resolved. (Given the nature/location of Tract F, ownership and maintenance by RRMD (as open space) would seem to be the anticipated intent.)
10. General Note #9, and the Tract Summary Table, both indicate a Tract intended to be transferred to Southgate Water District for ownership and maintenance. However, Tract N is not shown in the Preliminary Plan sheets. Tract N should be located/shown. (We anticipate the intent is for Tract N to be the Southgate Pump Station location.)
11. General Note #15 appropriately acknowledges the City requirement regarding Professional Structural Engineer sealed wall designs. Given the degree and extent of the proposed walls, we recommend a requirement that construction inspection reports, as-built records and a final written and sealed certification be provided (by a licensed professional structural engineer and/or professional Geotechnical Engineer) that the retaining walls as constructed are in conformance with the approved structural engineer design provided. This Certification should be provided before approvals for issuance of associated building permits, or at least prior to issuance of certificates of occupancy. If necessary to accommodate the proposed Phased Construction, the requested documentation may be able to be considered and submitted (to the extent practicable) on a Phase by Phase basis.

12. General Note #17 references that the Cabela Drive extension ROW will be dedicated "By Others" with this Plat. We anticipate the "Others" referenced to be the Owner (e.g. Ridgegate Investments, Inc.). It would appear that Ridgegate Investments, Inc. would be a signatory on the Plat. Accordingly, rather than indicating "By Others" for the ROW dedication, perhaps simply noting the dedication by this Plat would be applicable. Also, Note #17 does not address who will be constructing this extension. The Cabela Drive extension and associated required relocation of the impacted portion of the existing regional trail are required for construction/completion of the proposed Tract GG development. Accordingly, the Preliminary Plan Note(s) should address these items.
13. Tract I (reference Sheet 4) consists of both drainage channel, and area containing retaining wall(s) along the rear of Lots 16 & 17 and the cul-de-sac of Street A (public street). Based upon prior concept discussion with Century and their Engineer, we anticipate this Tract I drainage area may be planned for temporary 100-year storm event detention for the Tract GG development. If that indeed is the intent, then having the HOA responsible for ownership and maintenance of this Tract seems appropriate. Tract J (channel downstream of the road crossing) appears to be part of the "existing" drainage channels, and perhaps should be considered for combination as part of Tract D for RRMD ownership and maintenance.
14. To allow development of, and access to, the area for currently proposed Lots 16 - 26, a road crossing of the north leg of the channel is proposed. A graded fill with 4:1 side-slopes, with the road built over the fill, is proposed (on Tracts I & J). The proposed method of construction for this crossing and road impacts a significant portion of the channel and associated vegetation. We recommend a vertical retaining walled crossing, rather than the sloped fill. The total required "footprint" within the channel would be considerably reduced (from approximately 290' of channel length to perhaps 50-60'). A similar fill/crossing approach also may appropriate for the trail/water main crossing on the southerly channel.)

Sheet Nos. 2, 3 & 4 – Site Plan

15. The boundary(ies) of the Tracts are not clearly defined, and in some cases it is unclear which specific Tract(s) some areas are included within. We recommend a more clear (bolder) demarcation of the Tract Boundaries that can be clearly differentiated be provided.
16. While the amount, and overall total cumulative heights of the retaining walls have been reduced from the prior Tract GG proposal, a significant number of retaining walls still are proposed throughout the site. Most of the individual walls are shown as 8 foot maximum height, or less. Tiered wall systems (2 or more adjacent walls) totaling up to 16 feet combined height are proposed. The tallest wall (around the west end of Lots 16, 17 and the Street A cul-de-sac) is shown as 23 feet maximum height. (For reference, the maximum height of the three-tiered retaining wall system at the south-west side of the Cabela's et. al. site is approximately 48 feet in height). Relative to the walls, we have the following specific comments:
 - a. The locations and extents of the walls is not readily discernable on the plans. The wall line weight/line style appears the same as the major contour lines. We recommend the walls be shown more clearly.

- b. There are several locations where apparent wall (or other?) callouts are either missing or are covered by other notes and/or features:
 - i. Sht. 3 north side of Lots 6 & 7 – callout covered by overall Sheet Title.
 - ii. Sht. 3, west of Lot 10 – callout partially covered by the Legend.
 - iii. Sht. 3, east of Lot 27 – callout to Lot 26 could be moved closer to Lot 26 for clarity.
 - iv. Sht. 4, Lot 26 wall callout (see preceding comment) should be shifted so it shows on this sheet.
 - v. Sht. 4, west side of Tract K & Lot 46 – what appears to be walls are not called out.
 - c. The Street A cul-de-sac appears to be approximately 35 feet +/- above the adjacent drainage channel to the west of the cul-de-sac, with a proposed 23 foot max retaining wall offset approximately 10-12 feet from the edge of the pavement. This condition presents a potential traffic safety concern. We recommend the cul-de-sac be pulled back to provide more than a 10-12 foot buffer from the retaining wall/drop into the channel. Appropriate barricading/guard rail system will be required around the west end of the cul-de-sac.
17. The preliminary storm drainage system (inlets, piping, etc.) is presented on these sheets. Based on general pre-submittal discussions held with Century and their engineer, we believe an acceptable/appropriate stormwater and drainage management concept, and associated infrastructure, can be provided for the Tract GG development. However, insufficient information is presented in the current Preliminary Plan Package to confirm if the stormwater plan/concept shown will achieve acceptable results. Some of the concepts/major concerns we have include:
- a. The allowable major storm event flow within the Cottonwood Creek channel at RidgeGate Parkway cannot exceed the current master planned flow, without potentially flooding through the pedestrian tunnel under RidgeGate Parkway. The existing Cottonwood Creek Flow Control Structure (CCFCS – e.g. the pipe under the current Crossfield Drive embankment across the Cottonwood Creek) restricts the upstream drainage basin flows to control the maximum channel flow at RidgeGate Parkway to within the allowable limit. The “excess” upstream flow is temporarily detained behind the CCFCS, creating a temporary 100 Yr. stormwater pond. The overall Tract GG development stormwater management system MAY NOT create any increase in the 100 Yr. discharge rate from the CCFCS nor in the downstream Cottonwood channel flow. We are uncertain from information presented to date in the Preliminary Plan submittal whether this peak flow restriction would be met.
 - b. Part of the indicated Tract GG storm collection system is piped into the upstream end of the existing Cabela Drive storm sewer system. This existing system has a maximum allocated/available capacity for flows from the Tract GG development. Based upon the original Phase II Drainage Report information submitted with the prior 70 lot development concept, it appeared the allowable Cabela Drive storm sewer capacity was projected to be exceeded. We anticipate the current 50 lot Tract GG flows to the Cabela Drive storm sewer will be reduced from those projected for the prior 70 lot proposal. However, pending receipt of an updated Preliminary Plan Drainage Report, we cannot confirm that adequate reductions have been achieved.

Sheet No. 5 – Existing Slope Analysis

18. Note #2 on this sheet states that expansive materials exist throughout the site. While the CTL Thompson Geologic and Preliminary Geotechnical Investigation Report (presented with the prior Tract GG submittal) comments that “*The site is judged suitable for residential development*”, the report also noted that special design and construction considerations should be implemented to minimize the potential for shrink/swell damage potential to structures and improvements.

Sheet No. 6 – Phasing and Features Plan

19. The nature of the proposed connection of Alicante Road (Montecito Subdivision) and Public Street A (in Tract GG) is not clearly identified in this Preliminary Plan (re: Sheets 2 & 6). During the prior Tract GG Preliminary Plan discussions had been held regarding two possible scenarios for this connection:
- A full, public street and intersection connection, or
 - An emergency only connection consisting of more of a pedestrian/bicycle connection (promenade) that could be used by the fire department for emergency access, but which would not otherwise be open for public vehicular traffic.

While Public Works can accept either approach, we recommend the full access connection option. Alicante Drive, south of Montecito Drive, was accepted and platted as a Public Road on the understanding/anticipation that it would serve as a street connection to Tract GG when Tract GG was developed. If the full public road connection to Tract GG will not occur, Public Works recommends that Alicante, south of Montecito Drive, be vacated as Public Road ROW. The section of Alicante would then be considered a private roadway, and the City would no longer maintain nor plow that section of Alicante Drive. The Montecito HOA then would need to take over maintenance and plowing for that section of Alicante Drive.

Preliminary Plan Narrative

20. Storm Drain System: The discussion in this section references 100-yr detention for the site being provided by a combination of on-site improvements and the off-site regional stormwater detention pond. The referenced off-site facility is the RRMD constructed and maintained Regional Stormwater Pond 311 (located east of Sky Ridge Medical Center, between the SRMC and I-25). Pond 311 provides both water quality and detention. It may be appropriate to update the Narrative discussion to reference “Pond 311”. Pond 311 was upgraded this winter to a full EURV-100 Yr. (Full Spectrum) facility to provide the additional capacity for completion of development within its service area, including the proposed Tract GG development.
21. Traffic Study: The Narrative references the 2015 Traffic Study prepared for the prior 70 lot development concept (Ridgegate Tract GG Traffic Impact Analysis, Sept. 14, 2015, LSC Transportation Consultants, Inc.). That study presented the projected traffic considerations associated with the prior proposed development – and indicated the existing/proposed street system in the area could accommodate the proposed development acceptably (from a street design/capacity standpoint). As noted in the current Preliminary Plan Narrative, the present proposal is for 50 lots (down from the prior 70 lot proposal) with an associated reduction of anticipated traffic demands. Accordingly, the existing/proposed street system in the area would be anticipated to accommodate the proposed (50 lot) development acceptably (from a street design/capacity standpoint).

Preliminary Drainage Report

22. A Preliminary Drainage Report, dated June, 2015, by Calibre Engineering, Inc. was provided with the prior Tract GG Preliminary Plan. An updated Preliminary Drainage Report has not been submitted to date for the current Tract GG Preliminary Plan submittal. As such, we cannot identify whether the drainage system indicated in the current Preliminary Plan will be acceptable, or if revised (or additional) drainage infrastructure may be required. The above stated, we believe that an acceptable drainage concept and system can be (will be) presented as the detailed site engineering progresses. Accordingly, we have no drainage based objections to the Preliminary Plan as currently being presented. Necessary detailed drainage documentation and approvals will be required prior to a recommendation for Final Plat approvals.

Geologic and Preliminary Geotechnical Investigation

An updated geologic and geotechnical report was not provided with the current Tract GG Preliminary Plan package. However, the Project Narrative references the previously submitted document (Geologic and Preliminary Geotechnical Investigation, dated June 12, 2014, by CTL Thompson, Inc.).

23. The prior Report notes:
- a. *"The site is judged suitable for residential development."*, and
 - b. *"We believe there are no geologic or geotechnical constraints at this site that would preclude development."* with *"... proper planning, engineering, design and construction."*, and
 - c. *"The primary geotechnical concerns are expansive soil and claystone bedrock and areas with moderate to steep slopes."*
24. The report also:
- a. Raises a potential concern for slope stability of some areas of the site for proposed 3:1 (33%) cut slopes, and states *"We recommend permanent cut and fill slopes be designed with a maximum grade of 4:1 (horizontal:vertical) in these areas."*
 - b. Includes several other specific design/construction recommendations in light of the geotechnical conditions.
25. One item regarding the Geotechnical Report is that the Report and underlying borings locations were based upon the Tract GG layout concept proposed at the time the report was written (June, 2014). The current Tract GG layout/plan is different – and results in grading and retaining wall considerations not necessarily referenced/addressed in the June 2014 report. Additional soil borings were conducted in the area of Lots 16 – 26 during 2015, but we have not seen those results. While we would not anticipate the major comments/concerns/recommendations presented in the updated Report will significantly change from those contained in the current Report, there may be some specific revisions of importance that could impact the final design/construction considerations. We recommend that an updated report reflecting the current proposed Project and additional borings be provided, prior to Final Plat consideration and/or engineering documents approvals.

SB16-12R (Century Tract GG)
RidgeGate Sec 22, Fil. 1
March 14, 2016
Page 8

CONCLUSIONS

Public Works/Engineering has raised several questions/concerns above. We recommend each of these be addressed to the satisfaction of the Planning Commission and Council during consideration for Preliminary Plan approval, and ultimately to Public Works/Engineering before final plat and development plans approvals.

Please feel free to contact me with any questions or comments at 303-662-8112.

Sincerely,

A handwritten signature in black ink, appearing to read "Gregory A. Weeks". The signature is written in a cursive style with a large initial "G".

Gregory A. Weeks, PE, LEED @ AP
City Engineer

Jennifer Drybread

Subject: FW: Ridgeway Tract GG

From: Anthony Valdez [<mailto:Anthony.Valdez@southmetro.org>]
Sent: Tuesday, February 16, 2016 12:00 PM
To: Lisa Albers <lisaA@centurycommunities.com>
Cc: Kelly First <Kelly.First@cityoflonetree.com>; Chip Kerkhove <Chip.Kerkhove@southmetro.org>; Jeff Sceili <jeff.sceili@southmetro.org>
Subject: RE: Ridgeway Tract GG

Lisa –

I have reviewed the document you attached. The upper component to the site plan, at 38 homes, is compliant with one point of access. However, if two more homes are added, the connection point between the two dead-ends will be required to be constructed. Furthermore, it should be noted that placing a long, dead-end component to the access in a wildland urban interface creates some concern for the safety of residents within this area when a fire were to occur, as it prevents people from having an option to evacuate.

The document provided does not provide for an accurate means of scaling dimensions, so I am assuming all of our access roadways meet the requirements of the International Fire Code and South Metro apparatus specifications, including all of the turn-around dimensions. If you are formally resubmitting to the City, we should be seeing all the formal documents on referral and can verify design dimensions at that time.

Please let me know if you have any further questions or concerns.

Respectfully,

Anthony Valdez, FM, CFPS
Fire Marshal / Life Safety Bureau Chief

anthony.valdez@southmetro.org
Direct: 720.989.2248
Cell: 303.472.9429



Life Safety Bureau
South Metro Fire Rescue
9195 East Mineral Avenue
Centennial, CO 80112
www.southmetro.org



Commission on
Fire Accreditation
International

"We exist to protect lives and property from all hazards through preparedness, prevention, mitigation, and response."

From: Lisa Albers [<mailto:lisaA@centurycommunities.com>]
Sent: Friday, February 12, 2016 16:03
To: Anthony Valdez <Anthony.Valdez@southmetro.org>
Subject: Ridgeway Tract GG

Anthony,

We've revised our site plan for Tract GG and eliminated 20 lots. By doing so, we left the emergency access connection to Montecito, but got rid of the emergency access road that connected the two ends.



SOUTH METRO FIRE RESCUE AUTHORITY

LIFE SAFETY BUREAU

9195 E Mineral Ave, Centennial, CO 80112

PHONE: 720.989.2230 www.southmetro.org FAX: 720.989.2130

Kelly First
City of Lone Tree
9220 Kimmer Dr Suite 100
Lone Tree, CO 80124
303-708-1818

File #/Name: SB16-12R
Project Type: **Residential Development**
Referral Received: 2/22/2016
Comments Due: 3/14/2016

S Metro Review # REFPDP16-0017
Plan reviewer: Jeff Sceili
Review date: 3/7/2016

Narrative: New residential development

Code Reference: 2012 International Fire Code, 2012 International Building Code

South Metro Fire Rescue's Life Safety Division has reviewed the above project and has approved the plans with no unresolved issues.



March 18, 2016

Delivered via email: jennifer.drybread@cityoflonetree.com

Ms. Jennifer Drybread
Planning Division
City of Lone Tree
9220 Kimmer Drive, #100
Lone Tree, CO 80124

**RE: Referral for Case No. SB16-12R
RidgeGate Tract GG aka The Retreat
SPN: 2231-222-00-010**

Dear Ms. Drybread,

Thank you for providing Southgate Water & Sanitation Districts (Southgate) the opportunity to comment on the subject referral, which was received on February 29, 2016. The subject property is within the boundaries of Southgate and is serviceable through Southgate. Service connections to Southgate's water distribution and wastewater collection systems may be made only after proper application to Southgate and are subject to the following conditions. Southgate comments are as follows:

1. Proposed water and sewer infrastructure design was not reviewed with this submittal – water and sewer main extensions, fire hydrants, and water and sewer service plans, with applicable fees, must be submitted to Southgate directly for review and approval prior to construction. The design and construction of water and wastewater systems or facilities shall be in strict accordance with Southgate's Rules & Regulations and Design & Construction Standards/Specifications. Information on the review process and submittal requirements can be found on Southgate's website: www.southgatedistricts.org
2. Extensions to Southgate's systems are required to be located in a minimum of 30' public right-of-way (ROW) or easement without encumbrances and encroachments and minimum required clearances from other utilities, edges of ROW/easement, flow-lines, etc.
 - a. Encroachments are not permitted. Encroachments include structures, buildings, fences, walls, retaining walls, parking, curb & gutter crossings, trees, woody plants, nursery stock, planters, islands, medians, posts, signs, etc.

- b. All easements shall be drivable with Southgate equipment, including a combination jet/vacuum truck, without traversing encroachments, such as curb and gutter, walkways, landscaping, etc.
 - c. Unimproved easements shall be graded for driving purposes and may be landscaped with sod, bark or gravel. Trees, shrubs and woody plants are not permitted.
 - d. Improved easements shall be a paved (no pavers) roadway with a minimum paving width of 29' flow-line to flow-line or 26' flow-line to flow-line with an attached walk.
 - e. Easements will be granted to Southgate and not Denver Water as noted in the submittal package.
3. Parcels and irrigated landscaping receiving water service must be wholly within Southgate's and Denver Water's combined service area boundaries.
 4. Century Communities is proposing a water booster pump station (BPS) to serve Tract GG.
 - a. BPS must be an above-ground station on property conveyed to Southgate.
 - i. Southgate does not oppose the proposed location of the BPS; however, Southgate did not review the proposed property limits with this submittal and whether the proposed area to be conveyed to Southgate will be a sufficient area.
 - b. Property must be secured by fencing with sufficient area for vehicles to park and move-about within.
 - c. BPS architecture must blend with the character of the development as to not attract resident complaints.
 - d. Minimum BPS standards have been previously provided to Century Communities.
 - e. Century Communities is required to set-up a sub-district to cover long-term BPS O&M and capital expenditures.
 5. The cost of providing services to the property, including, and not limited to, System Connection Charges, system extension projects, potential system impact studies, potential system impact fees, and potential system improvements, will be borne by the property owner.
 6. The legal ability to provide service continues to exist at the time of connection and has not been limited, restricted or suspended by the action of a governmental entity, agency or other regulatory body which would diminish Southgate's capability to provide such service.

7. Contact Southgate's Engineering Staff as soon as possible to discuss the project and establish project-specific requirements.

You may contact me at cbaca@southgatedistricts.org or (303) 713-7746 with questions.

Sincerely,



Christina Baca, PE
Engineering Manager
Southgate Water & Sanitation Districts

cc: David Irish, Southgate Water & Sanitation Districts;
Mike Lehrburger, Burns & McDonnell;
File



Cherry Creek Basin Water Quality Authority
8390 East Crescent Parkway, Suite 500
Greenwood Village, Colorado 80111
(P) 303.779.4525 (F) 303.773.2050

March 16, 2016

Ms. Jennifer Drybread
Senior Planner
City of Lone Tree
9220 Kimmer Drive, #100
Lone Tree, CO 80124

Subject: Tract GG; Ridgeway - Section 22, Filing No.1
Preliminary Plan Resubmittal

Dear Ms. Drybread:

The Cherry Creek Basin Authority (Authority) has reviewed the subject project for point and non-point source pollutant impacts and water quality considerations in the Cherry Creek watershed. The Authority reviews land disturbance referrals for compliance with Control Regulation No. 72¹ and the Authority's CR-72.2 Stormwater Guidance Document².

Project Description:

The Ridgeway - Section 22, Filing No. 1, Tract GG, Preliminary Plan (Project) is understood to be a 48-acre residential development; generally located southwest of the intersection of Ridgeway Parkway and I-25 at the west end of Cabela Drive. Cottonwood Creek bisects the proposed site. It is understood the number of lots within the proposed development has been reduced from 70 lots to 50 lots.

In the Authority's previous referral review letter dated November 17, 2015, our comments were based on information provided on the Preliminary Plan and in the Preliminary Drainage Report³. An updated Preliminary Drainage Report was not included in this resubmittal referral review packet. As such, the Authority is unable to complete our review at this time.

The Preliminary Plan, dated February 29, 2016 appears to include fewer retaining walls than were previously proposed along the back of the developed lots on each side of Cottonwood Creek. It remains unclear from this submittal how the channel is configured and how its cross section will convey storm flows without degradation of the creek channel. Additionally, it remains unclear who is responsible for maintenance of the Cottonwood Creek channel and how they will access the upper reach of the channel within the development without further disturbance. The previous project submittal referenced the Cottonwood Creek (Downstream of Lincoln Avenue) Conceptual Design Report⁴ which currently serves as the stream channel model for channel stability; however, it isn't apparent how these concepts are incorporated within this reach of Cottonwood Creek. Clarification is needed.

¹ Colorado Department of Public Health and Environment, Water Quality Control Commission, November 30, 2012. *Cherry Creek Reservoir Control Regulation 5CCR 1002-72.*

² Cherry Creek Basin Water Quality Authority, April 27, 2011. *Control Regulation 5 CCR 1002-72 Stormwater Permit Requirements Guidance Document.*

³ Calibre Engineering, Inc., September 2015. *Preliminary Drainage Report for Ridgeway - Section 22, Filing No. 1.*

⁴ Muller Engineering Company, Inc., August 2010. *Cottonwood Creek (Downstream of Lincoln Avenue) Conceptual Design Report.*

Considerations:

The proposed project warrants review by the Authority because of its location within the Cherry Creek basin and the change in land use that can impact runoff quantity and quality. Based on submittal information provided by the applicant, the Project is classified as a Tier 3 development. Tier 3 development requires both construction BMPs and post construction BMPs⁵ that include WQCV.

Impacts on Stream Preservation Areas. CR 72 sets forth additional requirements for all developments constructed within Stream Preservation Areas⁶. These requirements should be addressed in the drainage report.

Water Quality Protection using Stream Reclamation. The Authority and local governments have spent in excess of twenty-four million dollars reclaiming Cherry Creek and its tributaries to stabilize the channel, mitigate for change in hydrology due to urbanization, and provide habitat, recreation and water quality benefits. We have found that channel reclamation was necessary even when the floodplain was not disturbed during adjacent development activities. The need for reclamation is demonstrated by the stream degradation in downstream developed segments of Cherry Creek, and its tributaries, that have required extensive channel improvements to stabilize and restore the corridor hydraulic and environmental functions.

The Cottonwood Creek (Downstream of Lincoln Avenue) Conceptual Design Report⁴ currently serves as the basis for Cottonwood Creek reclamation projects. It remains unclear how the existing channel grade through the development compares to the stable downstream channel profile in the report. It is anticipated that the applicant will address this as a part of their final project design. The Authority anticipates that the stream degradation experienced in the downstream reaches of the basin will continue through Tract GG, if not addressed appropriately. Therefore, the Authority believes that reclamation of the Cottonwood Creek channel within the Project limits is vital for the protection of water quality and should be analyzed as a part of the final project design.

Cottonwood Creek Hydraulic Analysis. The Authority has evaluated several hydraulic parameters⁷ that indicate whether proposed channel modifications are beneficial, have no impact, or are detrimental to water quality as part of the channel reclamation analysis. The Authority believes that a detailed hydraulic analysis incorporating our procedures is necessary to better understand and mitigate for development impacts and protect water quality in Cottonwood Creek.

Review Comments:

The Authority is unable to complete our review of this project until such time as the updated Preliminary Drainage Report is submitted and reviewed. The Authority recommends that the City of Lone Tree require the Tract GG project applicant to submit the updated Preliminary Drainage Report and address the Authority's concerns related to requirements for construction and post-construction BMPs, impacts on stream preservation corridors, and implementing stream reclamation, as required, to protect water quality. In addition, the Authority can provide guidance for the hydraulic analysis of Cottonwood Creek to analyze water quality benefits of a stream reclamation plan.

⁵ CR 5CCR 1002-72; specifically 72.7.2(c)(6)(i)(A) and CR 5 CCR 1002-72 Stormwater Permit Requirements Guidance Document, Chapter III - Post Construction BMP Requirements.

⁶ CR 5CCR 1002-72; specifically 72.7.2(c)(8) and CR 5 CCR 1002-72 Stormwater Permit Requirements Guidance Document, Chapter VI - Stream Preservation Areas.

⁷ CCBWQA Technical Advisory Committee June 16, 2011. *Stream Reclamation, Water Quality Benefit Evaluation – Interim Status Report.*

Cherry Creek Basin Water Quality Authority
8390 East Crescent Parkway, Suite 500
Greenwood Village, Colorado 80111
(P) 303.779.4525 (F) 303.773.2050

The Authority reserves the right to comment on subsequent / future submittals.

Respectively submitted

A handwritten signature in black ink, appearing to read "Jim Swanson". The signature is fluid and cursive, with a long horizontal stroke at the end.

James R. "Jim" Swanson, PE
For the Cherry Creek Basin Water Quality Authority

cc: Chuck Reid, Manager, CCBWQA

Jennifer Drybread

From: Denslow, Denise <Denise.Denslow@claconnect.com>
Sent: Monday, March 21, 2016 12:39 PM
To: Jennifer Drybread
Subject: RE: [External] Tract GG

RRMD supports this project and will work with Century Communities on the coordination of maintenance responsibilities.



CliftonLarsonAllen

Denise D. Denslow, Principal

Outsourcing, CliftonLarsonAllen LLP

Direct 303-265-7910, Mobile 303-903-9760
denise.denslow@CLAconnect.com

Main 303-779-5710 x7910, Fax 303-779-0348
8390 E Crescent Parkway, Suite 500, Greenwood Village, CO 80111
CLAconnect.com



WEALTH ADVISORY | OUTSOURCING | AUDIT, TAX, AND CONSULTING



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Wealth Advisors, LLC, an SEC-registered investment advisor.*

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CliftonLarsonAllen LLP

From: Jennifer Drybread [mailto:Jennifer.Drybread@cityoflonetree.com]
Sent: Wednesday, March 16, 2016 11:28 AM
To: Denslow, Denise
Subject: [External] Tract GG

Denise, I am not sure if you received this referral (revised Tract GG application). Here is the link for the [new plans for Tract GG \(The Retreat\)](#). If at all possible, we would appreciate it if you can provide any written comments by this Monday, March 21st. We will be holding the Planning Commission meeting on the 22nd and would like to pass along your comments to them on Monday. Sorry for the late notice.

Please let me know if you have any questions.



March 21, 2016

Jennifer Drybread
City of Lone Tree
9220 Kimmer Drive
Lone Tree, CO 80124

RE: Ridge Gate Section 22, Filing 1 (Tract GG), SB16-12R
TCHD Case # 3817

Dear Ms. Drybread:

Thank you for the opportunity to review and comment on the Preliminary Plan and Sub-Area Plan for a subdivision located on the corner of Cabelas Drive and Alicante Drive in the Ridge Gate community. Tri-County Health Department (TCHD) staff reviewed the application for compliance with applicable environmental and public health regulations and has the following comment.

Community Design for Physical Activity

Because chronic diseases related to physical inactivity and obesity now rank among the country's greatest public health risks, TCHD encourages community designs that make it easy for people to include regular physical activity, such as walking and bicycling, in their daily routines. At the project site level, TCHD encourages applicants to incorporate pedestrian and bicycle amenities that support the use of a broader pedestrian and bicycle network.

TCHD commends the applicant for providing trail connections throughout the site to the existing East West Regional Trail.

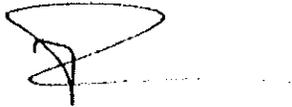
Sun Safety

Exposure to ultraviolet rays (UV) from the sun is a leading risk factor for skin cancer, the most common cancer in the United States. Nationally melanoma is the most common cancer in adolescents and young adults aged 15-29. Since the risk for skin cancer is determined in childhood, protection from ultraviolet radiation is especially important for children and adolescents. Seeking shade when outside is one of the best ways to prevent overexposure to UV rays. TCHD recommends the use of shade in public areas, such as the proposed outdoor passive seating areas on the trails, through trees or physical shade structures such as umbrellas.

**Ridge Gate Section 22
TCHD Case # 3817
March 21, 2016
Page 2 of 2**

Please feel free to contact me at 720-200-1580 or vrichard@tchd.org if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Vanessa Richardson', with a long horizontal line extending to the right.

Vanessa Richardson

Environmental Health Specialist II

CC: Sheila Lynch, Keith Homersham, TCHD

Jennifer Drybread

From: Linda Langewisch <llangewisch@msiho.com>
Sent: Wednesday, March 16, 2016 1:23 PM
To: Jennifer Drybread
Subject: RE: RidgeGate Section 22, Filing 1 (Tract GG, aka The Retreat) SB16-12R: Lone Tree Development Referrals

Follow Up Flag: Follow up
Flag Status: Flagged

Good Afternoon:
The RidgeGate West Village HOA has no comments for:

Project SB16-12R (Tract GG aka The Retreat).

Please let me know if you have any questions.

Thank you,

Linda Langewisch, CMCA
Community Manager
MSI, LLC
6892 So. Yosemite Court Suite 2.101
Centennial, Co 80112
720.974.4273
Fax 303.751.7396
LLangewisch@msiho.com

From: Jim Whatton
Sent: Monday, February 29, 2016 3:47 PM
To: Linda Langewisch <llangewisch@msiho.com>
Subject: FW: RidgeGate Section 22, Filing 1 (Tract GG, aka The Retreat) SB16-12R: Lone Tree Development Referrals

Thank you,

Jim Whatton, CAM, CMCA®, AMS®
Director of Community Management
MSI, LLC
6892 S. Yosemite Court, Suite 2-101
Centennial, CO 80112
(720) 974-4221
Fax (720) 974-4421
jwhatton@msiho.com

Jennifer Drybread

From: Dean Ottenbreit <deano99@q.com>
Sent: Monday, March 14, 2016 8:25 AM
To: Greg and Vicki Fong; jimgunning@comcast.net; Harold Anderson; Kim Monson; Susan Squyer; Jackie Millet; Wentzlaff Mark & Stephanie; Vicki Fong; spsipple@gmail.com; sean.oneill@cochlear.com; rtbellfamily; Roy Natarajan; Rick & Theresa Wagner; Ottenbreit Dean & Dorna; nodland@q.com; Montecito HOA Board; MD LL SIMON; Matt Zettel; Laura Lee Simon; kevinspencer3@icloud.com; Kevin Calame; kcatnew@gmail.com; jenhasn@hotmail.com; Jared Wright; gzal@aol.com; David.E.Williams@innospecinc.com; afowler@lewisfowler.com; Jennifer Drybread
Subject: Re: Tract GG Update Comments

City Council, Planning Commission, Neighbors,

I would also like to add to Greg's email about the new proposed development of tract GG. Although it is better than it was it is still a far cry from anything that was mentioned during the sales process when we were purchasing our home or after. We bought our lot because of the view, and Century charged us a premium for it, based upon the information that the sales staff provided us during our many visits. Prior to us writing our check we were told 2 important things, multiple times, that were huge factors that we based our decision on:

- A. The fire lane road behind our house would NEVER be paved and would be an emergency use road only. It is now proposed to be the main road into the Retreat.
- B. NOTHING was going to be built behind us, EVER!

Soon after we wrote our check my wife found a proposed development from Century, on line, that was 24 large homes on large lots up the draw. The entrance to that area was also proposed up the draw, out of our view. When we brought this to the sales staffs attention they didn't know about it and they seemed just as shocked as we were. Obviously upper management didn't pass that information along so that they could sell more houses? After they dove into it further they found that there were in fact plans to build the 24 homes in that area but the road behind my house was still going to be a fire lane and not paved. When we purchased this home I thought it was our dream house and we would retire here. If I would have known that there would have been this much time, stress, lying and deceit in owning this house I would never have bought it and I certainly would not have agreed to pay the lot premium that they charged us. I am sure that there are others in the neighborhood that experienced the same treatment.

It seems to me that Century is playing a game with us, start at a ridiculous number of houses (80) to make 50 seem like a great deal for everyone. I now understand that something is going to be built in that area but the only development that I would support would be going back to the original 24 homes on large lots or something similar. 24 homes on large lots seems a lot more appealing than 50! It would keep the integrity of the bluffs as well, because 50 homes is still a huge massing of buildings and WILL diminish the beauty of the bluffs, something that the sub area plan wanted to maintain when it was drafted.

If for some reason it is approved, I would implore you to keep Alicante Dr an emergency access road only!! This neighborhood is hard enough to navigate with the current traffic, narrow roads and cars parked on the street, not to mention how bad it gets when the snow is piled on the streets in the winter. The additional traffic from the Retreat and the adjacent shopping areas would cause safety concerns in the Montecito neighborhood. I would also ask that you make sure that Century is held to all of their promises and build only what is approved and plant all of the additional landscaping that they say they are providing to buffer the traffic in and out of the Retreat. Please don't make the Retreat more of a burden on our neighborhood than it already is!

I certainly appreciate your time and efforts. I hope that you make the right decision and keep the bluffs beautiful!

Sincerely,
Dean Ottenbreit
10665 Montecito Dr
303-906-1940

> On Mar 14, 2016, at 12:16 AM, Greg and Vicki Fong <gvfong@integrity.com> wrote:

>
> To the City Council,
>
> We would like to provide some feedback & comments on the Tract GG Update.
> As we are not sure how this process works in terms of previous email
> communications, we are including older emails to ensure that our
> previous comments are retained through the discussion.
>
> We have 3 main points regarding the revised plans.
> #1 - please remove the first 5 homes (lots 1-5 as noted in pg 13) for
> the reasons that a) we never expected to have any homes built in the
> proposed tract due to comments provided by Century Community sales
> people that this would be open space forever and b) now that we have
> been made aware that the tract will be developed, these new homes are
> in our view corridor to the "open space".
> #2 - the new proposed 50 homes, while fewer than the revised 65 to 70
> from the previous proposals, are still too many. Page 10 states that
> there are
> 1.03 dus/acre for The Retreat. If you calculate the actual acres per
> lot being sold to the buyers, the average size is 0.242 acres/lot or
> 4.1 dus/acre which will be the actual visual density in the clusters of homes.
> While the actual spacing between homes is more than what is seen in
> surrounding communities, the fact that other neighbors were told by
> Century Community sales people that only 24 homes would be built is
> double their expectation. Sticking to 24 homes would have a density
> of around 2 dus/acre but more in line with what was expected.
> #3 - please support the connection of Alicante Drive to The Retreat as
> an Alternative Emergency Connection due to the reasons stated in the
> attached email that Montecito residents will not use it but the retail
> shoppers / restaurant patrons and The Retreat residents & visitors
> will causing unnecessary traffic to Montecito residents.

> Thank you, Greg & Vicki Fong

> ----- Original Message

> -----
> Subject: Correction - Tract GG Update
> From: "Jennifer Drybread" <Jennifer.Drybread@cityoflonetree.com>
> Date: Mon, February 29, 2016 5:02 pm
> To: "'Greg & Vicki Fong'" <gvfong@integrity.com>
> "'laura.simon.business@gmail.com'"

Jennifer Drybread

From: Greg Zallaps <gzal@aol.com>
Sent: Thursday, March 10, 2016 9:12 AM
To: Jennifer Drybread
Subject: Tract GG(The Retreat) Comments

Jennifer,

I would like the following comments included in the planning commission's or city council member's packets.

I would like the planning commission and city council members to take into consideration the following concerns and address these issues with Century prior to any approval:

1)Landscape retaining walls-Since tract GG has such a beautiful and natural looking setting, please consider a more natural looking retaining wall instead of man made cinder blocks that were used in the landscaping at Montecito at Ridgeway. A more natural looking stone or the retaining walls in front of Cabella's might be an attractive alternative. If you do go with a more natural stone retaining wall, you have to make sure there is oversight on the construction quality of the natural stone wall as there can be a dramatic difference between a properly built stone wall and a poor quality stone wall. I am not sure what the height of the walls Century is planning to construct but if they are to high, natural stone walls might not be an option. If the retaining walls go above the height of what a natural stone wall can support, I would suggest a look similar to what is front of Cabella's. Having the same type of walls or something similar would be a nice transition between Cabella's and the new community. As far as a design standpoint, the tract GG area would be more suited to have similar looking natural retaining walls like the walls in front of Cabella's. I believe they are concrete, but they still look natural. Since there are so many retaining walls throughout the proposed subdivision, a poorly designed retaining wall system along with an unappealing look of the material used will have a dramatic impact on the tract GG area.

2)Landscape Plant Material-Please hold Century to a higher level of plant quality than what was used at Montecito at Ridgeway. The quality of plant material used in our subdivision was very poor and has a dramatic impact on the look of our neighborhood. I would suggest the planning commission and city council members hold Century to a higher standard quality of plant material used on Tract GG. I would also suggest the trees and shrubs be of a larger height and diameter which will make the tract GG area look more established and natural from the beginning of the project. If tract GG uses smaller tree and shrub heights, it will take tract GG a longer time to look more natural. As we all know, tract GG is a very beautiful area and we want to get that area to look as natural as possible in the quickest time frame.

3)Native Grass Areas-I would suggest to the planning commission and city council members hold Century to a higher level of maintaining the native seed grass areas on tract GG. The native grass areas in Montecito at Ridgeway has not been properly maintained by Century. We are in the process of potentially hiring a company that specializes in native grass. There is a lot more to seeding an area than throwing down seed and watering it. Century has not seeded the Montecito at Ridgeway area properly along with not maintaining the proper heights of the native grass which now has created many dead looking areas throughout our neighborhood. I would suggest to both the planning commission and city council members get a detailed plan of what seed Century proposes to use and the maintenance and upkeep of the native seed areas. Since Century was not held to any guidelines to follow the proper maintenance of our native seed areas, our subdivision is now having to bear the costs to fix what Century has done. If the native seed areas are not properly installed, it will have a dramatic impact on the setting of that area.

4)Front yard landscapes of homes to be built-I would suggest the City hold Century to a higher level of front yard landscaping if Century is going to install the front yard landscapes. The company they used to do the front yard landscapes in our subdivision has had a negative impact on our community. The plant material is of poor quality along with the installation is well below industry standards. If the City wants to keep that area as natural as possible, you have to hold Century to a higher level of front yard landscaping. Having poorly landscaped front yards will have a dramatic impact for that area. One option, which Century might be open to, is not landscaping the front yard of these homes and have the home owners cover these costs. It would save Century costs and allow the homeowner to create a much higher quality front yard landscape. If Century feels they need to install front yard landscapes, then please hold Century to getting a better quality landscaping firm.

5)Maintenance Company-Please hold Century to providing a higher quality landscape maintenance company during

the construction process. As I stated before, the landscape maintenance company Century used for our subdivision has set our native seed areas back by a few years. They did not understand how to take care of native seed grass and now we are in the process of trying to fix what they have done.

I would advise everyone on the both the planning commission and city council to really look at the retaining walls, the plant material, and the native grass areas in Montecito to see if this is really the look you want on tract GG. The Montecito community is now faced with correcting all these problems listed above which will cost our community a substantial amount of money which unfortunately we have limited funds. I would hate to see tract GG have and face the problems we are now encountering such as poor quality plant material, poor installation of front yard landscapes, and most importantly poor quality of native grass areas which have a dramatic affect on our community.

Thank you for taking the time and if anyone has any questions, please feel free to email me, and I would be more than happy to talk to anyone about my ideas and concerns.

Greg Zallaps
10501 Montecito Drive
Lone Tree, CO 80124



March 28, 2016

City of Lone Tree
Jennifer Drybread
9220 Kimmer Drive, Suite 100
Lone Tree, CO 80124

Dear Jennifer,

The following represents a summary of the concerns emailed to the City in regards to Retreat at Ridgegate.

1. Vehicular Connection to Montecito. The neighbors have asked to remove the proposed vehicular connection to their community.
 - a. **In order to support the Montecito community, we are still proposing an emergency only access connection to Alicante.**
2. Density. The neighbors were told that only 24 homes would be constructed.
 - a. **Unfortunately, we cannot account for what was told to the homeowner during the sales process; however, each homeowner was provided with a surrounding area report discussing the adjacent property development that was read and signed by the Buyer. In addition, the sales contracts and closing documents for Montecito include a paragraph which states, "The Property is contiguous to and/or in the vicinity of other parcels of real property, which as of the date hereof, have not been developed. Such property may or may not be developed the same as the Property. Purchaser should independently investigate the present and future use and improvement and character of all property adjacent to the Property (whether in the Subdivision or not) before**

- b. *deciding to purchase the Property and may not rely on any statements of any broker or employees, representatives or agents of Seller or any brochures or displays in the sales office about the use, improvement or character of any property. Purchaser acknowledges that any renderings, land plans, development plans, plats, conceptual layouts or other materials which may be in the sales office, brochures or otherwise which show such uses only demonstrate Seller's current knowledge of what may be planned for the area in question and are subject to change or modification at any time without notice. No assurances have been or are being made that such development and/or use will in any manner correspond to the matters reflected on any such rendering, land plan, layout or brochure or be consistent with the use of the Property. Completion of the common areas, including, without limitation, timing, location, method and manner of installation of landscaping, parking areas, recreational facilities, amenities, and walkways is at the sole discretion of Seller. Furthermore, Seller hereby reserves the right to change its development plans, timing, sales methods, and pricing in connection with any property within or without the Subdivision. Purchaser for himself and his successors and assigns hereby agrees to assume the risks and releases Seller and its members, managers, officers, employees, affiliates, agents, successors and assigns from any and all costs, expenses, damages, liabilities and claims arising from or related thereto."*

There is also another paragraph in the contract which states,
"FUTURE DEVELOPMENT: Certain land within, adjacent to and in the vicinity of the Subdivision is currently vacant and/or undeveloped (the "Vacant Land"). Purchaser understands and acknowledges that such land may not stay vacant and/or undeveloped. It is very likely that such land will be developed in the future unless it has been preserved as open space by the State of Colorado, local municipalities or preservation groups. Such development may result in significant grading activities along with increased noise, dust and traffic. There is also no assurance that current zoning will not be amended in the future. Purchaser understands and acknowledges that future development may also change the topography of the areas and that the current view from a particular location, including the Property, may be affected, changed or blocked by future development. Purchaser acknowledges that Seller has made no representation whatsoever, either verbal or written, as to the future use or development of the Vacant Land or the preservation of existing views. Purchaser acknowledges that no representations or warranties have been made by Seller as to the effect of the Vacant Land, either positive or negative, on the use, value or ownership of the Property. Purchaser is advised to conduct his own independent investigation as to any risk, benefit or detriment. Purchaser for himself and his successors and assigns hereby agrees to assume the risks, directly or indirectly, related to the future development of the Vacant Land and releases Seller and its

members, managers, officers, employees, affiliates, agents, successors and assigns from any and all costs, expenses, damages, liabilities and claims arising from or related to such future development and agrees to indemnify, defend and hold them harmless. Such risks include, without limitation, increased noise, nuisance, dust and injury or damage resulting from or caused by future development as well as the resulting detrimental visual and aesthetic effects including, without limitation, the elimination or adverse effect on existing views.”

- c. **The proposed Retreat at Ridgegate is currently zoned R-M/U (Residential Mixed Use) which has no maximum density restriction.**
 - d. **The illustration that was up in the Montecito sales office showed approximately 47 home sites within Tract GG; however, the illustrative (done in October of 2014) has a disclaimer that states “However the exact location of roads, parks, trails, housing, schools and other uses shown on the map has not been finalized and must still be reviewed and approved by the City of Lone Tree.”**
 - e. **The same illustrative shows a vehicular connection to Montecito.**
3. Entrance Road.
- a. **There was concern over the amount of traffic and headlights along the entrance road to the Retreat at Ridgegate. In order to protect the existing Montecito homeowners, we are proposing to add additional landscaping on their side of the entrance road in order to decrease any headlight penetration and decrease noise levels of vehicles.**

Comments from Greg Zallaps’ email dated March 10, 2016:

1)Landscape retaining walls-Since tract GG has such a beautiful and natural looking setting, please consider a more natural looking retaining wall instead of man made cinder blocks that were used in the landscaping at Montecito at Ridgegate. A more natural looking stone or the retaining walls in front of Cabela's might be an attractive alternative. If you do go with a more natural stone retaining wall, you have to make sure there is oversight on the construction quality of the natural stone wall as there can be a dramatic difference between a properly built stone wall and a poor quality stone wall. I am not sure what the height of the walls Century is planning to construct but if they are too high, natural stone walls might not be an option. If the retaining walls go above the height of what a natural stone wall can support, I would suggest a look similar to what is front of Cabela's. Having the same type of walls or something similar would be a nice transition between Cabela's and the new community. As far as a design standpoint, the tract GG area would be more suited to have similar looking natural retaining walls like the walls in front of Cabela's. I believe they are concrete, but they still look natural. Since there are so many retaining walls throughout the proposed subdivision, a poorly designed retaining wall system along with an unappealing look of the material used will have a dramatic impact on the tract GG area.

Response: Our proposed retaining wall matches the same wall that was installed at Bluffmont Heights. Construction inspections will be performed by a licensed geotechnical engineer. The proposed heights are 8 feet tiered walls.

2) Landscape Plant Material-Please hold Century to a higher level of plant quality than what was used at Montecito at Ridgegate. The quality of plant material used in our subdivision was very poor and has a dramatic impact on the look of our neighborhood. I would suggest the planning commission and city council members hold Century to a higher standard quality of plant material used on Tract GG. I would also suggest the trees and shrubs be of a larger height and diameter which will make the tract GG area look more established and natural from the beginning of the project. If tract GG uses smaller tree and shrub heights, it will take tract GG a longer time to look more natural. As we all know, tract GG is a very beautiful area and we want to get that area to look as natural as possible in the quickest time frame.

Response: The landscape plan will be submitted and reviewed during the Final Plat process.

3) Native Grass Areas-I would suggest to the planning commission and city council members hold Century to a higher level of maintaining the native seed grass areas on tract GG. The native grass areas in Montecito at Ridgegate has not been properly maintained by Century. We are in the process of potentially hiring a company that specializes in native grass. There is a lot more to seeding an area than throwing down seed and watering it. Century has not seeded the Montecito at Ridgegate area properly along with not maintaining the proper heights of the native grass which now has created many dead looking areas throughout our neighborhood. I would suggest to both the planning commission and city council members get a detailed plan of what seed Century proposes to use and the maintenance and upkeep of the native seed areas. Since Century was not held to any guidelines to follow the proper maintenance of our native seed areas, our subdivision is now having to bear the costs to fix what Century has done. If the native seed areas are not properly installed, it will have a dramatic impact on the setting of that area.

Response: A detailed landscaping plan will be submitted and reviewed during the Final Plat process.

4) Front yard landscapes of homes to be built-I would suggest the City hold Century to a higher level of front yard landscaping if Century is going to install the front yard landscapes. The company they used to do the front yard landscapes in our subdivision has had a negative impact on our community. The plant material is of poor quality along with the installation is well below industry standards. If the City wants to keep that area as natural as possible, you have to hold Century to a higher level of front yard landscaping. Having poorly landscaped front yards will have a dramatic impact for that area. One option, which Century might be open to, is not landscaping the front yard of these homes and have the home owners cover these costs. It would save Century costs and allow the homeowner to create a much higher quality front yard landscape. If Century feels they need to install front yard landscapes, then please hold Century to getting a better quality landscaping firm.

Response: A detailed landscaping plan will be submitted and reviewed during the Final Plat process.

5) Maintenance Company-Please hold Century to providing a higher quality landscape maintenance company during the construction process. As I stated before, the landscape maintenance company Century used for our subdivision has set our native seed areas back by a few years. They did not understand how to take care of native seed grass and now we are in the process of trying to fix what they have done.

Response: Duly noted.

I would advise everyone on the both the planning commission and city council to really look at the retaining walls, the plant material, and the native grass areas in Montecito to see if this is really the look you want on tract GG. The Montecito community is now faced with correcting all these problems listed above which will cost our community a substantial amount of money which unfortunately we have limited funds. I would hate to see tract GG have and face the problems we are now encountering such as poor quality plant material, poor installation of front yard landscapes, and most importantly poor quality of native grass areas which have a dramatic affect on our community.

Response: Duly noted. Century Communities is working extremely closely with the Montecito HOA Board of Directors to address all concerns the community has prior to final turnover.

Thank you for taking the time and if anyone has any questions, please feel free to email me, and I would be more than happy to talk to anyone about my ideas and concerns.

Greg Zallaps
10501 Montecito Drive
Lone Tree, CO 80124

Comments from Dean Ottenbriet's email dated March 14, 2016:

City Council, Planning Commission, Neighbors,

I would also like to add to Greg's email about the new proposed development of tract GG. Although it is better than it was it is still a far cry from anything that was mentioned during the sales process when we were purchasing our home or after. We bought our lot because of the view, and Century charged us a premium for it, based upon the information that the sales staff provided us during our many visits. Prior to us writing our check we were told 2 important things, multiple times, that were huge factors that we based our decision on:

- A. The fire lane road behind our house would NEVER be paved and would be an emergency use road only. It is now proposed to be the main road into the Retreat.
- B. NOTHING was going to be built behind us, EVER!

Soon after we wrote our check my wife found a proposed development from Century, on line, that was 24 large homes on large lots up the draw. The entrance to that area was also proposed up the draw, out of our view. When we brought this to the sales staff's attention they didn't know about it and they seemed just as shocked as we were.

Obviously upper management didn't pass that information along so that they could sell more houses? After they dove into it further they found that there were in fact plans to build the 24 homes in that area but the road behind my house was still going to be a fire lane and not paved. When we purchased this home I thought it was our dream house and we would retire here. If I would have known that there would have been this much time, stress, lying and deceit in owning this house I would never have bought it and I certainly would not have agreed to pay the lot premium that they charged us. I am sure that there are others in the neighborhood that experienced the same treatment.

Response: The only proposed illustrative site plans of this site showed 47 home sites. However, the Surrounding Area Report that was signed by each homeowner explained that your views today will not be the same in the future, that Tract GG was zoned as Residential – Mixed Use, and that any parcels can be rezoned at any time.

It seems to me that Century is playing a game with us, start at a ridiculous number of houses (80) to make 50 seem like a great deal for everyone. I now understand that something is going to be built in that area but the only development that I would support would be going back to the original 24 homes on large lots or something similar. 24 homes on large lots seems a lot more appealing than 50! It would keep the integrity of the bluffs as well, because 50 homes is still a huge massing of buildings and WILL diminish the beauty of the bluffs, something that the sub area plan wanted to maintain when it was drafted.

Response: It was not our intent to come in with more homes only to make 50 homes more appealing. We submitted our first plan to the City with 70 home sites. This plan was in conformance with Planning Area #11 restrictions per the Ridgegate PDD and subsequently recommended for approval by Planning Staff. After many meetings with the City and several proposed concept plans, we prepared a plan of 50 lots that we believe met all of the concerns from the City Council hearing on January 19, 2016.

If for some reason it is approved, I would implore you to keep Alicante Dr an emergency access road only!! This neighborhood is hard enough to navigate with the current traffic, narrow roads and cars parked on the street, not to mention how bad it gets when the snow is piled on the streets in the winter. The additional traffic from the Retreat and the adjacent shopping areas would cause safety concerns in the Montecito neighborhood. I would also ask that you make sure that Century is held to all of their promises and build only what is approved and plant all of the additional landscaping that they say they are providing to buffer the traffic in and out of the Retreat. Please don't make the Retreat more of a burden on our neighborhood than it already is!

Response: In order to support the Montecito community, we are still proposing an emergency only connection to Alicante.

I certainly appreciate your time and efforts. I hope that you make the right decision and keep the bluffs beautiful!

Sincerely,

Dean Ottenbreit
10665 Montecito Dr
303-906-1940

Comments from Greg and Vicki Fong's email dated March 14, 2016:

To the City Council,

We would like to provide some feedback & comments on the Tract GG Update. As we are not sure how this process works in terms of previous email communications, we are including older emails to ensure that our previous comments are retained through the discussion.

We have 3 main points regarding the revised plans.

#1 - please remove the first 5 homes (lots 1-5 as noted in pg 13) for the reasons that a) we never expected to have any homes built in the proposed tract due to comments provided by Century Community sales people that this would be □open space forever□ and b) now that we have been made aware that the tract will be developed, these new homes are in our view corridor to the "open space".

Response: We have prepared a 3-D rendering that clearly shows no homes will be visible from your street corner. Respectfully, we do not agree that any of Lots 1-5 will adversely impact your view.

#2 - the new proposed 50 homes, while fewer than the revised 65 to 70 from the previous proposals, are still too many. Page 10 states that there are 1.03 dus/acre for The Retreat. If you calculate the actual acres per lot being sold to the buyers, the average size is 0.242 acres/lot or 4.1 dus/acre which will be the actual visual density in the clusters of homes. While the actual spacing between homes is more than what is seen in surrounding communities, the fact that other neighbors were told by Century Community sales people that only 24 homes would be built is double their expectation. Sticking to 24 homes would have a density of around 2 dus/acre but more in line with what was expected.

Response: The only proposed illustrative site plans of this site showed 47 home sites. However, the Surrounding Area Report that was signed by each homeowner explained that your views today will not be the same in the future, that Tract GG was zoned as Residential – Mixed Use, and that any parcels can be rezoned at any time. Density is calculated using the overall acreage of the respective project. This includes the roadway infrastructure, parks, open space and the actual lots.

#3 - please support the connection of Alicante Drive to The Retreat as an Alternative Emergency Connection due to the reasons stated in the attached email that Montecito residents will not use it but the retail shoppers / restaurant patrons and The Retreat residents & visitors will causing unnecessary traffic to Montecito residents.

Response: In order to support the Montecito community, we are still proposing an emergency only connection to Alicante.

Thank you, Greg & Vicki Fong

Please let me know if you have any questions.

Respectfully,

Lisa Evans
Managing Director of Development

03/22/2016

Jennifer Drybread

City of Lone Tree Community Development Dept

303-708-1818

jennifer.drybread@cityoflonetree.com

9220 Kimmer Drive, Suite 100

Lone Tree, CO 80124

Dear Jennifer,

We have reviewed the City of Lone Tree's comments for the Ridgeline Section 22, Filing 1 Preliminary Plan; below you will find our responses to the comments.

If you need any additional materials or have any questions with regards to the provided information, please feel free to contact me at the contact information provided above.

Thank you,

A handwritten signature in blue ink, appearing to read "Todd A. Johnson", is written over a light blue circular scribble.

CALIBRE ENGINEERING, INC.

Todd A. Johnson

V.P. – Director of Professional Services

O: (303) 730-0434

F: (303) 730-1139

taj@calibre.us.com

Listed below are responses to the comments dated 3/14/2016.

General Comments:

1. The Public Works/Engineering Preliminary Plan (& associated reports) Review fee for this Project, per the adopted standard review fee schedule, is \$7500.00. The fee has been paid.
Response: Comment noted.

2. The Preliminary Plan package submittal is the initial step in the City's review and evaluation of Century Communities' proposed development of an approximately 70 lot subdivision on what currently is known as RidgeGate Tract GG. Tract GG is located southwest of the current Montecito Subdivision and the RidgeGate Commons (Cabela's, et. al.) developments. As this proposed Project moves through the subsequent approvals processes (Final Platting, Engineering Plans approvals, etc.), and prior to construction, the following items will need to be addressed appropriately:
 - a. A Subdivision Improvement Agreement (SIA) and appropriate sureties will be required for the proposed Project.
Response: Comment noted.
 - b. A Grading, Erosion and Sedimentation Control (GESC) Permit and applicable surety will be required for this Project. No site work may begin prior to issuance of the applicable
Response: Comment noted.
 - c. Since this site exceeds one (1) acre of disturbed area, the developer must obtain a State Stormwater Construction Permit from the Colorado Department of Public Health and Environment (CDPHE), in addition to the City of Lone Tree issued GESC Permit. Documentation of the State Permit coverage issuance will be required prior to issuance of the applicable City site GESC Permit.
Response: Comment noted.

We have provided the following comments referenced to the indicated sheets within the documents we were reviewing at the time the item commented upon was noted. Comments provided also may apply to other sheets/locations in the Project documents. The applicant's professional(s) should verify that the item(s) are addressed throughout the related Project documents consistently, as applicable.

Specific Comments:

Preliminary Plan

Sheet 1-Title Sheet

Sheet 1 - Title Sheet

1. The Title on all sheets reference SB 15-57R. That was the assigned Planning number for the prior 70 lot Tract GG submittal. City Planning has assigned SB16-12R to the current Preliminary Plan submittal. The Plan Sheet titles should be revised accordingly.
Response: All sheets now reference SB16-12R, as requested.

2. We recommend the Section Lines and applicable labels (Section 5 & Section 22) be clearly shown on the documents, including the Vicinity Maps on Sheet 1, as well as the rest of the plan sheets as applicable.
Response: Section lines have been added to the Vicinity map and remain shown throughout the Preliminary Plan.

3. Public Works has previously recommended inclusion of sidewalks along at least one side of all of the streets within the development, with the sidewalk(s) located within the associated ROW and/or within public access easement(s) adjacent to the streets. The typical Public Street section includes attached sidewalk along one side. The typical Private Drive section does not include a sidewalk. We would recommend sidewalk be included along at least one side of the private roads.

Response: We are in the process of evaluating if these two streets can be made public, if so we will provide a walk along one side, as with the two main streets within this development.

4. The Typical Private Street Section shows 20-30' widths (re: See Plan) with two 10-lanes. The Typical Section does not identify where / how the 20' paved section falls within the 30' width in these areas where the plans show 30' private road way. The Typical Section should be updated appropriately to clarify.

Response: A second typical "private drive" section has been provided to show how the 30 ft width will be paved.

5. The Typical Public Street Section shows a proposed 40' Public Access Easement. If, as indicated, Street A and Street B are to be dedicated Public Streets, then this 40' wide section must be dedicated/platted to the City of Lone Tree as public road right-of-way. Additionally, the ROW line should extend to 1' behind the back of walk on the sidewalk side (e.g. either 41' ROW, or revise the opposite side for the ROW to be 5' behind the curb face, rather than 6').

Response: The typical section has been revised to provide 1 foot of ROW behind the walk, the total ROW width remains 40 feet.

6. General Note #4 references the Geologic Hazard Areas Plan on Sheet 6. The correct reference should be to Sheet 5.

Response: The aforementioned label has been corrected, as indicated.

7. General Note #6 references Tracts A, B & C. Tracts A & B are the Private Streets. Tract C (see Sheet 4 of 6) appears to be primarily open space and drainage channel. This Tract contains a proposed 10-foot wide crusher fines trail, and a water main loop between the two public roads. Listing Tract C for "Access and Utilities" therefore may be appropriate. (Note – in the prior Tract GG concept, this connection was proposed as a 20' wide paved emergency fire access "road". However, it is our understanding that the fire department no longer is requiring this emergency fire connection.) Typically, Denver Water / Southgate Water require either a 30-foot hard surfaced easement or a 50-foot non-surfaced easement along their water mains. Neither water main easement seems to be indicated. If required, it would seem appropriate to indicate/show the water main easement. Given the open space/drainage channel nature of this Tract, perhaps consideration of whether the overall Tract should be owned and maintained by the HOA, or by the RRMD, with an appropriate Public Access and Water Main easement across it, would be appropriate. An alternate approach might be to make the Public Access and Water Main easement section a separate Tract for HOA ownership and maintenance, with the remainder of the "open space" area

being a Tract to the RRMD.

Response: Tract C currently remains as an Access and utility tract. All tract definition is preliminary and will certainly be refined once the 50 lot concept has general Planning Commission approval.

8. General Note #7 indicates Tract M as being transmitted to the HOA for ownership and maintenance. However, the Tract Summary Table indicates the RRMD as the ownership & maintenance entity for Tract M. This discrepancy should be resolved. (Given the apparent nature/location of Tract F (as Tract GG Park/Open Space) ownership and maintenance by the HOA would seem to be the anticipated intent.)
Response: Tract M will be owned and maintained by the HOA.

9. General Note #8 indicates Tract F as being transmitted to the RRMD for ownership and maintenance. However, the Tract Summary Table indicates the HOA as the ownership & maintenance entity for Tract F. This discrepancy should be resolved. (Given the nature/location of Tract F, ownership and maintenance by RRMD (as open space) would seem to be the anticipated intent.)
Response: Tract F will be owned and maintained by the HOA.

10. General Note #9, and the Tract Summary Table, both indicate a Tract intended to be transferred to Southgate Water District for ownership and maintenance. However, Tract N is not shown in the Preliminary Plan sheets. Tract N should be located/shown. (We anticipate the intent is for Tract N to be the Southgate Pump Station location.)
Response: Tract N is now clearly labeled.

11. General Note #15 appropriately acknowledges the City requirement regarding Professional Structural Engineer sealed wall designs. Given the degree and extent of the proposed walls, we recommend a requirement that construction inspection reports, as-built records and a final written and sealed certification be provided (by a licensed professional structural engineer and/or professional Geotechnical Engineer) that the retaining walls as constructed are in conformance with the approved structural engineer design provided. This Certification should be provided before approvals for issuance of associated building permits, or at least prior to issuance of certificates of occupancy. If necessary to accommodate the proposed Phased Construction, the requested documentation may be able to be considered and submitted (to the extent practicable) on a Phase by Phase basis.
Response: Comment noted, a qualified professional engineer will design the walls.

12. General Note #17 references that the Cabela Drive extension ROW will be dedicated "By

Others" with this Plat. We anticipate the "Others" referenced to be the Owner (e.g. Ridgeway Investments, Inc.). It would appear that Ridgeway Investments, Inc. would be a signatory on the Plat. Accordingly, rather than indicating "By Others" for the ROW dedication, perhaps simply noting the dedication by this Plat would be applicable. Also, Note #17 does not address who will be constructing this extension. The Cabela Drive extension and associated required relocation of the impacted portion of the existing regional trail are required for construction/completion of the proposed Tract GG development. Accordingly, the Preliminary Plan Note(s) should address these items.

Response: Note 17 now clarifies that the extension of Cabela Drive will be constructed with this development.

13. Tract I (reference Sheet 4) consists of both drainage channel, and area containing retaining wall(s) along the rear of Lots 16 & 17 and the cul-de-sac of Street A (public street). Based upon prior concept discussion with Century and their Engineer, we anticipate this Tract I drainage area may be planned for temporary 100-year storm event detention for the Tract GG development. If that indeed is the intent, then having the HOA responsible for ownership and maintenance of this Tract seems appropriate. Tract J (channel downstream of the road crossing) appears to be part of the "existing" drainage channels, and perhaps should be considered for combination as part of Tract D for RRMD ownership and maintenance.

Response: Tract I will as you state, contain 100 yr storm event improvements and therefore it remains indicated as a HOA owned and maintained tract.

14. To allow development of, and access to, the area for currently proposed Lots 16 - 26, a road crossing of the north leg of the channel is proposed. A graded fill with 4:1 side-slopes, with the road built over the fill, is proposed (on Tracts I & J). The proposed method of construction for this crossing and road impacts a significant portion of the channel and associated vegetation. We recommend a vertical retaining walled crossing, rather than the sloped fill. The total required "footprint" within the channel would be considerably reduced (from approximately 290' of channel length to perhaps 50-60'). A similar fill/crossing approach also may be appropriate for the trail/water main crossing on the southerly channel.)

Response: This crossing remains as a 4:1 fill condition, any effort to minimize the area of impact will result in walls and the maintenance access to the drainage channel would be compromised.

Sheet Nos. 2, 3 & 4 - Site Plan

15. The boundary(ies) of the Tracts are not clearly defined, and in some cases it is unclear which specific Tract(s) some areas are included within. We recommend a more clear (bolder) demarcation of the Tract Boundaries that can be clearly differentiated be provided.

Response: The aforementioned tract boundaries have been darkened in an effort to more clearly demark the limits of the tract boundaries.

16. While the amount, and overall total cumulative heights of the retaining walls have been reduced from the prior Tract GG proposal, a significant number of retaining walls still are proposed throughout the site. Most of the individual walls are shown as 8 foot maximum height, or less. Tiered wall systems (2 or more adjacent walls) totaling up to 16 feet combined height are proposed. The tallest wall (around the west end of Lots 16, 17 and the Street A cul-de-sac) is shown as 23 feet maximum height. (For reference, the maximum height of the three-tiered retaining wall system at the south-west side of the Cabela's et. al. site is approximately 48 feet in height). Relative to the walls, we have the following specific comments:

Response: The 23 ft area reference above has been revised and reduced to a two tier condition where neither wall exceeds 8 feet.

- a. The locations and extents of the walls is not readily discernable on the plans. The wall line weight/line style appears the same as the major contour lines. We recommend the walls be shown more clearly.
Response: We continue to modify lineweights and shading to clarify, hopefully they appear more readable on the current document
- b. There are several locations where apparent wall (or other?) callouts are either missing or are covered by other notes and/or features:
 - i. Sht. 3 north side of Lots 6 & 7 – callout covered by overall Sheet Title.
Annotation has been revised for clarity.
 - ii. Sht. 3, west of Lot 10 – callout partially covered by the Legend.
Annotation has been revised for clarity.
 - iii. Sht. 3, east of Lot 27 -callout to Lot 26 could be moved closer to Lot 26 for clarity.
Annotation has been revised for clarity.
Sht. 4, Lot 26 wall callout (see preceding comment) should be shifted so it shows on this sheet.
Annotation has been revised for clarity.
 - iv. Sht. 4, west side of Tract K & Lot 46 -what appears to be walls are not called out.
Annotation has been revised for clarity.

- c. The Street A cul-de-sac appears to be approximately 35 feet +/- above the adjacent drainage channel to the west of the cul-de-sac, with a proposed 23 foot max retaining wall offset approximately 10-12 feet from the edge of the pavement. This condition presents a potential traffic safety concern. We recommend the cul-de-sac be pulled back to provide more than a 10-12 foot buffer from the retaining wall/drop into the channel. Appropriate barricading/guard rail system will be required around the west end of the cul-de-sac.

Response: The cul-de-sac in question has been pulled back and lowered. We believe the current configuration to be much more agreeable to the site.

17. The preliminary storm drainage system (inlets, piping, etc.) is presented on these sheets. Based on general pre-submittal discussions held with Century and their engineer, we believe an acceptable/appropriate stormwater and drainage management concept, and associated infrastructure, can be provided for the Tract GG development. However, insufficient information is presented in the current Preliminary Plan Package to confirm if the stormwater plan/concept shown will achieve acceptable results. Some of the concepts/major concerns we have include:

- a. The allowable major storm event flow within the Cottonwood Creek channel at RidgeGate Parkway cannot exceed the current master planned flow, without potentially flooding through the pedestrian tunnel under RidgeGate Parkway. The existing Cottonwood Creek Flow Control Structure (CCFCS – e.g. the pipe under the current Crossfield Drive embankment across the Cottonwood Creek) restricts the upstream drainage basin flows to control the maximum channel flow at RidgeGate Parkway to within the allowable limit. The "excess" upstream flow is temporarily detained behind the CCFCS, creating a temporary 100 Yr. stormwater pond. The overall Tract GG development stormwater management system MAY NOT create any increase in the 100 Yr. discharge rate from the CCFCS nor in the downstream Cottonwood channel flow. We are uncertain from information presented to date in the Preliminary Plan submittal whether this peak flow restriction would be met.

Response: Comments noted: We are working to update the report and finalize our analysis prior to city council approval.

- b. Part of the indicated Tract GG storm collection system is piped into the upstream end of the existing Cabela Drive storm sewer system. This existing system has a maximum allocated/available capacity for flows from the Tract GG development. Based upon the original Phase II Drainage Report information submitted with the prior 70 lot development concept, it appeared the allowable Cabela Drive storm sewer capacity was projected to be exceeded. We anticipate the current 50 lot Tract GG flows to the Cabela Drive storm sewer will be reduced from those projected for the prior 70 lot proposal. However, pending receipt of an updated Preliminary Plan Drainage Report, we cannot confirm that adequate reductions

Response: Comments noted. We are working to update the report and finalize our analysis prior to city council approval.

Sheet No. 5 - Existing Slope Analysis

18. Note #2 on this sheet states that expansive materials exist throughout the site. While the CTL Thompson Geologic and Preliminary Geotechnical Investigation Report (presented with the prior Tract GG submittal) comments that *"The site is judged suitable for residential development"*, the report also noted that special design and construction considerations should be implemented to minimize the potential for shrink/swell damage potential to structures and improvements.

Response: Comment noted, final design will address shrink/swell mitigation.

Sheet No. 6 - Phasing and Features Plan

19. The nature of the proposed connection of Alicante Road (Montecito Subdivision) and Public Street A (in Tract GG) is not clearly identified in this Preliminary Plan (re: Sheets 2 & 6). During the prior Tract GG Preliminary Plan discussions had been held regarding two possible scenarios for this connection:

- a. A full, public street and intersection connection, or
- b. An emergency only connection consisting of more of a pedestrian/bicycle connection (promenade) that could be used by the fire department for emergency access, but which would not otherwise be open for public vehicular traffic.

While Public Works can accept either approach, we recommend the full access connection option. Alicante Drive, south of Montecito Drive, was accepted and platted as a Public Road on the understanding/anticipation that it would serve as a street connection to Tract GG when Tract GG was developed. If the full public road connection to Tract GG will not occur, Public Works recommends that Alicante, south of Montecito Drive, be vacated as Public Road ROW. The section of Alicante would then be considered a private roadway, and the City would no longer maintain nor plow that section of Alicante Drive. The Montecito HOA then would need to take over maintenance and plowing for that section of Alicante Drive

Response: We are working with the Montecito HOA on an acceptable connection.

Preliminary Plan Narrative

20. Storm Drain System: The discussion in this section references 100-yr detention for the site being provided by a combination of on-site improvements and the off-site regional stormwater detention pond. The referenced off-site facility is the RRMD constructed and maintained Regional Stormwater Pond 311 (located east of Sky Ridge Medical Center, between the SRMC and 1-25). Pond 311 provides both water quality and detention. It may be appropriate to update the Narrative discussion to reference "Pond 311". Pond 311 was upgraded this winter to a full EURV-100 Yr. (Full Spectrum) facility to provide the additional capacity for completion of development within its service area, including the proposed Tract GG development.

Response: Comment noted.

21. Traffic Study: The Narrative references the 2015 Traffic Study prepared for the prior 70 lot development concept (Ridgegate Tract GG Traffic Impact Analysis, Sept. 14, 2015, LSC Transportation Consultants, Inc.). That study presented the projected traffic considerations associated with the prior proposed development -and indicated the existing/proposed street system in the area could accommodate the proposed development acceptably (from a street design/capacity standpoint). As noted in the current Preliminary Plan Narrative, the present proposal is for 50 lots (down from the prior 70 lot proposal) with an associated reduction of anticipated traffic demands. Accordingly, the existing/proposed street system in the area would be anticipated to accommodate the proposed (50 lot) development acceptably (from a street design/capacity standpoint).

Response: Comment noted.

Preliminary Drainage Report

22. A Preliminary Drainage Report, dated June, 2015, by Calibre Engineering, Inc. was provided with the prior Tract GG Preliminary Plan. An updated Preliminary Drainage Report has not been submitted to date for the current Tract GG Preliminary Plan submittal. As such, we cannot identify whether the drainage system indicated in the current Preliminary Plan will be acceptable, or if revised (or additional) drainage infrastructure may be required. The above stated, we believe that an acceptable drainage concept and system can be (will be) presented as the detailed site engineering progresses. Accordingly, we have no drainage based objections to the Preliminary Plan as currently being presented. Necessary detailed drainage documentation and approvals will be required prior to a recommendation for Final Plat approvals.

Response: Comments noted. We are working to update the report and finalize our analysis prior to City Council approval.

Geologic and Preliminary Geotechnical Investigation

An updated geologic and geotechnical report was not provided with the current Tract GG Preliminary Plan package. However, the Project Narrative references the previously submitted document (Geologic and Preliminary Geotechnical Investigation, dated June 12, 2014, by CTL Thompson, Inc.).

23. The prior Report notes:
- a. *"The site is judged suitable for residential development", and*
 - b. *"We believe there are no geologic or geotechnical constraints at this site that would preclude development." with "...proper planning, engineering, design and construction. ", and*
 - c. *"The primary geotechnical concerns are expansive soil and claystone bedrock and areas with moderate to steep slopes."*
24. The report also:
- d. *Raises a potential concern for slope stability of some areas of the site for proposed 3:1 (33%) cut slopes, and states "We recommend permanent cut and fill slopes be designed with a maximum grade of 4:1 (horizontal:vertical) in these areas."*
 - e. *Includes several other specific design/construction recommendations in light of the geotechnical conditions.*

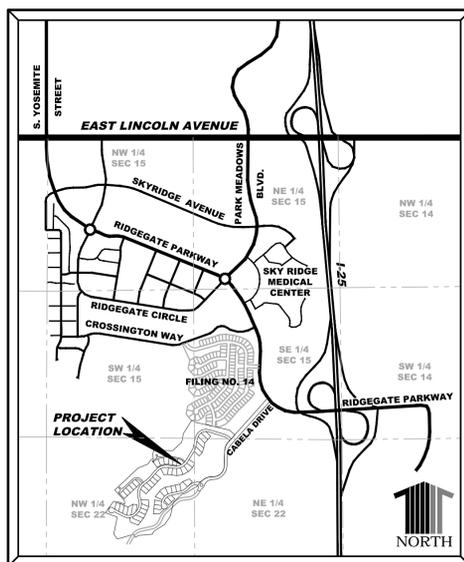
25. One item regarding the Geotechnical Report is that the Report and underlying borings locations were based upon the Tract GG layout concept proposed at the time the report was written (June, 2014). The current Tract GG layout/plan is different – and results in grading and retaining wall considerations not necessarily referenced/addressed in the June 2014 report. Additional soil borings were conducted in the area of Lots 16 – 26 during 2015, but we have not seen those results. While we would not anticipate the major comments / concerns / recommendations presented in the updated Report will significantly change from those contained in the current Report, there may be some specific revisions of importance that could impact the final design/construction considerations. We recommend that an updated report reflecting the current proposed Project and additional borings be provided, prior to Final Plat consideration and/or engineering documents approvals.

Response: Comment noted.

RIDGEGATE - SECTION 22, FILING NO. 1

A Portion of CMU Planning Area #2, RMU Planning Area #11
 A PART OF THE NORTH HALF OF SECTION 22, TOWNSHIP 6 SOUTH,
 RANGE 67 WEST, OF THE 6TH PRINCIPAL MERIDIAN
 CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
 48.949 Acres, 50 Residential Lots and 13 Tracts
 SB16-12R

PRELIMINARY PLAN



VICINITY MAP

SCALE: 1"=1500'

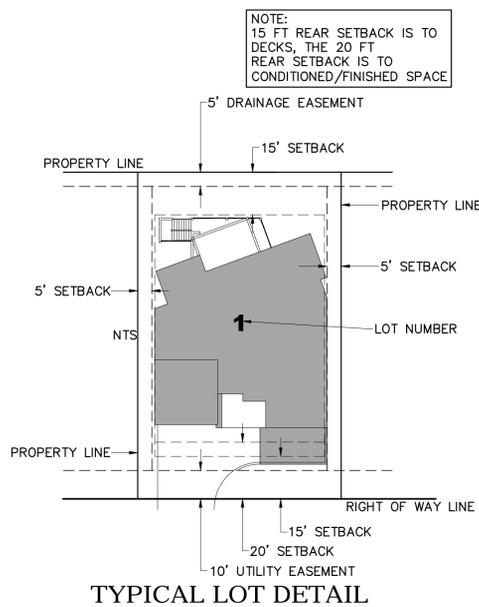
GENERAL NOTES:

- ALL DEFINED UTILITY EASEMENTS ARE FOR THE USE OF GAS, ELECTRIC, TELEPHONE, CABLE TV AND COMMUNICATIONS.
- NO HISTORICAL, ARCHAEOLOGICAL OR PALEONTOLOGICAL RESOURCES ARE LOCATED ON THE SITE.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO LIMIT ANY DAMAGE TO EXISTING VEGETATION STANDS IN AND AROUND THE SITE THAT ARE TO REMAIN IN PLACE AND MAY BE AFFECTED BY WORK ACTIVITIES.
- AREAS OF 25% OR GREATER SLOPES EXIST ON THE SITE AND HAVE BEEN SHADED ON THE EXISTING SLOPE ANALYSIS AND GEOLOGIC HAZARD AREAS PLAN LOCATED ON SHEET 5.
- UNTIL FINAL ACCEPTANCE BY THE CITY OF THE PROPOSED PUBLIC ROADWAYS (STREETS A & B, AND CABELA DRIVE EXTENSION, AS SHOWN ON SHEET 6), THE OWNERSHIP AND MAINTENANCE RESPONSIBILITY FOR THOSE ROADWAYS REMAINS WITH THE DEVELOPER OR SUCH SUCCESSORS OR ASSIGNS OF THE DEVELOPER, OR OTHERS, THAT ARE ACCEPTABLE TO THE CITY IN WRITING. OWNERSHIP AND MAINTENANCE RESPONSIBILITY, INCLUDING SNOW PLOWING, OF THE PRIVATE ROADWAYS SHALL REMAIN WITH THE DEVELOPER AND/OR HOA.
- TRACTS A, B AND C ARE TO BE CONVEYED TO THE HOMEOWNERS ASSOCIATION BY SEPARATE DOCUMENT FOR OWNERSHIP AND MAINTENANCE.
- TRACTS F, G, H, I, J, K, L AND M ARE TO BE CONVEYED TO THE HOMEOWNERS ASSOCIATION BY SEPARATE DOCUMENT FOR OWNERSHIP AND MAINTENANCE FOR USE AS PUBLIC OPEN SPACE AND PARK PURPOSES.
- TRACTS D AND E ARE TO BE CONVEYED TO THE RAMPART RANGE METRO DISTRICT (RRMD) BY SEPARATE DOCUMENT FOR OWNERSHIP AND MAINTENANCE FOR USE AS PUBLIC OPEN SPACE.
- TRACT N WILL BE CONVEYED TO THE SOUTHGATE WATER DISTRICT BY SEPARATE DOCUMENT FOR OWNERSHIP AND MAINTENANCE.
- THE BOUNDARIES SHOWN HEREIN FURTHER REFINE THE PLANNING AREA BOUNDARIES OF THE RIDGEGATE PLANNED DEVELOPMENT, 4TH AMENDMENT, CONSISTENT WITH THE RIDGEGATE RESIDENTIAL DISTRICT WEST SUB-AREA PLAN.
- A GEOTECHNICAL REPORT FOR EACH LOT WITHIN THE DEVELOPMENT, WILL BE SUBMITTED TO THE CITY AT THE TIME OF BUILDING PERMIT APPLICATION.
- RETAINING WALL COLOR AND MATERIAL WILL BE DETERMINED.
- BUILDER/DEVELOPER WILL BE RESPONSIBLE FOR INSTALLATION AND HOMEOWNERS ASSOCIATION WILL BE RESPONSIBLE FOR MAINTAINING TRAILS, OPEN SPACE AND PARK LANDSCAPING, REAR-YARD FENCING, WALLS AND AMENITIES WITHIN THE PROPERTY. FUTURE CONNECTIONS TO REGIONAL TRAILS BY OTHERS.
- DRAINAGE IMPROVEMENTS IN TRACTS A, B, C, F, G, H, I, J, K, L AND M ARE TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION.
- WHERE RETAINING WALLS ARE GREATER THAN 4- FEET IN HEIGHT AND/OR WHERE THERE ARE MULTIPLE STEP WALLS WHERE THE SUBSEQUENT WALLS ARE WITHIN A 1:1 ZONE OF INFLUENCE OF EACH OTHER AND THE COMBINED SUM OF SUCH ADJACENT WALL HEIGHTS EXCEEDS 4- FEET, THE WALLS MUST BE DESIGNED BY, AND THE WALL DESIGN SEALED BY, A STRUCTURAL ENGINEER LICENSED IN THE STATE OF COLORADO. WALL HEIGHTS AND LOCATIONS ARE SUBJECT TO CHANGE BASED ON FINAL WALL DESIGN BY STRUCTURAL ENGINEER.
- ADJACENT OFF-SITE GRADING AS PROPOSED WILL BE GRANTED BY A SEPARATE LICENSE AGREEMENT WITH ADJOINING PROPERTY OWNER.
- THE PUBLIC STREET EXTENSION OF CABELA DRIVE TO THE ENTRY FOR LOTS 39 THRU 50 WILL BE DEDICATED WITH THIS PLAT, TO THE CITY OF LONETREE. THIS PORTION OF CABELA DRIVE WILL BE CONSTRUCTED WITH THIS DEVELOPMENT.

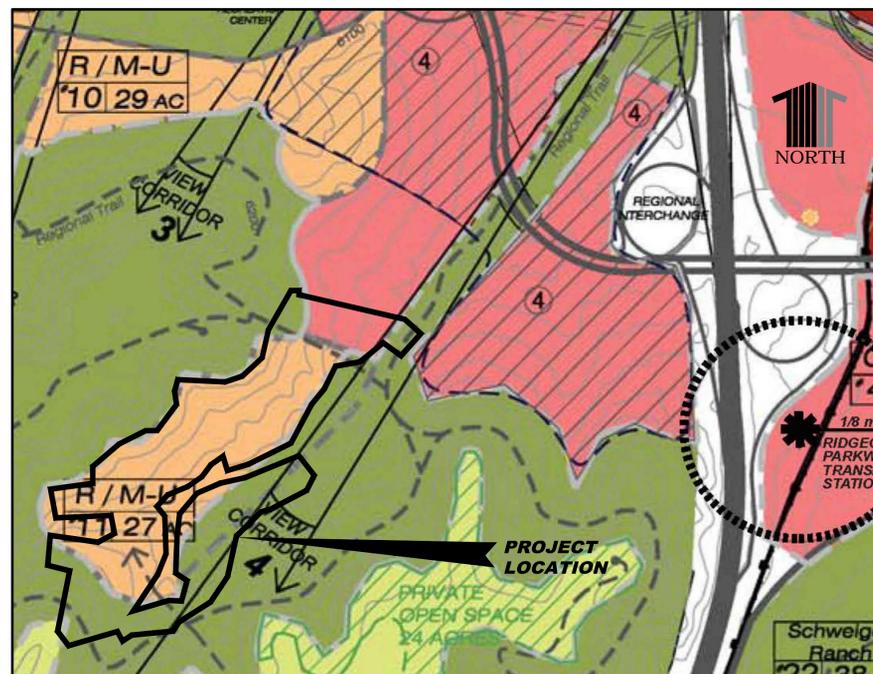
LEGAL DESCRIPTION:

STREETSCAPE DIVERSITY REQUIREMENTS

- FRONT SETBACKS:**
 - 15' to side-load garages
 - 20' to front load garages
 - 20' to conditioned spaces
- Rear Setback/Step-back**
 - 15' to a covered or uncovered deck
 - 20' to finished space on the 1st level
 - 30' to the center of any wall plane on the 2nd level
- Side Setback/Step-back**
 - 5' side yard set back
 - The house shall be built to the side setback line for no more than 50% of the lot depth (120x75%=57.5')
- See Typical Lot Detail



TYPICAL LOT DETAIL



PD VICINITY MAP

SCALE: 1"=500'

TRACT SUMMARY

OUTLOTS/ TRACTS	SQ. FT.	TOTAL ACREAGE	OWNERSHIP & MAINTENANCE	USE		
				ACCESS & UTILITIES	OPEN SPACE	PARK
TRACT A	13,546	0.311	HOA	0.311		
TRACT B	17,685	0.406	HOA	0.406		
TRACT C	282,056	6.475	HOA	6.205		0.270
TRACT D	454,368	10.431	RRMD		10.431	
TRACT E	37,100	0.852	RRMD		0.852	
TRACT F	223,531	5.132	HOA		4.952	0.180
TRACT G	16,046	0.368	HOA		0.088	0.280
TRACT H	113,092	2.596	HOA		2.629	
TRACT I	96,553	2.217	HOA		2.077	
TRACT J	100,805	2.314	HOA		2.314	
TRACT K	29,738	0.683	HOA		0.683	
TRACT L	18,671	0.429	HOA		0.279	0.150
TRACT M	15,776	0.362	HOA		0.362	
TRACT N	12,409	0.285	SOUTHGATE	0.285		
TOTAL	1,431,377	32.860		7.207	24.773	0.880

DEVELOPMENT STATISTICS

LAND USE : AREA CALCULATIONS

LAND USE	AREA	% OF TOTAL	UNITS	DU/AC
RESIDENTIAL	12.137 AC	24.53%	50	---
PARKS / OPEN SPACE	25.137 AC	51.84%	---	---
INTERNAL ROW	3.952 AC	7.99%	---	---
INTERNAL ACCESS	7.738 AC	15.64%	---	---
TOTAL	48.949 AC	100.00%	50	---

DEVELOPMENT STANDARDS

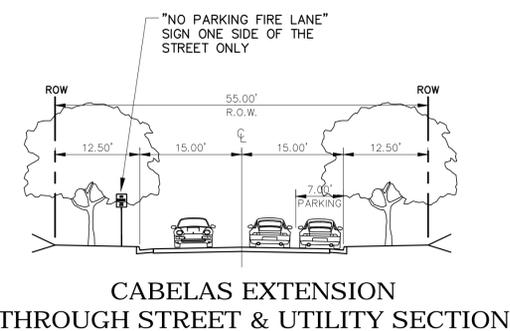
SINGLE FAMILY DETACHED	SQ. FT.
TYPICAL LOT SIZE (75' x 120')	9,000
MINIMUM LOT SIZE	8,354
MAXIMUM LOT SIZE	13,962

OWNER:

RIDGEGATE INVESTMENTS, INC.
 8310 SOUTH VALLEY HIGHWAY
 3RD FLOOR
 ENGLEWOOD, CO. 80112

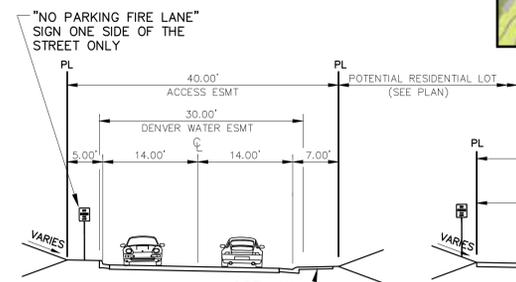
APPLICANT:

CENTURY COMMUNITIES
 8930 E. CRESCENT PARKWAY
 SUITE 650
 GREENWOOD VILLAGE, CO. 80111



CABELAS EXTENSION

THROUGH STREET & UTILITY SECTION



TYPICAL PUBLIC STREET & UTILITY SECTION



TYPICAL PRIVATE DRIVE SECTIONS

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RIDGEGATE - SECTION 22, FILING NO. 1
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 TITLE SHEET

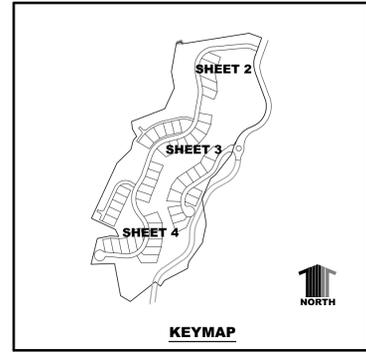
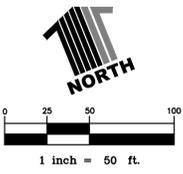
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 CENTURY COMMUNITIES

Job Number
 CENTURY RG TGG
 Date
 MARCH 21, 2016
 Sheet
 1 of 6

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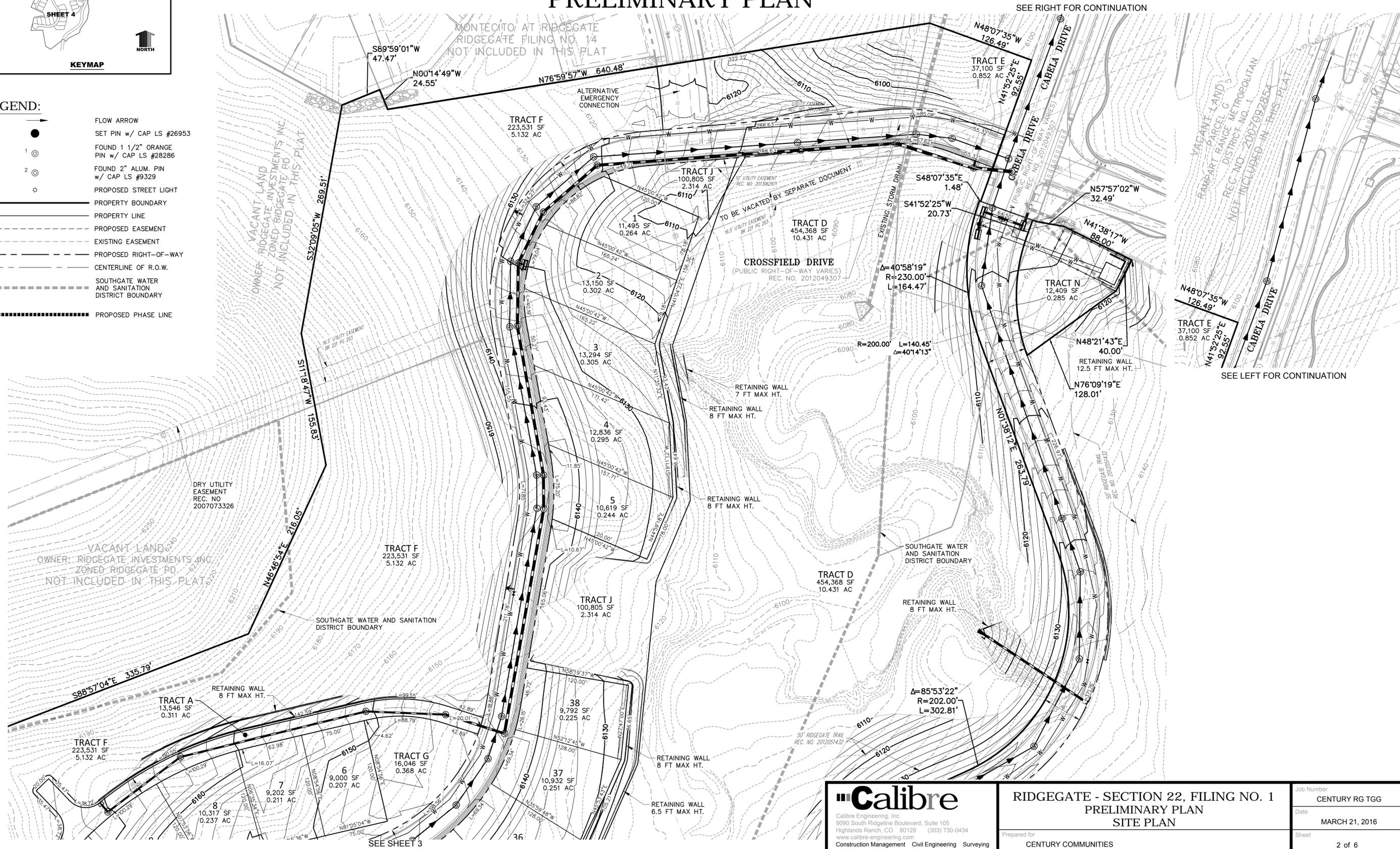
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 A PART OF THE NORTH HALF OF SECTION 22, TOWNSHIP 6 SOUTH,
 RANGE 67 WEST, OF THE 6TH PRINCIPAL MERIDIAN
 CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
 48.949 Acres, 50 Residential Lots and 13 Tracts

PRELIMINARY PLAN



LEGEND:

- FLOW ARROW
- SET PIN w/ CAP LS #26953
- ① FOUND 1 1/2" ORANGE PIN w/ CAP LS #28286
- ② FOUND 2" ALUM. PIN w/ CAP LS #9329
- ☆ PROPOSED STREET LIGHT
- PROPERTY BOUNDARY
- - - PROPERTY LINE
- - - PROPOSED EASEMENT
- - - EXISTING EASEMENT
- - - PROPOSED RIGHT-OF-WAY
- - - CENTERLINE OF R.O.W.
- - - SOUTHGATE WATER AND SANITATION DISTRICT BOUNDARY
- PROPOSED PHASE LINE



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 PLOTTED BY: Brian Moss
 PLOTT DATE: 3/20/16

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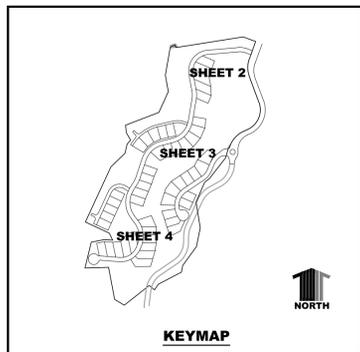
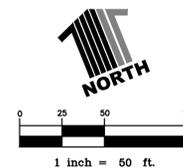
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PRELIMINARY PLAN
SITE PLAN
 Prepared for
CENTURY COMMUNITIES

Job Number
CENTURY RG TGG
 Date
MARCH 21, 2016
 Sheet
2 of 6

RIDGEGATE - SECTION 22, FILING NO. 1

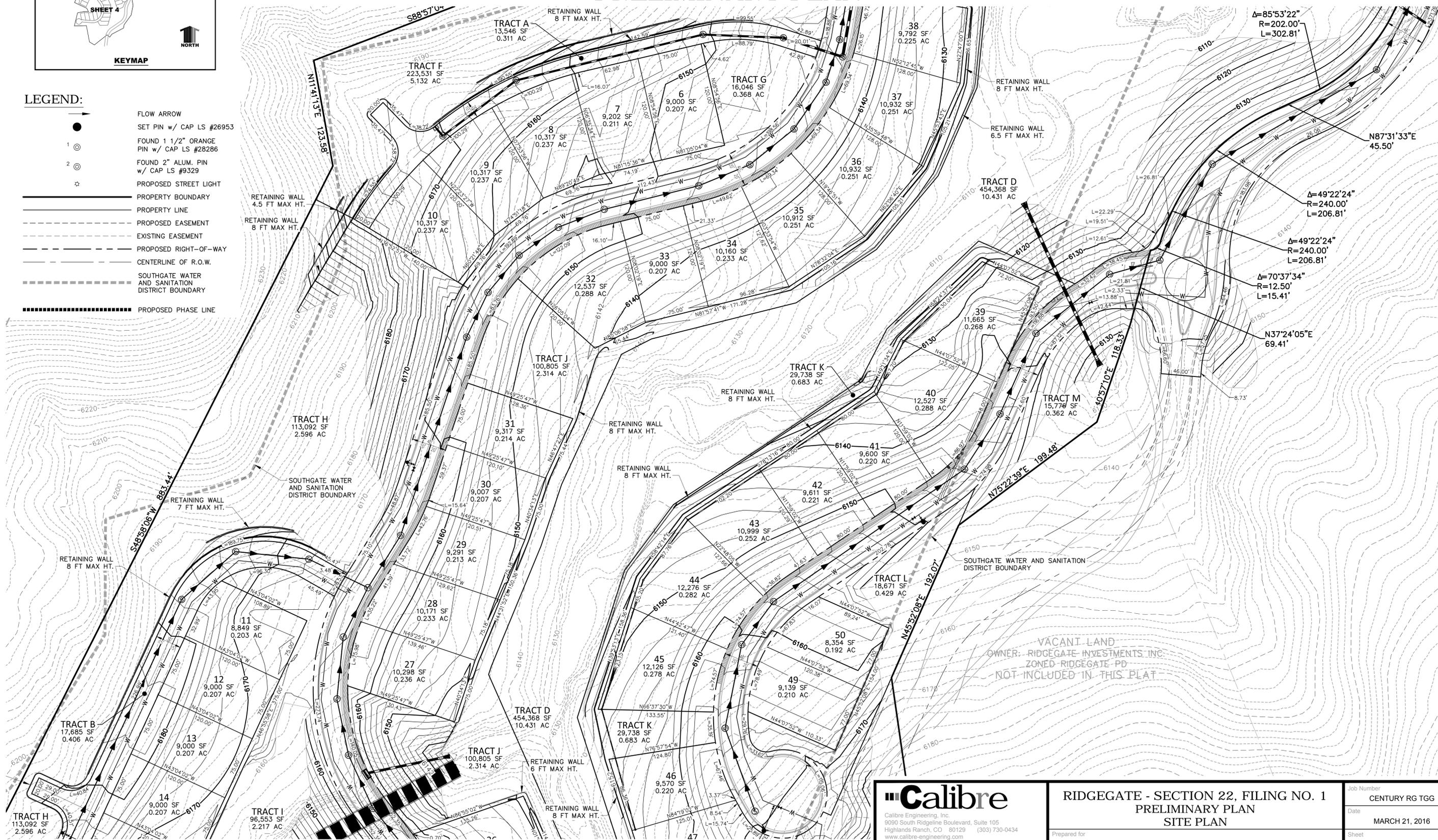
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- - - PROPOSED RIGHT-OF-WAY
- - - CENTERLINE OF R.O.W.
- - - SOUTHGATE WATER AND SANITATION DISTRICT BOUNDARY
- ▬▬▬▬▬▬▬ PROPOSED PHASE LINE



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 PLOTTED BY: Brian Moss PLOT DATE: 3/20/16

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RIDGEGATE - SECTION 22, FILING NO. 1
PRELIMINARY PLAN
SITE PLAN

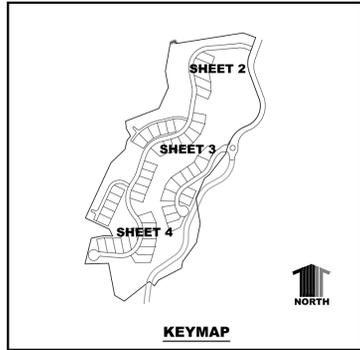
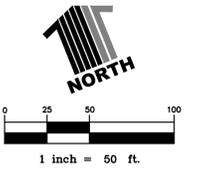
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CENTURY COMMUNITIES

Job Number	CENTURY RG TGG
Date	MARCH 21, 2016
Sheet	3 of 6

RIDGEGATE - SECTION 22, FILING NO. 1

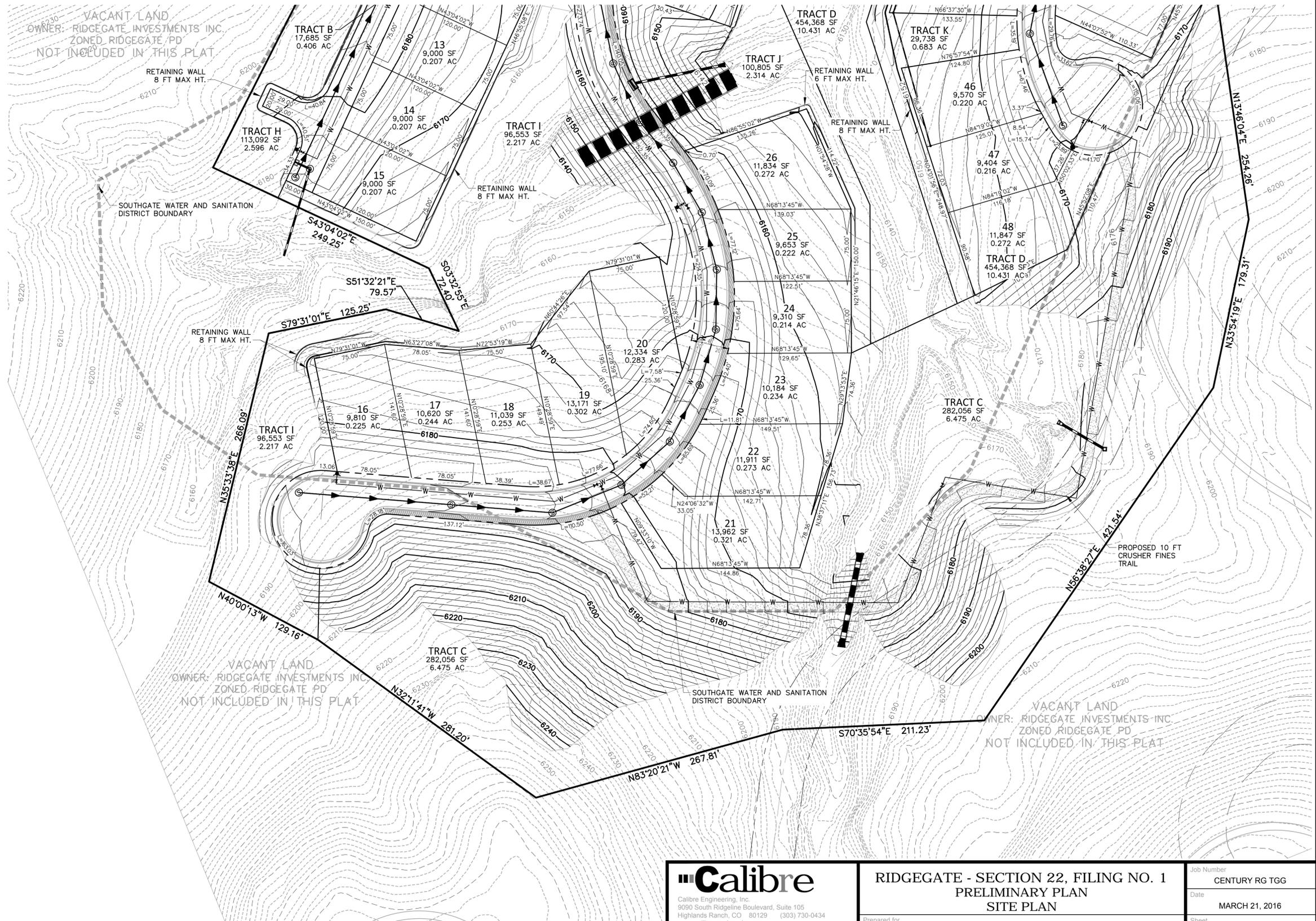
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 RANGE 67 WEST, OF THE 6TH PRINCIPAL MERIDIAN
 CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
 48.949 Acres, 50 Residential Lots and 13 Tracts

PRELIMINARY PLAN



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- - - CENTERLINE OF R.O.W.
- - - SOUTHGATE WATER AND SANITATION DISTRICT BOUNDARY
- ▬ PROPOSED PHASE LINE



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 PLOT DATE: 3/20/16

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PRELIMINARY PLAN
SITE PLAN

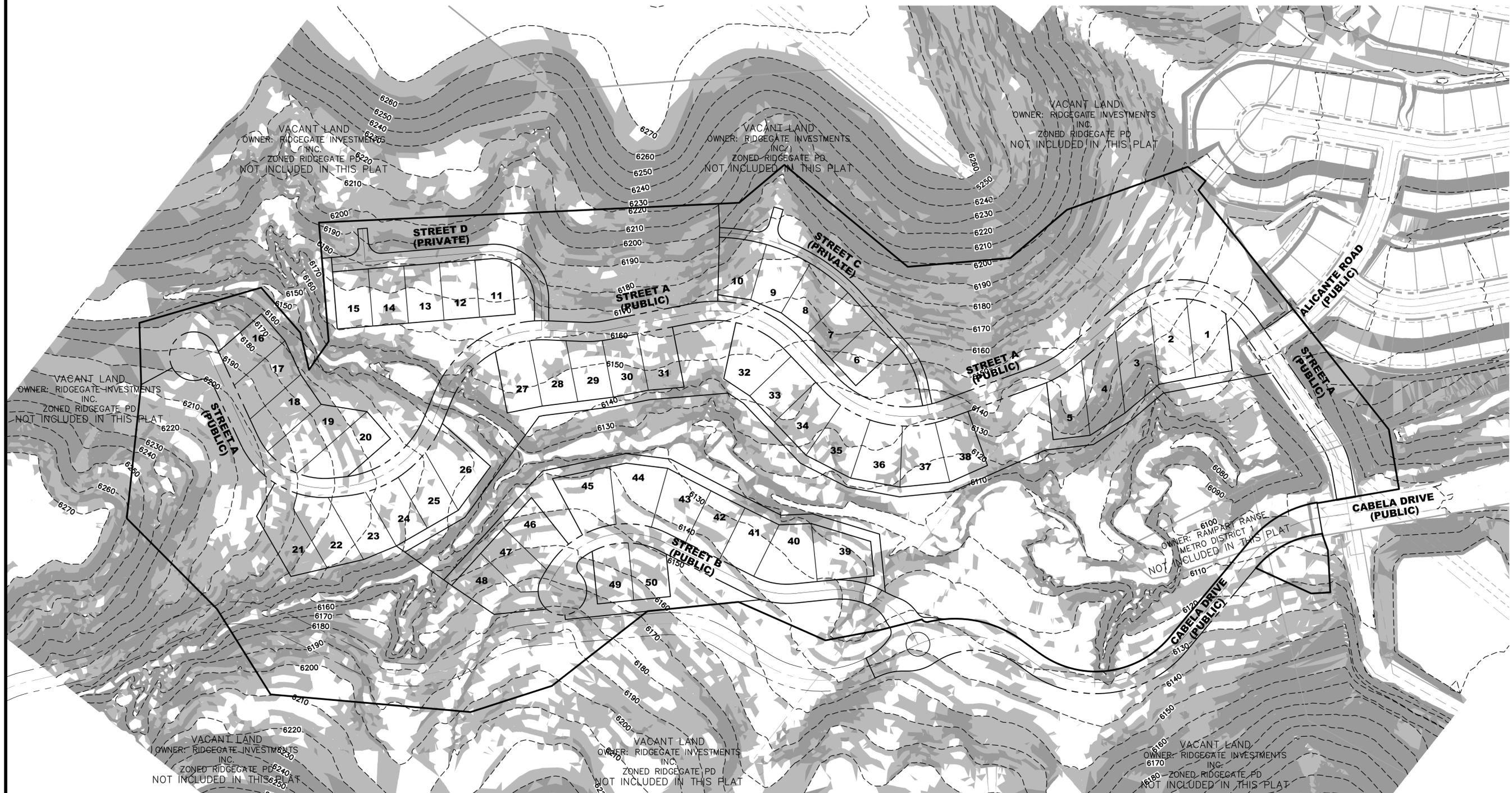
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Job Number	CENTURY RG TGG
Date	MARCH 21, 2016
Sheet	4 of 6

RIDGEGATE - SECTION 22, FILING NO. 1

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 A PART OF THE NORTH HALF OF SECTION 22, TOWNSHIP 6 SOUTH,
 RANGE 67 WEST, OF THE 6TH PRINCIPAL MERIDIAN
 CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
 48.949 Acres, 50 Residential Lots and 13 Tracts

PRELIMINARY PLAN

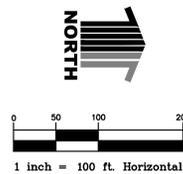


LEGEND

Slope Table		
Slope Range		Color
0% TO 15%		White
15% TO 25%		Light Gray
25% AND GREATER		Dark Gray

EXISTING SLOPE ANALYSIS AND GEOLOGIC HAZARD AREA PLAN

NOTES:
 1) NO FLOODPLAINS ARE LOCATED WITHIN THE PROPERTY BOUNDARY.
 2) ENTIRE SITE CONTAINS CLAY SOIL OR BEDROCK THAT IS CONSIDERED EXPANSIVE AND/OR WITHIN AASHTO A-6 A-7-6 CLASSIFICATIONS.



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RIDGEGATE - SECTION 22, FILING NO. 1
 PRELIMINARY PLAN
 EXISTING SLOPE ANALYSIS

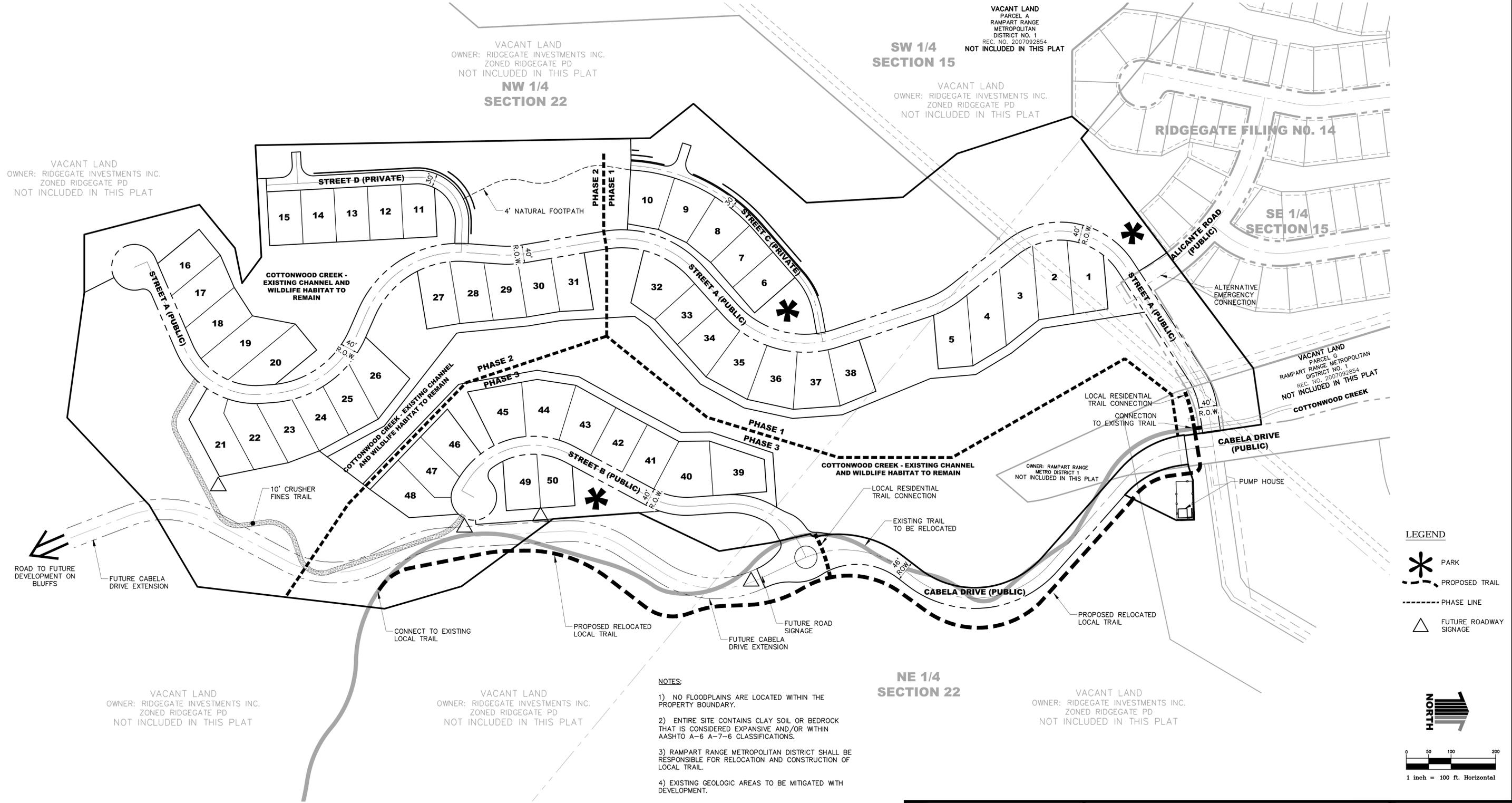
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 CENTURY COMMUNITIES

Job Number
 CENTURY RG TGG
 Date
 MARCH 21, 2016
 Sheet
 5 of 6

RIDGEGATE - SECTION 22, FILING NO. 1

A Portion of CMU Planning Area #2, RMU Planning Area #11
 A PART OF THE NORTH HALF OF SECTION 22, TOWNSHIP 6 SOUTH,
 RANGE 67 WEST, OF THE 6TH PRINCIPAL MERIDIAN
 CITY OF LONE TREE, COUNTY OF DOUGLAS, STATE OF COLORADO
 48.949 Acres, 50 Residential Lots and 13 Tracts
 SB16-12R

PRELIMINARY PLAN



- NOTES:**
- 1) NO FLOODPLAINS ARE LOCATED WITHIN THE PROPERTY BOUNDARY.
 - 2) ENTIRE SITE CONTAINS CLAY SOIL OR BEDROCK THAT IS CONSIDERED EXPANSIVE AND/OR WITHIN AASHTO A-6 A-7-6 CLASSIFICATIONS.
 - 3) RAMPART RANGE METROPOLITAN DISTRICT SHALL BE RESPONSIBLE FOR RELOCATION AND CONSTRUCTION OF LOCAL TRAIL.
 - 4) EXISTING GEOLOGIC AREAS TO BE MITIGATED WITH DEVELOPMENT.

LEGEND

- PARK
- PROPOSED TRAIL
- PHASE LINE
- FUTURE ROADWAY SIGNAGE

NORTH

0 50 100 200
 1 inch = 100 ft. Horizontal

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RIDGEGATE - SECTION 22, FILING NO. 1
PRELIMINARY PLAN
PHASING AND FEATURES PLAN

Prepared for
 CENTURY COMMUNITIES

Job Number
 CENTURY RG TGG

Date
 MARCH 21, 2016

Sheet
 6 of 6

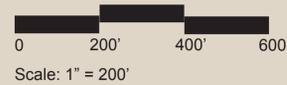
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 PLOTTED BY: Brian Moss
 PLOT DATE: 3/21/16



Ridgegate Parcel GG

Lone Tree, Colorado

Context Plan
March 11, 2016



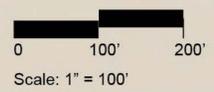


KEY



Retreat at Ridgeway
 Tract GG - Planning Area II, Lone Tree, Colorado

Site Plan 65 Lots over 50 Lots
 March 11, 2016





Previous
70 Lot Plan
View 'A'



Current
50 Lot Plan
View 'A'



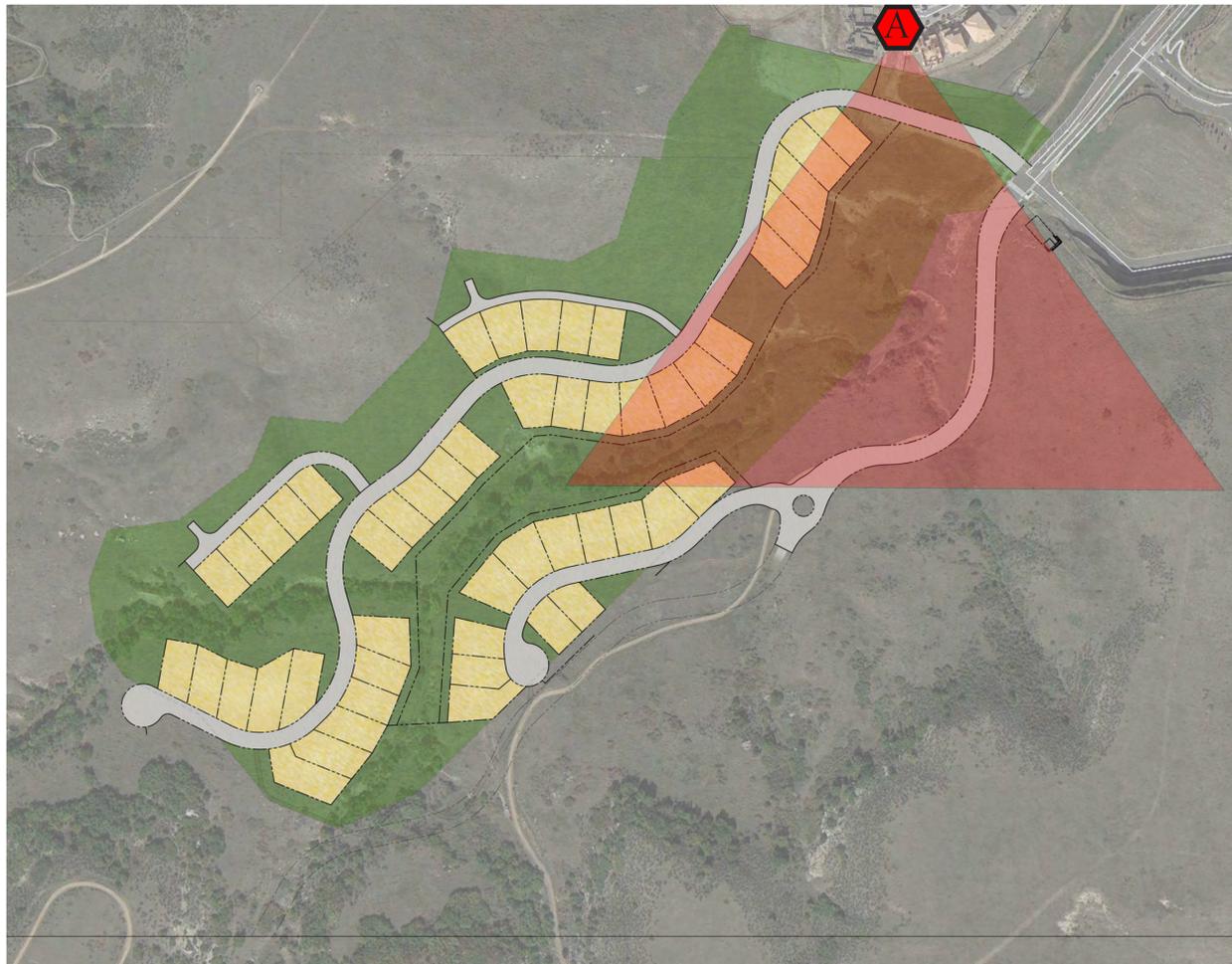


Previous
70 Lot Plan
View 'B'



Current
50 Lot Plan
View 'B'





'View B' from Alicante Road in Montecito to the previous plan



Site Plan - Current 50 Lot Plan



'View A' from Alicante Road in Montecito to the current plan



Site Plan - Previous 70 Lot Plan





(1) 8 ft wall and a 7 ft wall

(2) 8 ft walls and a 4 ft wall

20' Private Street

(2) 8 ft walls

30' Private Street



(2) 8 ft walls and a 6.5 ft wall.
Total height went from 16 feet to 22.5 feet or
6.5 additional vertical feet

(3) 8 ft walls.
Total wall height went from 20 ft to 24 feet or
4 additional vertical feet

(3) 8 ft walls and a 2.5 ft wall.
Total wall height went from 15 ft to 26.5 feet or
11.5 additional vertical feet

40' Public Street

40' Public Street



RidgeGate Residential West Village Sub-Area Plan



4.1.9 Planning Area #11

The following standards shall apply to development within the area designated in the *RidgeGate Planned Development District* document as R/MU Planning Area #11. Refer to Exhibits 7.1b in the Appendix.

Standards

- The detailed site plan for R/MU Planning Area #11 will provide for the reconfiguration of the southern portion of that parcel, surrounded by the bluffs, to allow for its shifting to the northern half of the valley area, thereby preserving the middle and southern area. It is recognized that such shifting may entail development on slopes exceeding 20 percent in this particular parcel (irrespective of previous references indicating that slopes greater than 20 percent would be in open space), in which case appropriate mitigation measures for development shall be employed. The site plan for this parcel will be prepared in consultation with the Division of Wildlife. Additional requirements in this area may involve the maintenance of natural vegetation and restricted landscaping through building envelopes and the consideration of a regional trail through the area. The site plan will consider alternative residential development design, including reduced street width, common open space areas, and a mix of housing types. The design shall also incorporate common building materials and a palette of building colors for homes in this area. Low-profile and stair-stepped buildings will be considered in the areas that are located along the toes of the bluffs, in order to conform to the topography.
- Planning Area #11 boundaries may be reconfigured or reduced to preserve tree and brush vegetation, wildlife areas, and significant views to the south from Planning Area #11 and views to the west from Interstate 25.
- All development proposed within Planning Area #11 is subject to review by the City of Lone Tree Planning Commission and approval by the City Council prior to or concurrent with platting. Plats in these areas may include designation of building envelopes. Submittal requirements may include (but are not limited to) proposed building massing (which may involve height limitations and/or low-profile and stair-stepped buildings); architectural elevations; materials; colors; landscaping; fencing; and lighting. Other information necessary to determine the overall design, character and quality of the project for consistency with the Sub-Area Plan, the City of Lone Tree Design Guidelines, and the overall goal of providing a natural transition to the bluffs may be required.
- In addition to all development in Planning Area #11, residential development located adjacent to the southern open space planning areas along the toe of the bluffs is subject to the above City review and approval process. This shall apply to development located within 250 feet from the open space, or the average depth of the lot, whichever is greater.
- A Wildfire Hazard Assessment, consistent with Douglas County's Wildfire Mitigation Standards, will be required to be submitted to the Lone Tree Community Development Department at the time of subdivision of any plat for Planning Area #11. Suggested mitigation measures may be required as a condition of subdivision approval. On-going maintenance measures to minimize the potential for wildfire may be required to be incorporated in the Covenants, Conditions and Restrictions (CC & Rs) for Planning Area #11.

4.2 Architectural Standards

4.2.1 Architectural Style

Concept

- Architectural styles that are complementary and consistent with each other and the landscape. It is

4.1.9 - Tract GG (Planning Area 11) Sub Area Plan Standards & Guidelines

Revised March 4, 2016

4.1.9.1 - Intent

The Sub Area Plan is intended to reduce the environmental and visual impacts of development and to guide the quality and character of the architecture.

4.1.9.2 - Variances

All variances from these standards must be in writing and will be reviewed administratively by the City of Lone Tree Planning Division. A determination must be made by the City that the variance furthers the intent of this Sub Area Plan. Denials of variances by the Community Development Director will be appealable to the City Council.

4.1.9.3 - Enforcement

The City's Planning staff and RidgeGate Design Review Committee (DRC) will review and enforce these standards and guidelines as provided herein. All building permit applications to the City must be accompanied by a letter of approval from the DRC as to compliance with the provisions in their purview. The developer must also submit evidence as to compliance with these standards & guidelines under City purview at the time of building permit application.

4.1.9.4 - Site Restrictions/Standards

These standards are reviewed and approved by the RidgeGate Design Review Committee (DRC).

- 4.1.9.4.a - To avoid a monotonous streetscape, no more than three of the same model with the same architectural style/elevation and same color scheme will be used within a cluster. Furthermore, the same model will not be built on adjacent lots or lots directly across from each other. No more than 30% of the same model will be built within the same cluster. Clusters are defined as follows and shown on the attached Cluster Map (Figure 1).

Cluster A: Lots 1- 5

Cluster B: Lots 6-10, Lots 32 - 38

Cluster C: Lots 11-15, Lots 27-31

Cluster D: Lots 16-26

Cluster E: Lots 39-50

4.1.9.5 - Fencing Standards

Open fencing only is permitted. Due to site grading, rock retaining walls are intended for side yards as required. Fencing, if desired, shall be installed by the future homeowner. If fencing is requested by a buyer, the developer will offer side and rear yard metal fencing without masonry columns per the image below. Wood and vinyl solid privacy fencing will not be allowed. Lots that have rear lot retaining walls will be required to install the 5 foot ornamental metal fence as shown below.

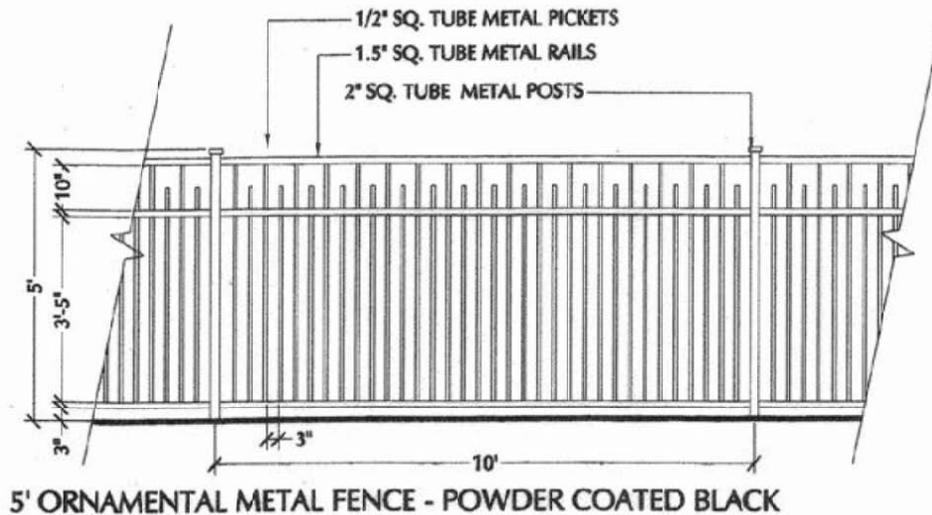


Figure 2. Optional Fencing

4.1.9.6 - Front and Rear Yard Landscaping Standards

The DRC will review landscape plans to ensure compliance with these standards. The following minimum plant materials are required for the front and rear yard:

- (1) 3.5" Deciduous Tree in Front Yard
- (9) 5 gallon Deciduous Shrubs
- (2) 5 gallon Evergreen Shrubs
- (8) 1 gallon Ornamental Grasses
- Kentucky/Texas Hybrid Sod

4.1.9.6.a – Downhill walkout lots have a 20’ deep flat zone that embraces the street with driveways attaching at a perpendicular alignment. The front yard landscaping will be more manicured to enhance the approach to the home and blend site features such as patios and walls into the landscape. Shade trees shall be provided within the front 1/3 of the front yard creating shade along the street edge and sidewalk. The landscape will transition on the sides of the homes stepping down or terracing in the side yards to the rear yard.

4.1.9.6.b – Side loading downhill walkout lots have driveways entering the home with a 90 degree turn. The turning driveway shall have plantings to blend it with the grading of the lot. Other lot landscaping shall be similar to the Standards of the F1 type lot.

4.1.9.6.c – Flat lots that embrace the street with driveways attaching at a perpendicular alignment. The front yard landscaping shall complement the architecture and provide variety of landscape along the street frontage. The landscaping shall include foundation plantings that are sculpted and tie back into the street frontage. Shade trees shall be provided within the front 1/3 of the front yard creating shade along the street edge and sidewalk.

4.1.9.6.d – Rear downhill lots that transition to a sloped native open space without retaining walls. Rear yard fences are optional. The landscape shall provide a defensible zone for wildfire. The landscaping shall transition from manicured at the foundation to more native at the rear of the lot.

Ample drought tolerant plantings shall be provided to allow the architecture to blend into the native landscape. Planting beds shall separate private yard space from open space.

4.1.9.6.e – Rear downhill lots that transition to a sloped native open space with retaining walls. Rear yard fences are required. The landscape shall provide a defensible zone for wildfire. The retaining walls provide for both a physical and visual barrier between the lots and native open space. Landscaping for the rear of this type lot can be more manicured given the separation. Native, drought tolerant plants are encouraged.

4.1.9.6.f – Uphill rear lots that transition to a sloped native open space without retaining walls. Rear yard fences are optional. The landscape shall provide a defensible zone for wildfire. The landscaping shall transition from manicured at the foundation to more native at the rear of the lot. Ample drought tolerant plantings shall be provided to allow the architecture to blend into the native landscape. Planting beds shall separate private yard space from open space.

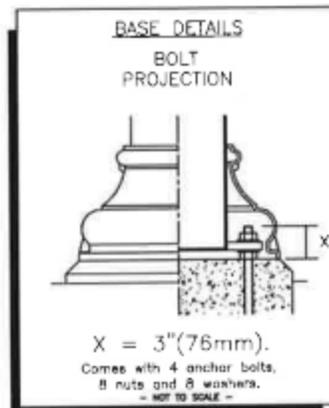
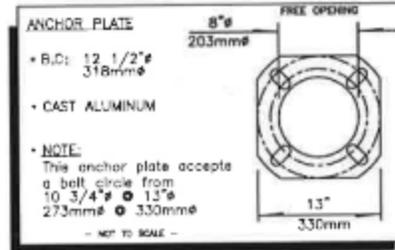
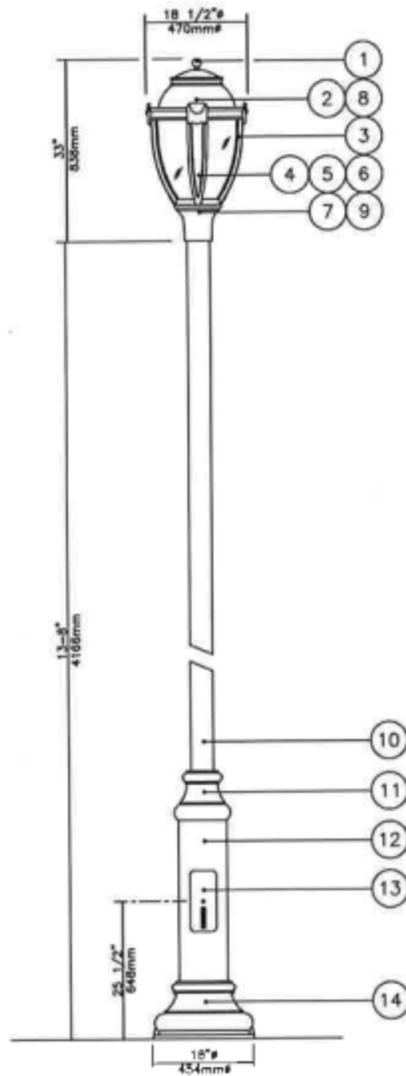
Figure 3. Landscaping Requirements (See attached Sheet L-1)

4.1.9.7 - Retaining Walls

Tract GG will employ a retaining wall design that correlates with location within the community and with the architectural and amenity area materials. The intent is a cohesive material palette with specific highlighted or enhanced areas. Side yard retaining walls are conceptually designed as low rock walls. In areas with tiered walls, the developer will install low-water demand vegetation between the walls. The landscape plan for these walls will be reviewed and approved as part of the Final Plat.

4.1.9.8 - Lighting Guidelines

Tract GG will employ “dark skies” limitation on lighting. Exterior house lighting shall consist of fully cutoff fixtures only. The Park Plan developed by Henry Design Group designates proposed street light locations. Street lights will be the approved Ridgegate Street Light as shown below.



STEEL ANCHOR BOLTS
 3/4" x 20"
 (supplied by LUMEC)

NOTE: Pole height is: 14'-0" (4267mm)

TITRE: TITLE:		Lonetree RidgeGate L80 (Item C)						36147	
ECHILLE/SCALE: 1/2"=1'-0"	ENREGISTRÉ ISO 9002 REGISTERED	N°	REVISION	PAR/PR:	DATE:	VER.:	PAR/PR:	N° DE DESSIN / DRAWING N°	PAGE
					04-11-02		MAL	L80 36147A	1/3

Figure 4. Street Light Specifications

4.1.9.9 - Wildlife

Tract GG is designed to preserve most of Cottonwood Creek and associated riparian woodlands, with the exception of one road crossing. The preserved Cottonwood Creek woodlands will provide habitat for a variety of wildlife including birds and small mammals. Leaving the existing woody and herbaceous vegetation intact to help stabilize the drainage and surrounding slopes.

A small isolated wetland occurs within the project area; and will be preserved with the current plan. Most of the dense trees and shrubs along the Cottonwood Creek riparian corridor will remain, except at the southern end of the project. The road crossing at the southern end of the project will create a barrier to diminish wildlife movement between the riparian woodlands and wildlife habitat to the south and east; however, this riparian area is currently not a significant wildlife corridor because the road and detention pond to the north create a barrier to wildlife movement. Residents will be given information on living with wildlife by the developer at closing.

4.1.9.10 - Building Setbacks

These standards will be enforced by the City during Building Permit review and shown on plot plans.

- 4.1.9.10.a - Minimum Front Setback (see Figure 5 and 7a)
 - 10' Utility easement
 - 15' to side-load garages
 - 20' to front load garages
- 4.1.9.10.b - Minimum Rear Setback (see Figure 5 and 7a)
 - 15' to a covered or uncovered deck
 - In no case shall the primary structure or deck encroach into the 5'-0" rear yard drainage.
- 4.1.9.10.c - Minimum Side Setback and Stepbacks (see Figures 5, 6 and 7a)
 - 5' side yard setbacks
 - The house shall be built to the side setback line for no more than 50% of the lot depth (e.g. 120 x 50% = 57.5')

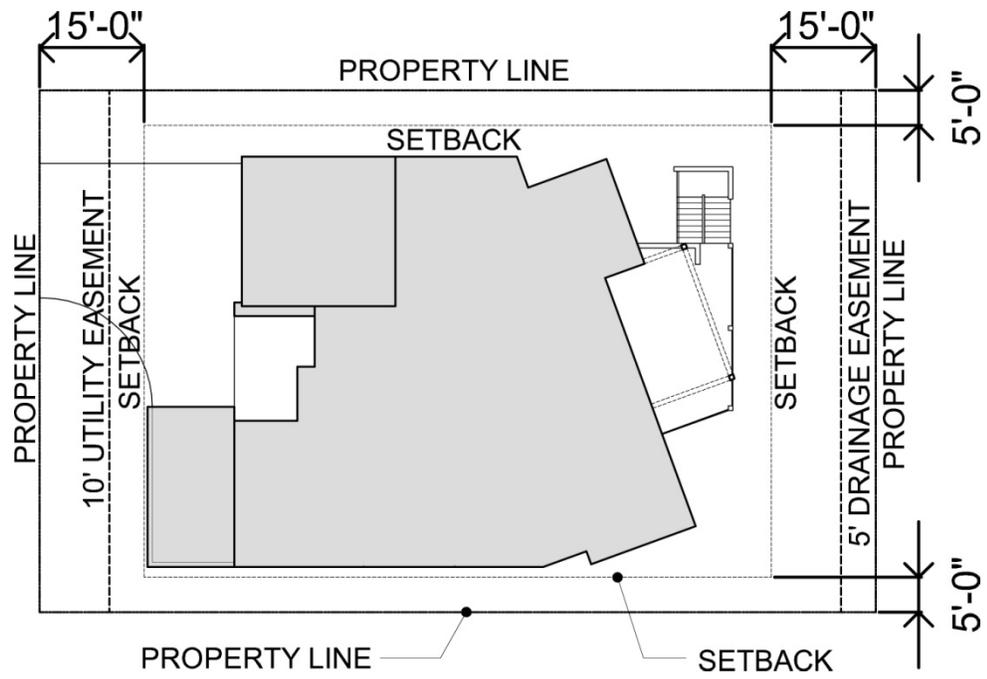


Figure 5. Front and Rear Yard Setbacks

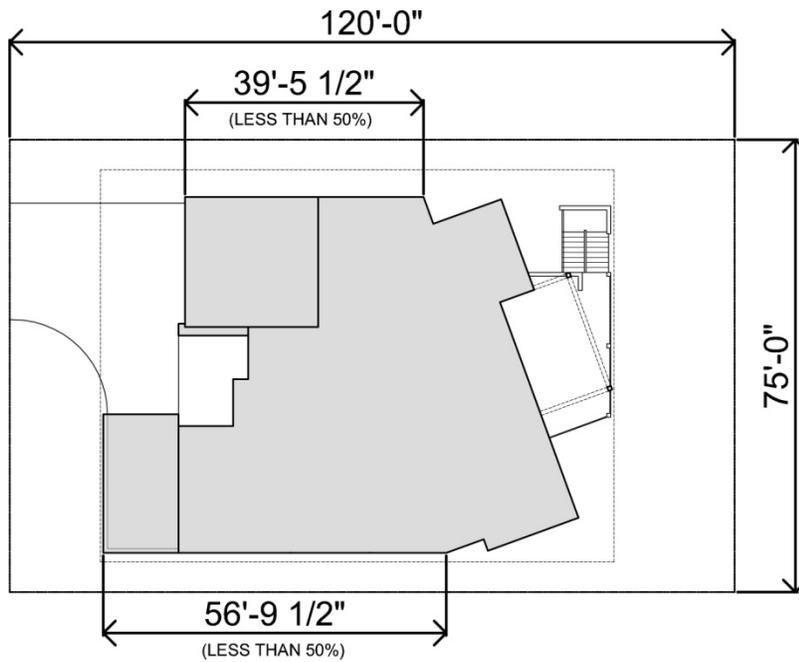


Figure 6. Side Step-Backs.

- 4.1.9.10.d - Setback modifications (Figures 7a, 7b, 7c, 7d and 7e).

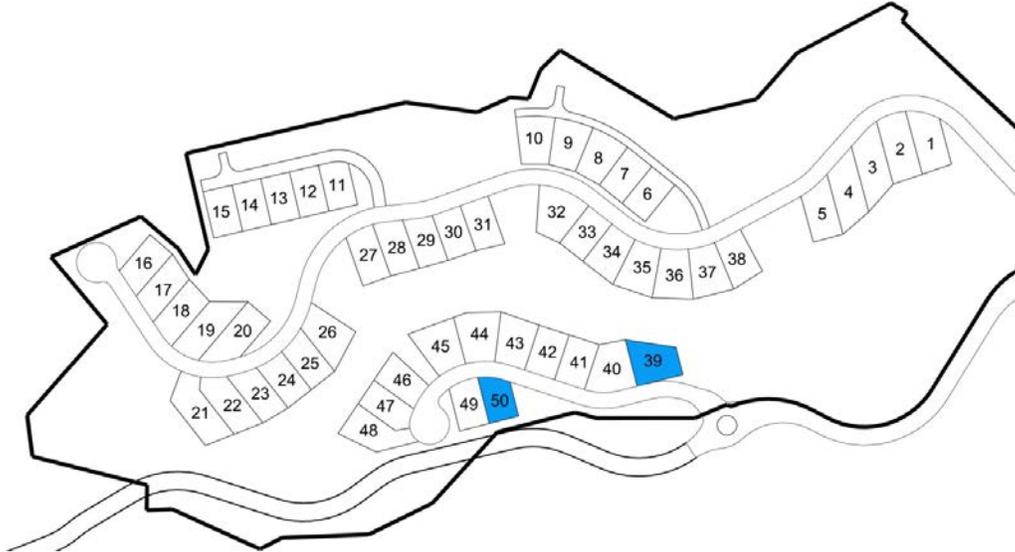


Figure 7a. Lots requiring setback modifications

- Lot 39 the setback from the NW lot line shall be the side setback and the setback from the NE lot line shall be the rear (see figure 7b & 7c).

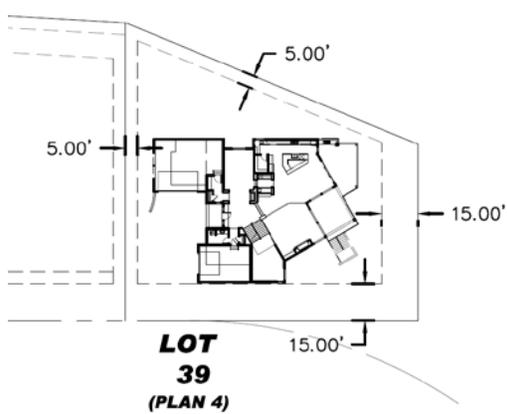


Figure 7b

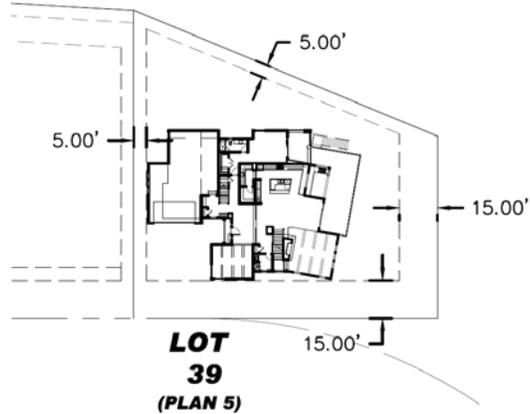


Figure 7c

- Lot 50 shall have a 5' rear setback from the adjacent Tract R open space.

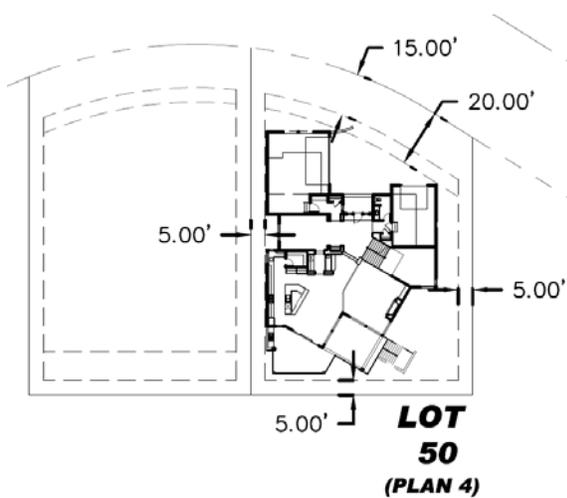


Figure 7d

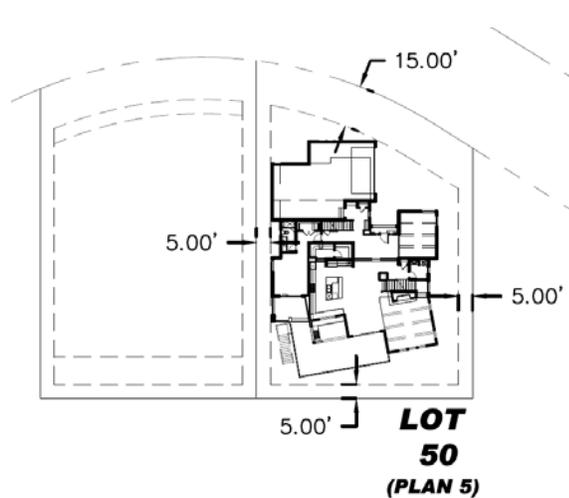


Figure 7e

4.1.9.11 - Integrating the Architecture into the Site

The DRC will review individual building plans to ensure compliance with these guidelines and standards.

Following the intent of the PDD, all home plans are developed to promote integration of the architecture into the site and feature low profile massing with low sloped roofs and less upper floor bulk. The project materials and architectural styles are also inspired by the site with all styles featuring natural materials like earth toned stucco, timber/wood accents and stone bases and elements that extend and integrate into the landscape. In addition, each proposed home plan shall feature at least 2 of the following strategies to further integrate the Architecture into the Site.

- Feature home plans that cluster the front door and garage doors to reduce the grading control points on the site and allow more of the site to slope naturally.
- Feature non-rectangular building form that angles to better align with the site's contours.
- Feature stepped living levels in the plan including split levels, sunken rooms, and other similar vertical arrangements.
- Feature architecture with raised foundation walls, hung joists and/or side-load garages that allow the finish floor elevation to be closer to or lower than the finish grade's high point adjacent to the house.
- Not locate rear main level and rear walk-out level patios on the downhill side of the lots. See Figure 8.

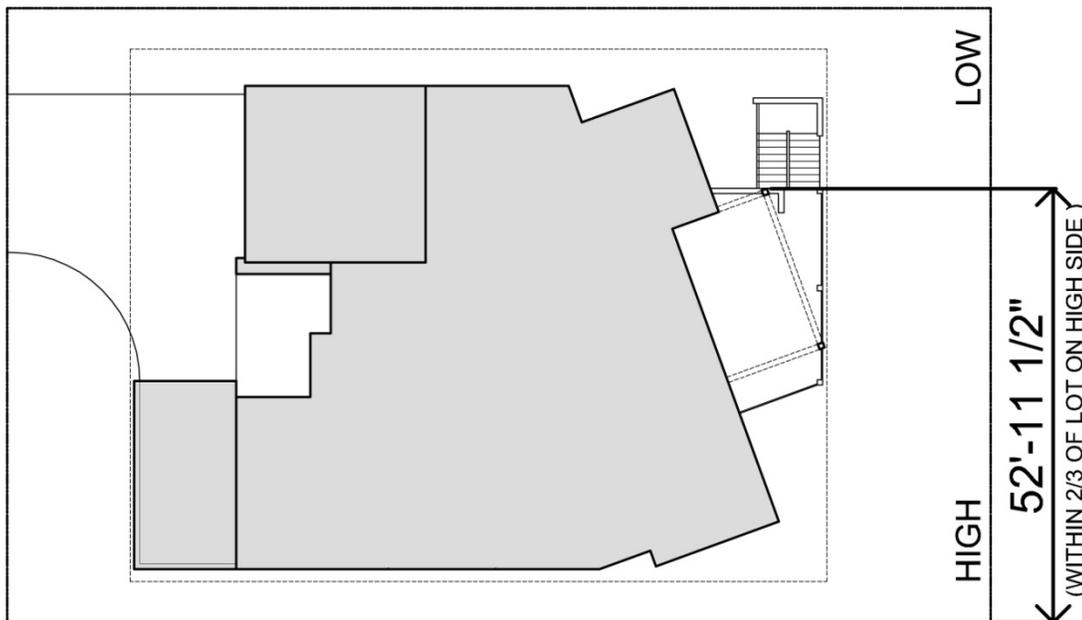


Figure 8. Rear Deck/Patio Location

4.1.9.12 - Additional Architectural Guidelines & Requirements

The DRC will review individual building plans to ensure compliance with these guidelines and standards.

- 4.1.9.13.a - Unbroken 3-story wall planes
 - No more than 33% of any rear elevation shall be an unbroken 3-story wall plane (covered or uncovered decks, roofs, wall plane breaks, etc. count as a wall break)
- 4.1.9.13.b - 360-degree architecture shall be provided for all plans through measures such as masonry, massing variation, trim and accent materials, detailing (corbels, brackets, shutters), and fenestration.

4.1.9.13 - Wildfire

The overall risk of the community is considered moderate according to the Wildfire Management Plan dated September 2015 as prepared by AnchorPoint Wildland Fire Solutions. Areas containing Gambel Oak are considered high risk. The following recommendations should be utilized to minimize the impact of a wildfire to the community. These mitigation measures for residential lots and common areas will become part of the Declaration of Covenants for Tract GG as reviewed and approved by the City and recorded with the Final Plat.

- Mitigate the risk of severe, uncontrollable wildfires by managing grass fuel through mowing adjacent to fencing and by thinning and low-limbing in Gambel oak stands.
- Rampart Range Metropolitan District shall communicate with South Metro Fire Rescue Authority (SMFRA) to be alerted when conditions are such that Gambel Oak becomes receptive to burning.
- Utilize only SMFRA Firewise plant list species for foundation plantings and landscaping.
- Install non-wood, Class B or better roofs.
- Restrict wood fencing.
- Do not allow yard clippings and yard waste to be dumped on open space land.
- Maintain a three (3) foot non-combustible perimeter around the base of all structures and under all, below roofline projections, including decks.
- Utilize the retaining wall adjacent to the interior Gambel Oak stand as a fuel break to backyards.

Attachments:

1. Cluster Map
2. Landscape Plan
3. Park Plan



FRONT AND REAR YARD LANDSCAPE GUIDELINES

F1 - Downhill walkout lots have a 20' deep flat zone that embraces the street with driveways attaching at a perpendicular alignment. The front yard landscaping will be more manicured to enhance the approach to the home and blend site features such as patios and walls into the landscape. Shade trees shall be provided within the front 1/3 of the front yard creating shade along the street edge and sidewalk. The landscape will transition on the sides of the homes stepping down or terracing in the side yards to the rear yard.

F2 - Side loading downhill walkout lots have driveways entering the home with a 90 degree turn. The turning driveway shall have plantings to blend it with the grading of the lot. Other lot landscaping shall be similar to the guidelines of the F1 type lot.

F3 - Flat lots that embrace the street with driveways attaching at a perpendicular alignment. The front yard landscaping shall complement the architecture and provide variety of landscape along the street frontage. The landscaping shall include foundation plantings that are sculpted and tie back into the street frontage. Shade trees shall be provided within the front 1/3 of the front yard creating shade along the street edge and sidewalk.

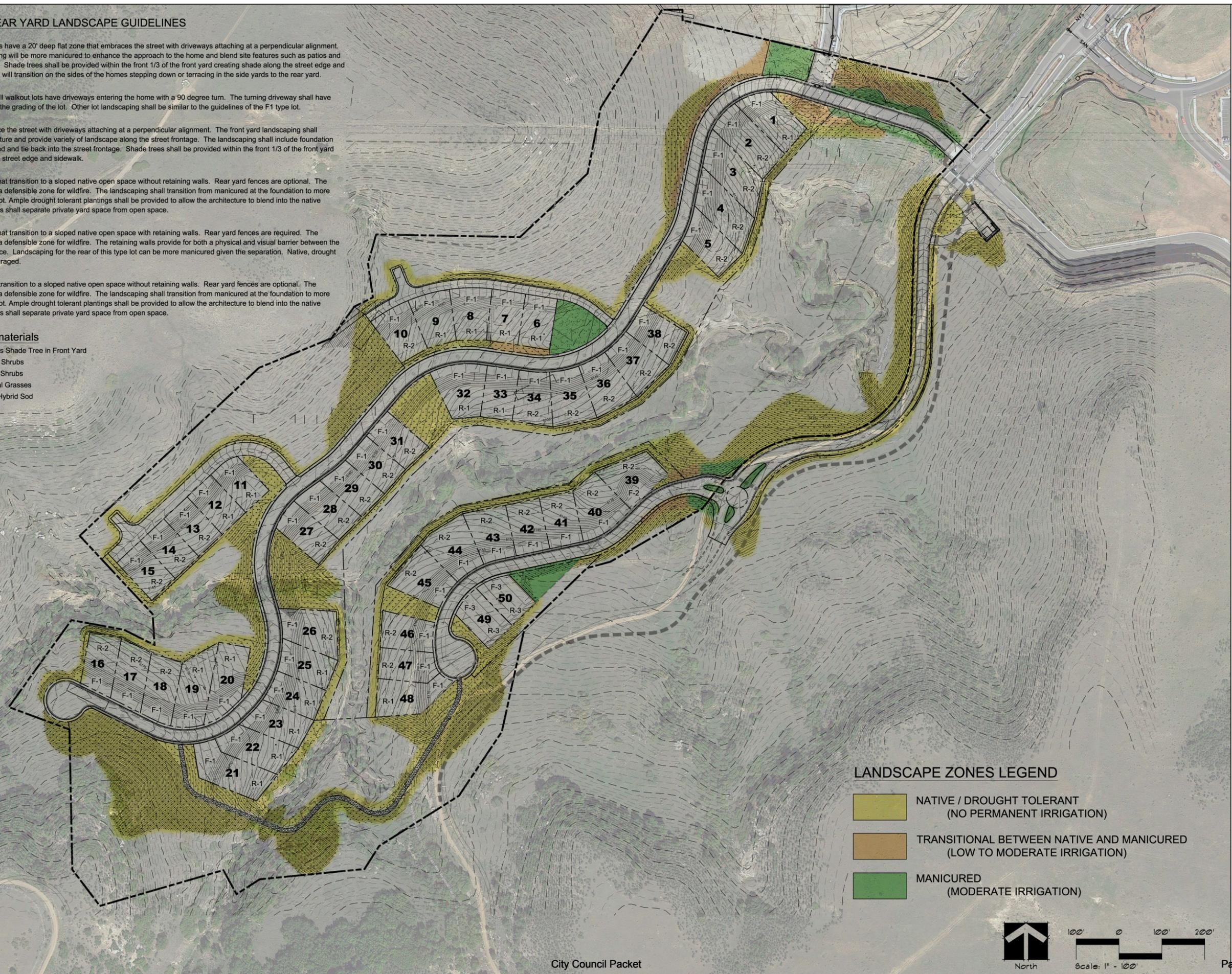
R1 - Rear downhill lots that transition to a sloped native open space without retaining walls. Rear yard fences are optional. The landscape shall provide a defensible zone for wildfire. The landscaping shall transition from manicured at the foundation to more native at the rear of the lot. Ample drought tolerant plantings shall be provided to allow the architecture to blend into the native landscape. Planting beds shall separate private yard space from open space.

R2 - Rear downhill lots that transition to a sloped native open space with retaining walls. Rear yard fences are required. The landscape shall provide a defensible zone for wildfire. The retaining walls provide for both a physical and visual barrier between the lots and native open space. Landscaping for the rear of this type lot can be more manicured given the separation. Native, drought tolerant plants are encouraged.

R3 - Uphill rear lots that transition to a sloped native open space without retaining walls. Rear yard fences are optional. The landscape shall provide a defensible zone for wildfire. The landscaping shall transition from manicured at the foundation to more native at the rear of the lot. Ample drought tolerant plantings shall be provided to allow the architecture to blend into the native landscape. Planting beds shall separate private yard space from open space.

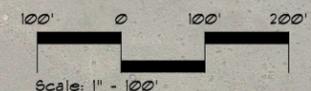
Minimum Plant materials

- (1) 3.5" Deciduous Shade Tree in Front Yard
- (9) #5 Deciduous Shrubs
- (2) #5 Evergreen Shrubs
- (8) #1 Ornamental Grasses
- Kentucky/Texas Hybrid Sod



LANDSCAPE ZONES LEGEND

- NATIVE / DROUGHT TOLERANT (NO PERMANENT IRRIGATION)
- TRANSITIONAL BETWEEN NATIVE AND MANICURED (LOW TO MODERATE IRRIGATION)
- MANICURED (MODERATE IRRIGATION)



NO.	REVISION	DATE	BY
1	1ST SUBMITTAL	-	-
2	2ND SUBMITTAL	-	-
3	-	-	-

RIDGEGATE GG
LANDSCAPE EXHIBIT

Developer
8390 E. Crescent Parkway
Suite 650
Greenwood Village, CO 80111
Contact: Lisa A. Albers



DATE: 3/10/16
JOB NO: -
DRAWN BY: SA
APPROVED: KH
CADD FILE: -

LEGEND

-  Site Feature
-  Landscape Feature
-  Evergreen Screening
-  Entry Statement/Enhanced Landscape

-  Key areas for lights and signage
-  Mail Kiosk
-  Entry Monument
-  Bench

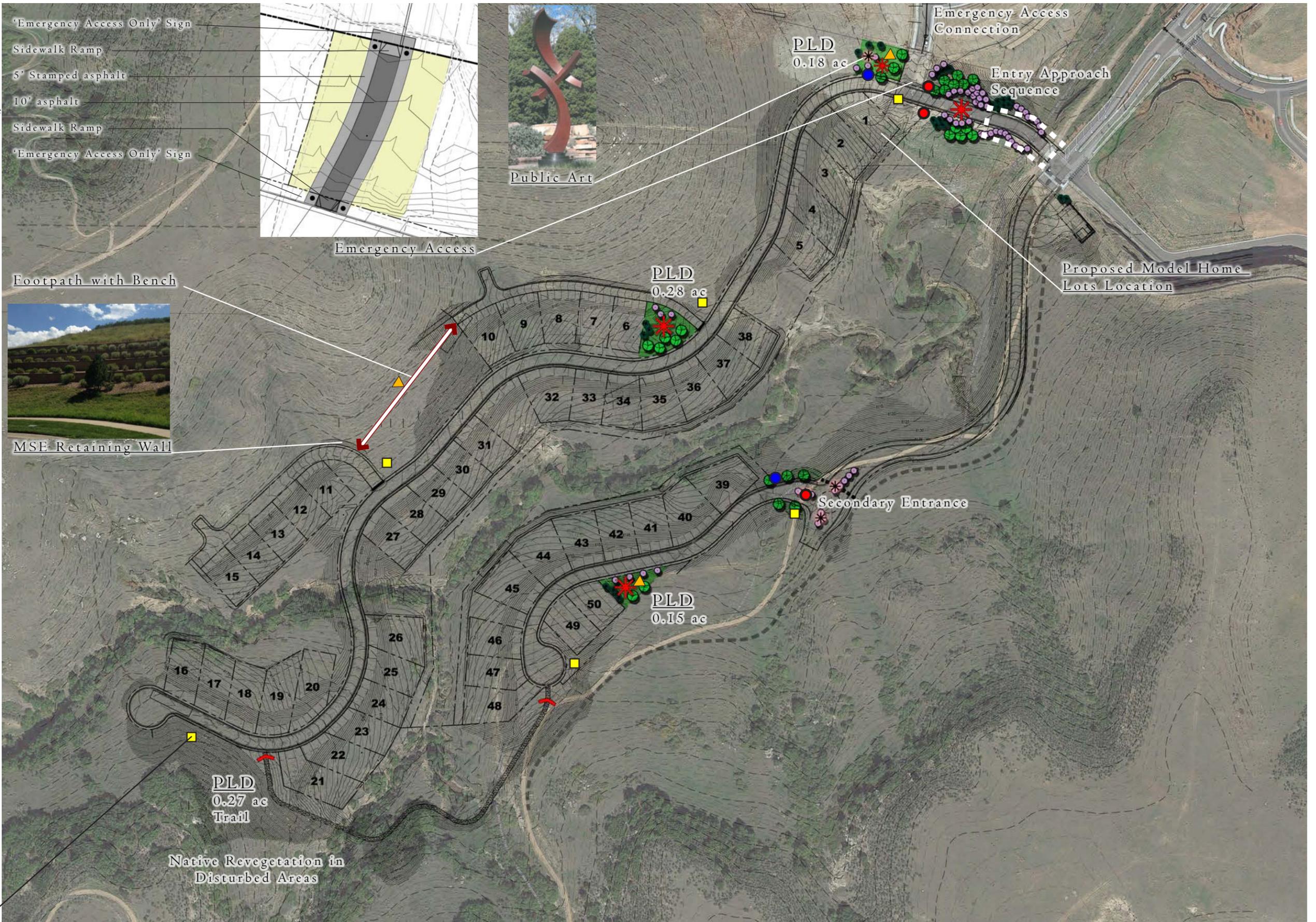
Park Land Dedication
 Required: 0.60 acres
 Provided: 0.88 acres



Bench



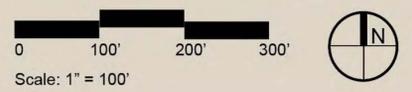
Street Light





Ridgeway Parcel GG
Lone Tree, Colorado

Cluster Map
February 26, 2016



CENTURY COMMUNITIES **Godden|Sudik ARCHITECTS** **Calibre** **THE HENRY DESIGN GROUP**

LAND PLANNING • LANDSCAPE ARCHITECTURE & DESIGN

1001 WADSWORTH STREET, SUITE 100, DENVER, COLORADO 80202 • P 303-440-2358 • F 303-440-0918

Construction Management • Civil Engineering • Surveying

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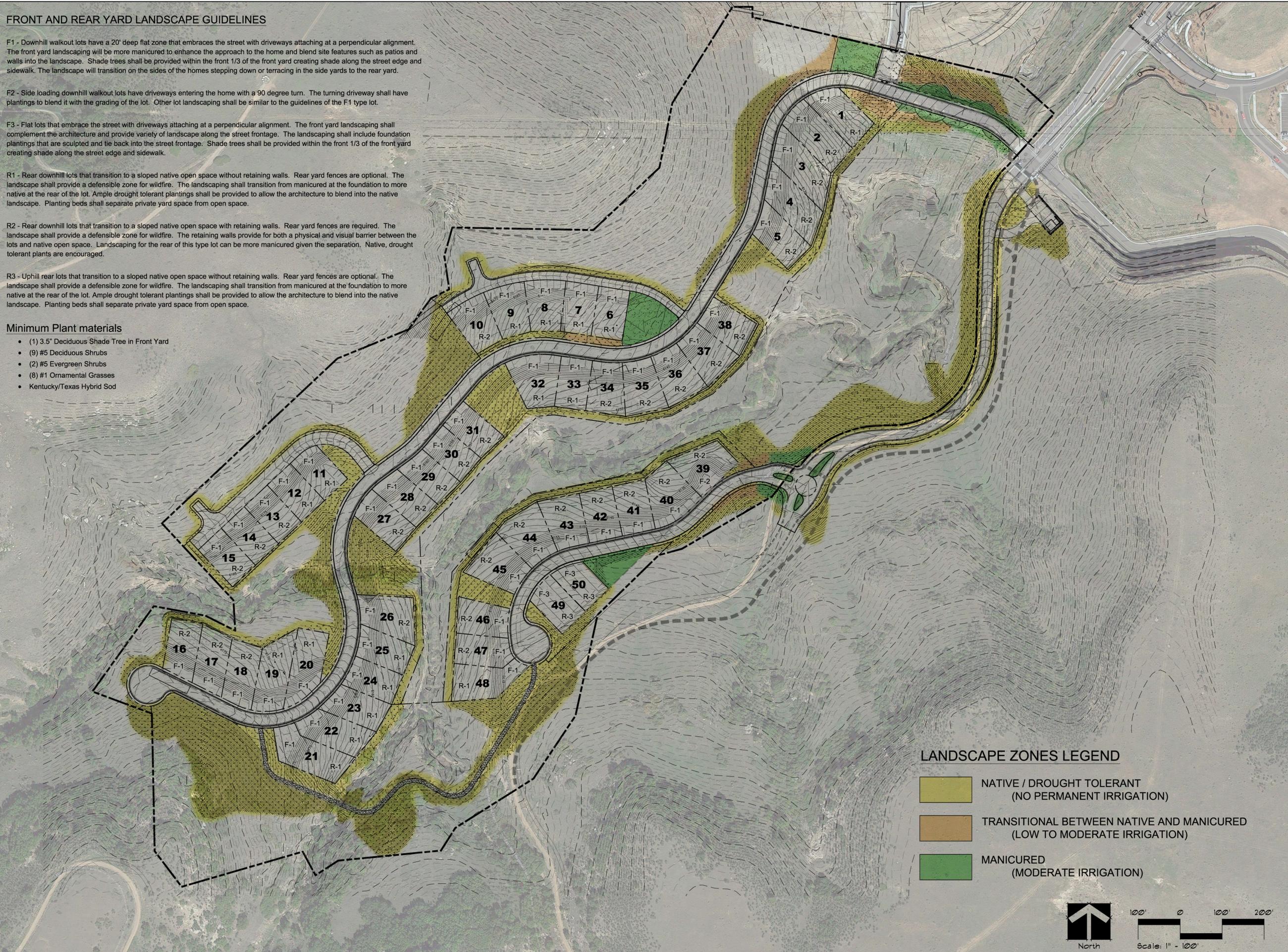
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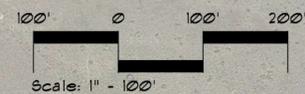
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-  TRANSITIONAL BETWEEN NATIVE AND MANICURED (LOW TO MODERATE IRRIGATION)
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NO.	REVISION	DATE	BY
1	1ST SUBMITTAL		
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RIDGEGATE GG
LANDSCAPE EXHIBIT

Developer
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DATE: 3/10/16
JOB NO: _____
DRAWN BY: SA
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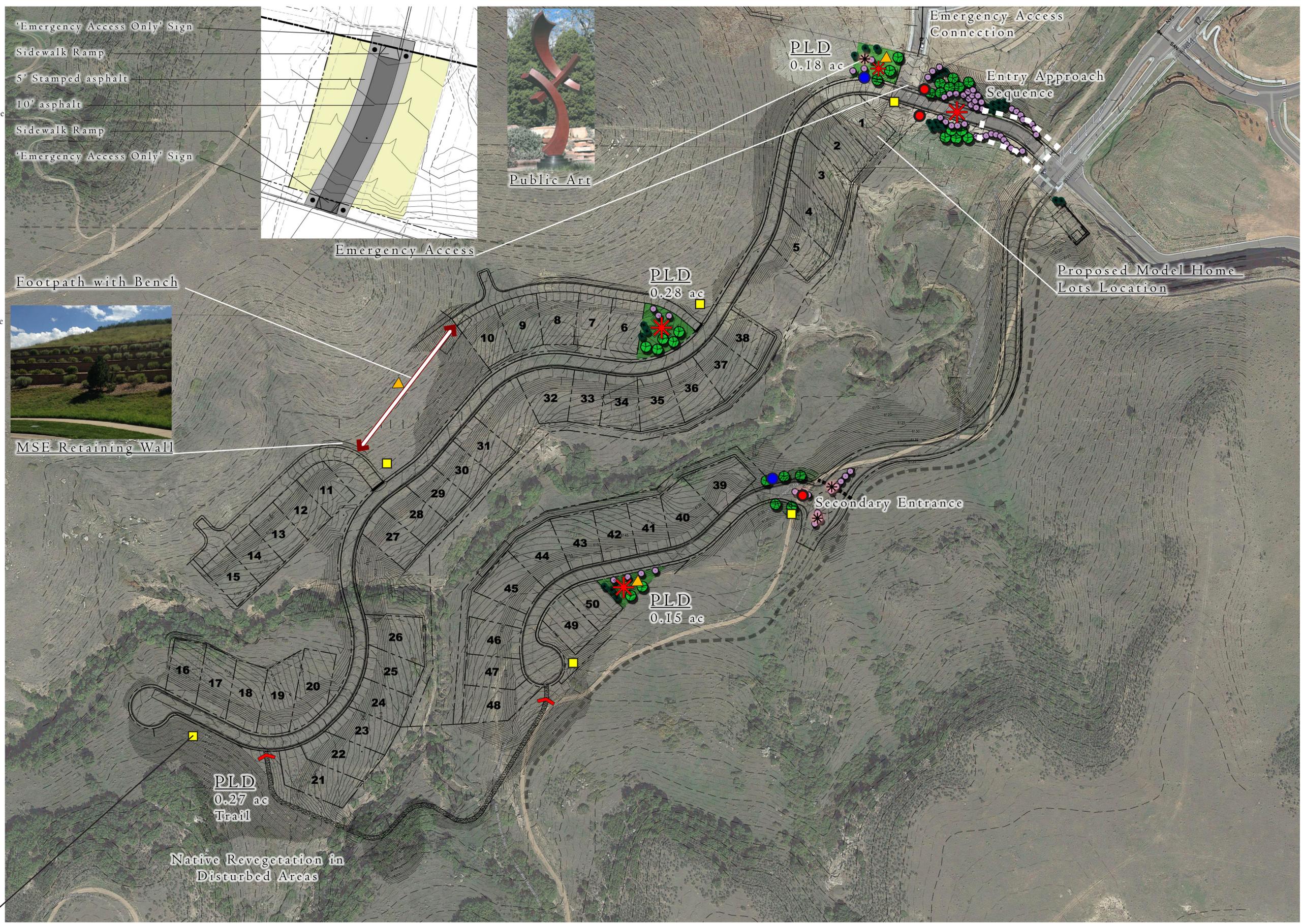
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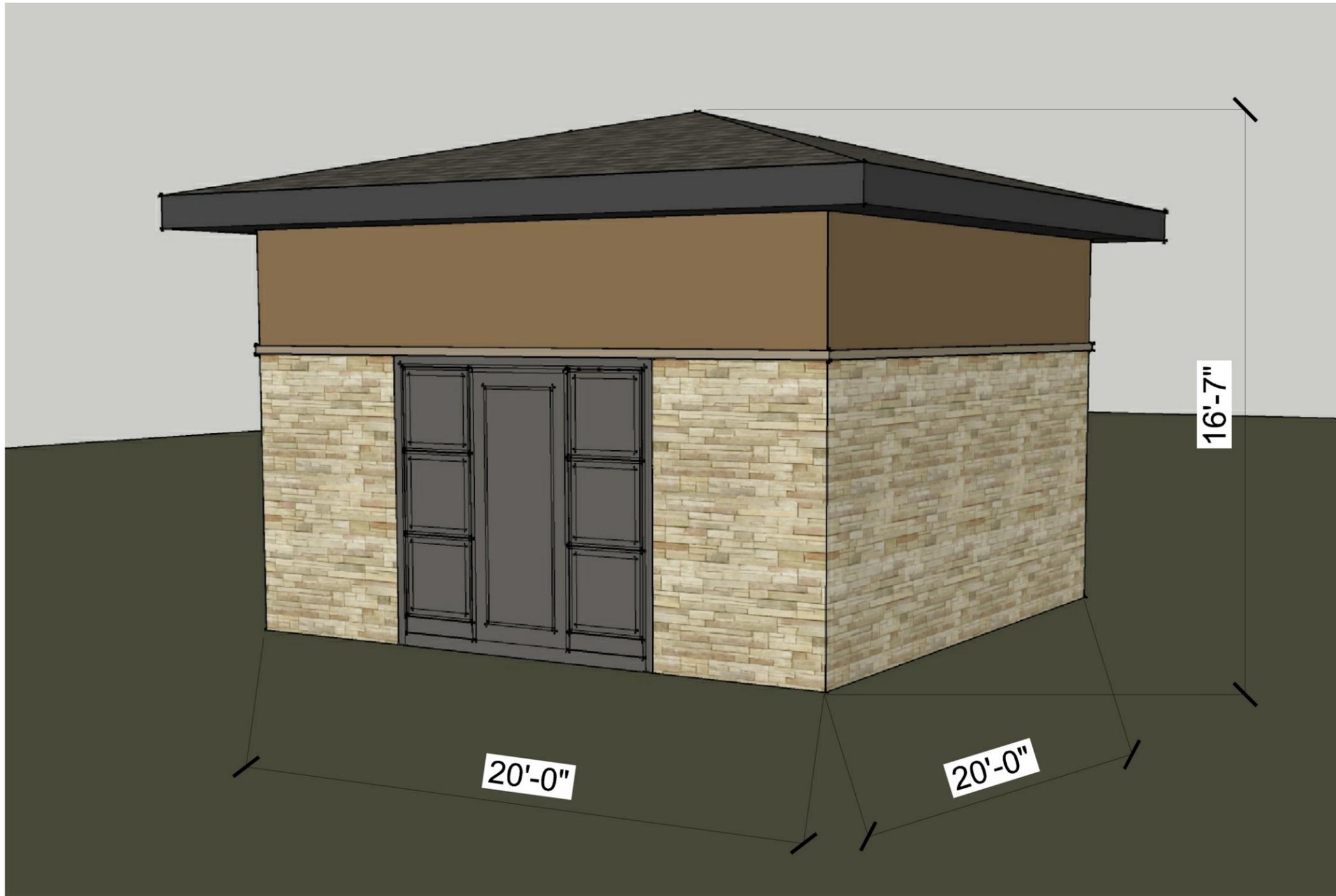
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-  Site Feature
-  Landscape Feature
-  Evergreen Screening
-  Entry Statement/Enhanced Landscape

-  Key areas for lights and signage
-  Mail Kiosk
-  Entry Monument
-  Bench

Park Land Dedication
 Required: 0.74 acres
 Provided: 0.88 acres





Proposed Pump House

Proposed Retaining Wall Block



*Consultants in
Natural
Resources and
the Environment*

DENVER • DURANGO • HOTCHKISS • IDAHO

**NATURAL RESOURCES ASSESSMENT
RIDGEGATE TRACT GG
DOUGLAS COUNTY, COLORADO**

Prepared for—

Century Communities
8390 East Crescent Parkway, Suite 650
Greenwood Village, Colorado 80111

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188

ERO Project #5825

April 21, 2014



ERO Resources Corp.

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Denver, CO 80218

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Wetlands and Waters of the U.S. 2
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- Figure 2. Existing Conditions

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- Photo log

Summary

Century Communities retained ERO Resources Corporation (ERO) to provide a natural resources assessment for the RidgeGate Tract GG property in Douglas County, Colorado (project area). ERO assessed the project area for potential wetlands and waters of the U.S., threatened and endangered species, and wildlife. Below is a summary of the resources found at the project area and recommendations or future actions necessary based on the current site conditions and federal, state, and local regulations.

Wetlands and Other Waters of the U.S. – The Cottonwood Creek drainage has intermittent evidence of a stream bank (other waters) and one wetland occurs within the project area. If any work is planned within any of these wetlands or other waters, a jurisdictional determination should be requested from the U.S. Army Corps of Engineers (Corps). If the Corps determines these wetlands and other waters are subject to its jurisdiction, and work is planned within the wetlands or other waters, a wetland delineation report should be submitted to the Corps for its review. If the Corps determines these wetlands and other waters are under its jurisdiction and activities are planned that would require the placement of dredged or fill material within wetlands or below the ordinary high water mark, authorization under Section 404 of the Clean Water Act would be required. If any of these wetlands or other waters are determined nonjurisdictional or if no work is planned within the jurisdictional wetlands or other waters, no action would be necessary.

Threatened and Endangered Species – Suitable habitat for federally listed threatened or endangered species is not present in the project area. No action is necessary to comply with the Endangered Species Act.

Migratory Birds and Other Wildlife – ERO found four migratory bird nests within the project area. If the four nests become active or other active nests are found within the project area, any work that would destroy a nest or cause abandonment should not be conducted until the birds have completed nesting. As with any human development, including residential development, wildlife species sensitive to human disturbance are likely to decline in abundance or abandon the area, while other wildlife species adapted to urban development are likely to increase in abundance.

The natural resources and associated regulations described in this report are valid as of the date of this report and may be relied upon for the specific use for which it was prepared by ERO under contract to Century Communities. Because of their dynamic natures, site conditions and regulations should be reconfirmed by a qualified consultant before relying on this report for a use other than that for which it was specifically prepared.

**NATURAL RESOURCES ASSESSMENT
RIDGEGATE TRACT GG
DOUGLAS COUNTY, COLORADO**

APRIL 21, 2014

Introduction

Century Communities retained ERO Resources Corporation (ERO) to provide a natural resources assessment for the RidgeGate Tract GG property, a proposed residential development in Douglas County, Colorado (project area; Figure 1). On April 15, 2014, an ERO biologist visited the project area to review natural resources (2014 site visit). During this assessment, activities included a review of potential wetlands or other waters, identification of potential federally threatened and endangered species habitat, and identification of other natural resources that might affect development of the property.

This report provides information on existing site conditions and resources, as well as current regulatory guidelines related to those resources. It is assumed that the landowner or developer is responsible for obtaining proper federal, state, and local permits for development of the project area.

Site Description

The project area is west of Interstate 25 and south of RidgeGate Parkway in Douglas County, Colorado (Figure 1). The legal description is Sections 15 and 22, T6S, R67W of the 6th Principal Meridian; and the UTM coordinates of the approximate center of the project area are 510464mE, 4374493mN, Zone 13. The latitude/longitude of the project area is 39.520017°N/104.878262°W. The elevation of the project area is 6,100 feet. Residential developments are adjacent to the project area on the northern side. The remainder of the project area is surrounded by undeveloped land. The East-West Regional Trail runs along the eastern boundary.

RidgeGate Tract GG is undeveloped open space covered by various native and nonnative species, including yucca (*Yucca glauca*), cheatgrass (*Bromus tectorum*), sand dropseed (*Sporobolus cryptandrus*), smooth brome (*Bromus inermis*), and blue grama (*Bouteloua gracilis*) (Photo 1). Cottonwood Creek and its tributaries run through the eastern and southern portions of the project area (Photo 2). Plains cottonwood (*Populus*

deltooides subsp. *monilifera*), scrub oak (*Quercus turbinella*), and other trees line Cottonwood Creek throughout the project area. Cottonwood Creek, which is predominantly an upland vegetated swale with smooth brome, sand dropseed, Kentucky bluegrass (*Poa pratensis*), and snowberry (*Symphoricarpos albus*), flows to a culvert in the northeastern corner of the project area.

Wetlands and Waters of the U.S.

Background

The Clean Water Act (CWA) was passed by the U.S. Congress in 1972 to protect the physical, biological, and chemical quality of waters of the U.S. The U.S. Army Corps of Engineers' (Corps) Regulatory Program administers and enforces Section 404 of the CWA. Under Section 404, a Corps' permit is required for the discharge of dredged or fill material into wetlands and waters of the U.S. The Corps defines waters of the U.S. as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Because of court challenges to the Corps' jurisdiction over wetlands and waters of the U.S., the Corps' regulatory guidance is in a state of flux. As a result of the 2001 ruling by the Supreme Court in the matter of *Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers*, 531 U.S. 159 (S. Ct. 2001), the Corps' regulatory jurisdiction over isolated, nonnavigable, intrastate waters has been eliminated if the sole nexus to interstate commerce was use of the waters by migratory birds. On June 19, 2006, the Supreme Court ruled in the consolidated cases of *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers*, which questioned the scope of the Corps' jurisdiction over wetlands associated with ephemeral and intermittent drainages, and man-made ditches and canals. On June 5, 2007, the Corps issued guidance on the Supreme Court ruling stating that the Corps would consider traditionally navigable waters (TNWs), wetlands adjacent to a TNW, and tributaries to TNWs that are relatively permanent waters (RPWs) and their abutting wetlands to be jurisdictional waters. Other wetlands and waters would require a determination that the wetland or tributary would have an effect that is more than speculative or insubstantial on the chemical, physical, or biological integrity of a TNW to be jurisdictional (significant nexus determination).

Site Conditions and Regulations

ERO surveyed the project area for wetlands and other waters of the U.S. Using methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (Corps 2010), wetlands were determined based on the presence of three wetland indicators: hydrophytic vegetation, hydric soils, and wetland hydrology. The wetland indicator status for plant species was determined from the National Wetland Plant List (Corps 2013). Data forms were completed for each of the wetland data points (DP) and are included in Appendix A. ERO delineated wetlands using a Trimble ProXR Global Positioning System (GPS) unit and TBC1 data logger. Data were differentially corrected using the CompassCom base station. All differential correction was completed using Trimble Pathfinder Office 5.40 software. Additionally, where appropriate, wetlands were drawn on georectified aerials and then digitized.

Cottonwood Creek within the project area consists of segments of intermittent channel (other waters), defined by sandy deposition and no vegetation, separated by stretches of upland vegetation with no evidence of stream flow (Photos 4 and 5). In the southwestern portion of the project area water is flowing through the creek (Photo 6), perhaps due to recent snowfall.

Within the project area, one wetland was found in Cottonwood Creek. Wetland 1 (Figure 2, DP 1; Photo 3) is characterized by Arctic rush (*Juncus arcticus*), sandbar willow (*Salix exigua*), and smooth brome. Wetland 1 is located in a bend along Cottonwood Creek in the northern portion of the project area. This wetland may be jurisdictional because it is a tributary to Cherry Creek, a TNW; however, the Corps makes the final determination if Cottonwood Creek is jurisdictional.

If any work is planned within the wetlands or other waters, a jurisdictional determination should be requested from the Corps. If the Corps determines these wetlands and other waters are jurisdictional, and work is planned within any of the wetlands or waters, a wetland delineation report should be submitted to the Corps for its review. If the Corps determines these wetlands and other waters are jurisdictional and activities are planned that would require the placement of dredged or fill material within

the wetlands or below the ordinary high water mark, authorization under Section 404 of the CWA would be required. If any of these wetlands or other waters are determined nonjurisdictional or if no work is planned within jurisdictional wetlands and other waters, no action would be necessary.

Threatened, Endangered, and Candidate Species

ERO assessed the project area for potential habitat for threatened, endangered, and candidate species under the Endangered Species Act (ESA). Federally threatened and endangered species are protected under the ESA of 1973, as amended (16 U.S.C. 1531 et seq.). Significant adverse effects on a federally listed species or its habitat require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 or 10 of the ESA. The Service lists several threatened and endangered species with potential habitat in Douglas County, or potentially affected by projects in Douglas County (Table 1).

Table 1. Federally threatened, endangered, and candidate species potentially found in Douglas County or potentially affected by projects in Douglas County.

Common Name	Scientific Name	Status*	Habitat	Suitable Habitat Present or Potential to be Affected by Project?
Mammals				
Preble's meadow jumping mouse	<i>Zapus hudsonius preblei</i>	T	Shrub riparian/wet meadows	No
Birds				
Interior least tern**	<i>Sterna antillarum athalassos</i>	E	Sandy/pebble beaches on lakes, reservoirs, and rivers	No habitat and no depletions anticipated
Mexican spotted owl	<i>Strix occidentalis</i>	T	Closed canopy forests in steep canyons	No
Piping plover**	<i>Charadrius melodus</i>	T	Sandy lakeshore beaches and river sandbars	No habitat and no depletions anticipated
Whooping crane**	<i>Grus americana</i>	E	Mudflats around reservoirs and in agricultural areas	No habitat and no depletions anticipated
Fish				
Greenback cutthroat trout	<i>Oncorhynchus clarki stomias</i>	T	Clear, swift-flowing mountain streams with cover such as overhanging banks and vegetation	No

NATURAL RESOURCES ASSESSMENT
RIDGEGATE TRACT GG
DOUGLAS COUNTY, COLORADO

Common Name	Scientific Name	Status *	Habitat	Suitable Habitat Present or Potential to be Affected by Project?
Pallid sturgeon**	<i>Scaphirhynchus albus</i>	E	Large, turbid, free-flowing rivers with a strong current and gravel or sandy substrate	No habitat and no depletions anticipated
Plants				
Colorado butterfly plant	<i>Gaura neomexicana</i> ssp. <i>coloradensis</i>	T	Subirrigated, alluvial soils on level floodplains and drainage bottoms between 5,000 and 6,400 feet in elevation	No
Ute ladies'-tresses orchid	<i>Spiranthes diluvialis</i>	T	Moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes below 6,500 feet in elevation	No
Western prairie fringed orchid**	<i>Platanthera praeclara</i>	T	Moist to wet prairies and meadows	No habitat and no depletions anticipated
Insects				
Pawnee montane skipper	<i>Hesperia leonardus montana</i>	T	Ponderosa woodlands (6,000 to 7,500 feet in elevation); requires blue grama and prairie gayfeather	No

*T = Federally Threatened Species, E = Federally Endangered Species.

**Water depletions in the South Platte River may affect the species and/or critical habitat in downstream reaches in other counties or states.

Source: Service 2014.

The proposed project would not directly affect the Mexican spotted owl, greenback cutthroat trout, or Pawnee montane skipper because of the lack of potentially suitable habitat in the project area. The interior least tern, piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid are species affected by water depletions from the South Platte River. If the project includes activities that would deplete water in the South Platte River, such as diverting water from a stream or developing new water supplies, these species could be affected by the project and consultation with the Service may be required.

Potential habitat for Preble's meadow jumping mouse, Colorado butterfly plant, and Ute ladies'-tresses orchid is more prevalent within development sites across the Front Range. Because these species are more likely to be addressed by counties and regulatory agencies such as the Corps, a more detailed discussion is provided below.

Preble's Meadow Jumping Mouse

Species Background

Preble's meadow jumping mouse (Preble's) was listed as a threatened species on May 13, 1998 under the ESA (Federal Register Vol. 63, No. 232:66777-66784, December 3, 1998). Under existing regulations, either a habitat assessment or a full presence/absence survey for Preble's is required for any habitat-disturbing activity within areas determined to be potential Preble's habitat (generally stream and riparian habitats along the Colorado Front Range and southeastern Wyoming). Typically, Preble's occurs below 7,600 feet in elevation, generally in lowlands with medium to high moisture along permanent or intermittent streams and canals (Meaney et al. 1997). Preble's occurs in low undergrowth consisting of grasses and forbs, in open wet meadows, riparian corridors near forests, or where tall shrubs and low trees provide adequate cover (Service 1999; Meaney et al. 1997). Preble's typically inhabits areas characterized by well-developed plains riparian vegetation with relatively undisturbed grassland and a water source nearby.

Potential Habitat and Possible Effects

On May 11, 2006, the Service approved implementation of the Douglas County Habitat Conservation Plan (DCHCP). The DCHCP was developed to conserve the quality, quantity, and distribution of habitat needed to maintain the long-term viability of Preble's in Douglas County. As part of the DCHCP, riparian areas and adjacent upland habitats on nonfederal lands with a high likelihood of supporting Preble's within three major watersheds in Douglas County (Plum Creek, Cherry Creek, and South Platte River upstream of Chatfield Reservoir) were identified. The designated potential habitat is referred to as the Riparian Conservation Zone (RCZ) (Figure 2).

Based on the RCZ mapping of the geographic limits of Preble's habitat on nonfederal lands in Douglas County, the project area is outside of the RCZ. Projects occurring within Douglas County and outside the RCZ will not require consultation with the Service for potential impacts on Preble's. Because there is no suitable habitat for Preble's within the project area and the project area is outside the RCZ, no action is necessary regarding Preble's.

Colorado Butterfly Plant

Species Background

The Colorado butterfly plant (CBP) is a short-lived perennial herb found in moist areas of floodplains. It occurs on subirrigated, alluvial soils on level or slightly sloping floodplains and drainage bottoms at elevations from 5,000 to 6,400 feet. Colonies are often found in low depressions or along bends in wide, active, meandering stream channels that are periodically disturbed. Historically, the main cause of disturbance was probably flooding (Service 2004). The CBP flowers from June to September and produces fruit from July to October (Spackman et al. 1997). This species is federally listed as threatened under the ESA and is found within a small area in southeastern Wyoming, western Nebraska, and north-central Colorado (NatureServe 2012).

Potential Habitat and Possible Effects

The Service has not established official survey guidelines for the CBP; however, no suitable habitat is present in the project area because an active, meandering stream characterized by wetlands and an active floodplain is not present in the project area. Suitable habitat for CBP is not present in the project area and no action is necessary.

Ute Ladies'-Tresses Orchid

Species Background

The Ute ladies'-tresses orchid (ULTO) is federally listed as threatened. ULTO occurs at elevations below 6,500 feet in moist to wet alluvial meadows, floodplains of perennial streams, and around springs and lakes where the soil is seasonally saturated within 18 inches of the surface. Generally, the species occurs where the vegetative cover is relatively open and not overly dense or overgrazed. Once thought to be fairly common in low-elevation riparian areas in the interior western United States, ULTO is now rare (Service 1992). The species' known range has since been extended from Colorado and Wyoming to British Columbia.

In Colorado, the Service requires surveys in areas of suitable habitat on the 100-year floodplain of the South Platte River, Fountain Creek, and Yampa River and their perennial tributaries, or in any area with suitable ULTO habitat in Boulder and Jefferson

counties. ULTO does not bloom until late July to early September (depending on the year) and timing of surveys must be synchronized with blooming (Service 1992).

Potential Habitat and Possible Effects

ERO assessed the project area for potential ULTO habitat. Because a perennial tributary to the South Platte River does not occur in the project area and the project area is in Douglas County, the site does not fall within the Service’s guidelines for ULTO surveys. No action is necessary regarding ULTO.

Other Species of Concern

Raptors and Migratory Birds

Migratory birds, as well as their eggs and nests, are protected under the Migratory Bird Treaty Act (MBTA). While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal (Service 2003). The regulatory definition of a take means to pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12).

Under the MBTA, the Service may issue nest depredation permits, which allow a permittee to remove an active nest. The Service, however, issues few permits and only under specific circumstances, usually related to human health and safety. Obtaining a nest depredation permit is unlikely and involves a process that takes from four to eight weeks. In addition, Colorado Parks and Wildlife has recommended buffers for nesting raptors, depending on the species (generally 1/3 or 1/4 mile) (Colorado Division of Wildlife 2008). Public awareness of the MBTA has grown in recent years, and most MBTA enforcement actions are the result of a concerned member of the community reporting noncompliance.

Potential Habitat and Possible Effects

Three unoccupied magpie nests and one potentially active magpie nest were observed in the project area during the 2014 site visit, as shown on Figure 2. Although not observed during the 2014 site visit, ground-nesting bird nests are difficult to detect and may be present in the uplands and trees in the project area. The breeding season for most

birds in Colorado is from March through August, with the exception of a few species that begin breeding in February, such as great-horned owls.

Recommendations

To comply with the MBTA, ERO recommends removing vegetation from September through February, which is typically outside of the active breeding season. Removal of nests may occur during the nonbreeding season to preclude future nesting and avoid violations of the MBTA. No permit or approval is necessary for removing nests during the nonbreeding season; however, nests must be destroyed and may not be collected under MBTA regulations. If the construction schedule does not allow vegetation removal outside of the breeding season, a nest survey should be conducted prior to vegetation removal to determine if active nests are present.

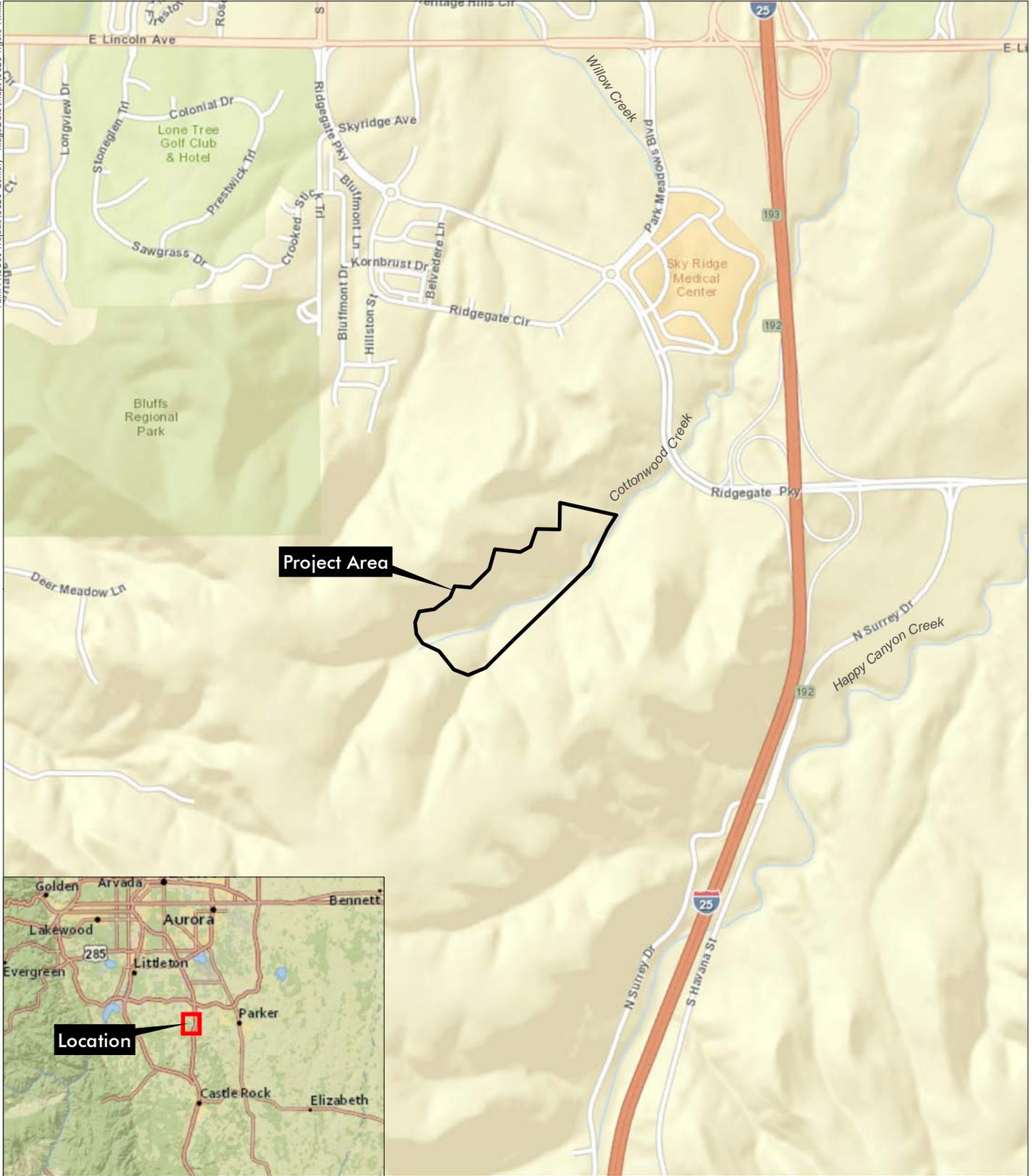
Other Wildlife

As with any human development, wildlife species sensitive to human disturbance are likely to decline in abundance or abandon the area, while other wildlife species adapted to development are likely to increase in abundance. Species likely to decline include some raptors and possibly coyotes. Species likely to increase include red fox, raccoon, and great horned owl. Overall, surrounding and continuing development contributes to a decline in the number and diversity of wildlife species nearby and to a change in species composition to favor species that adapt better to human disturbance.

References

- Colorado Division of Wildlife. 2008. Recommended buffer zones and seasonal restrictions for Colorado Raptor Nests. Colorado Division of Wildlife. February.
- Meaney, C.A., A. Deans, N.W. Clippenger, M. Rider, N. Daly, and M. O'Shea-Stone. 1997. Third year survey for Preble's meadow jumping mouse (*Zapus hudsonius preblei*) in Colorado. Under contract to Colorado Division of Wildlife. Boulder, CO.
- NatureServe. 2012. NatureServe Explorer. Available at:
<http://www.natureserve.org/explorer/servlet/NatureServe>.
- Spackman, S., B. Jennings, J. Coles, C. Dawson, M. Minton, A. Kratz, and C. Spurrier. 1997. Colorado Rare Plant Field Guide. Prepared for the Bureau of Land Management, the U.S. Forest Service, and the U.S. Fish and Wildlife Service by the Colorado Natural Heritage Program.

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- U.S. Fish and Wildlife Service (Service). 1992. Endangered and Threatened Wildlife and Plants: Final Rule to List the Plant *Spiranthes diluvialis* (Ute ladies'-tresses) as a Threatened Species. Federal Register 50 CFR Part 17, Vol. 57, No. 12, pp. 2048-2054. January 17.
- U.S. Fish and Wildlife Service (Service). 1999. Survey Guidelines for Preble's Meadow Jumping Mouse. USFWS, Colorado Field Office. Revised: April 2004.
- U.S. Fish and Wildlife Service (Service). 2003. Migratory Bird Permit Memorandum. April 15.
- U.S. Fish and Wildlife Service (Service). 2004. Endangered and Threatened Wildlife and Plants: Designated Critical Habitat for Colorado Butterfly Plant, Final Rule. Federal Register, Vol. 70, No. 7. January 11.
- U.S. Fish and Wildlife Service (Service). 2014. Endangered, Threatened, Proposed and Candidate Species, Colorado Counties. Available at: <http://ecos.fws.gov/ipac/>. Last updated: April 19, 2014.



RidgeGate – Tract GG

Sections 15 and 22, T6S, R67W; 6th PM

UTM NAD 83: Zone 13N; 510464mE, 4374493mN

Latitude, Longitude: 39.520017°N, 104.878262°W

USGS Highlands Ranch and Parker, CO Quadrangles

Douglas County, Colorado

Figure 1 Vicinity Map

Prepared for: Century Communities
File: 5825 Figure 1.mxd (GS)
April 21, 2014





RidgeGate – Tract GG

- Potentially Active Magpie Nest
- Unoccupied Magpie Nest
- Data Point
- Project Area Boundary
- ➔ Photo Point
- Wetland
- Intermittent Drainage

Image Source: Microsoft©, March 2012



**Figure 2
Existing Conditions**

Prepared for: Century Communities
File: 5825 Figure 2.mxd (GS)
April 21, 2014



WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Century - RidgeGate City/County: Douglas County Sampling Date: Anr 15 2014
 Applicant/Owner: Century Communities State: CO Sampling Point: DP2
 Investigator(s): H. Konker Section, Township, Range: Sects. 15 and 22, T6S, R67W; 6th PM
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Convex Slope (%): 3
 Subregion (LRR): G Lat: 4374611 mN Long: 510708 mE Datum: Nad83
 Soil Map Unit Name: Fondis-Kutch association NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Notes
Tree Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1.				
2.				
3.				
4.				
5.				
_____ = Total Cover				
Herb Stratum (Plot size: <u>5 x 2 ft</u>)				
1.	<u>40</u>	<u>D</u>	<u>FACU</u>	<u>Bromus inermis</u>
2.	<u>30</u>	<u>D</u>	<u>FACU</u>	<u>Poa pratensis</u>
3.	<u>10</u>			<u>Sporobolus cryptandrus</u>
4.	<u>10</u>			<u>Juncus arcticus</u>
5.				
6.				
7.				
8.				
9.				
10.				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1.				
2.				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 0 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species: _____ x 1 = _____
 FACW species: _____ x 2 = _____
 FAC species: _____ x 3 = _____
 FACU species: _____ x 4 = _____
 UPL species: _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--------------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | (MLRA 72 & 73 of LRR H) |

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

Did not dig based on lack of hydric vegetation

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--------------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No hydrology indicators present

WETLAND DETERMINATION DATA FORM – Great Plains Region

Project/Site: Century - RidgeGate City/County: Douglas County Sampling Date: Anr 15 2014
 Applicant/Owner: Century Communities State: CO Sampling Point: DP1
 Investigator(s): H. Konker Section, Township, Range: Sects. 15 and 22, T6S, R67W; 6th PM
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 3
 Subregion (LRR): G Lat: 4374614 mN Long: 510709 mE Datum: Nad83
 Soil Map Unit Name: Fondis-Kutch association NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation N, Soil N, or Hydrology N naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>15 x 4</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus deltoides ssp. Monilifera</u>	<u>15</u>	D	FAC	
2. _____				
3. _____				
4. _____				
	<u>15</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
		= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5 x 3</u>)				
1. <u>Juncus arcticus</u>	<u>50</u>	D	FACW	
2. <u>Salix exigua</u>	<u>10</u>		FACW	
3. <u>Poa pratensis</u>	<u>7</u>		FACU	
4. <u>Bromus inermis</u>	<u>30</u>	D	FACU	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	<u>97</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____				
2. _____				
		= Total Cover		
% Bare Ground in Herb Stratum <u>3</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC (excluding FAC-): 2 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 66 (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species: _____ x 1 = _____
 FACW species: _____ x 2 = _____
 FAC species: _____ x 3 = _____
 FACU species: _____ x 4 = _____
 UPL species: _____ x 5 = _____
 Column Totals: _____ (A) _____ (B)
 Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:
 1 - Rapid Test for Hydrophytic Vegetation
 2 - Dominance Test is >50%
 3 - Prevalence Index is ≤3.0¹
 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

SOIL

Sampling Point: DP1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	7.5YR 3/1	95	7.5YR 6/8	5	C	M	SaCilo	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- | | |
|--------------------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) | <input type="checkbox"/> High Plains Depressions (F16) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F) | |
- (MLRA 72 & 73 of LRR H)**

Indicators for Problematic Hydric Soils³:

- 1 cm Muck (A9) (LRR I, J)
- Coast Prairie Redox (A16) (LRR F, G, H)
- Dark Surface (S7) (LRR G)
- High Plains Depressions (F16)
- (LRR H outside of MLRA 72 & 73)**
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- | | |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Invertebrates (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input checked="" type="checkbox"/> Drift Deposits (B3) | (where not tilled) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (minimum of two required)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Oxidized Rhizospheres on Living Roots (C3)
- (where tilled)**
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Geomorphic Position (D2)
- FAC-Neutral Test (D5)
- Frost-Heave Hummocks (D7) (LRR F)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**PHOTO LOG
RIDGE GATE TRACT GG
APRIL 15, 2014**



Photo 1 - An overview of the project area. View is to the east.



Photo 2 - Cottonwood Creek in the project area. View is to the south.

**PHOTO LOG
RIDGE GATE TRACT GG
APRIL 15, 2014**



Photo 3 - Wetland 1 and DP 1. View is to the east.

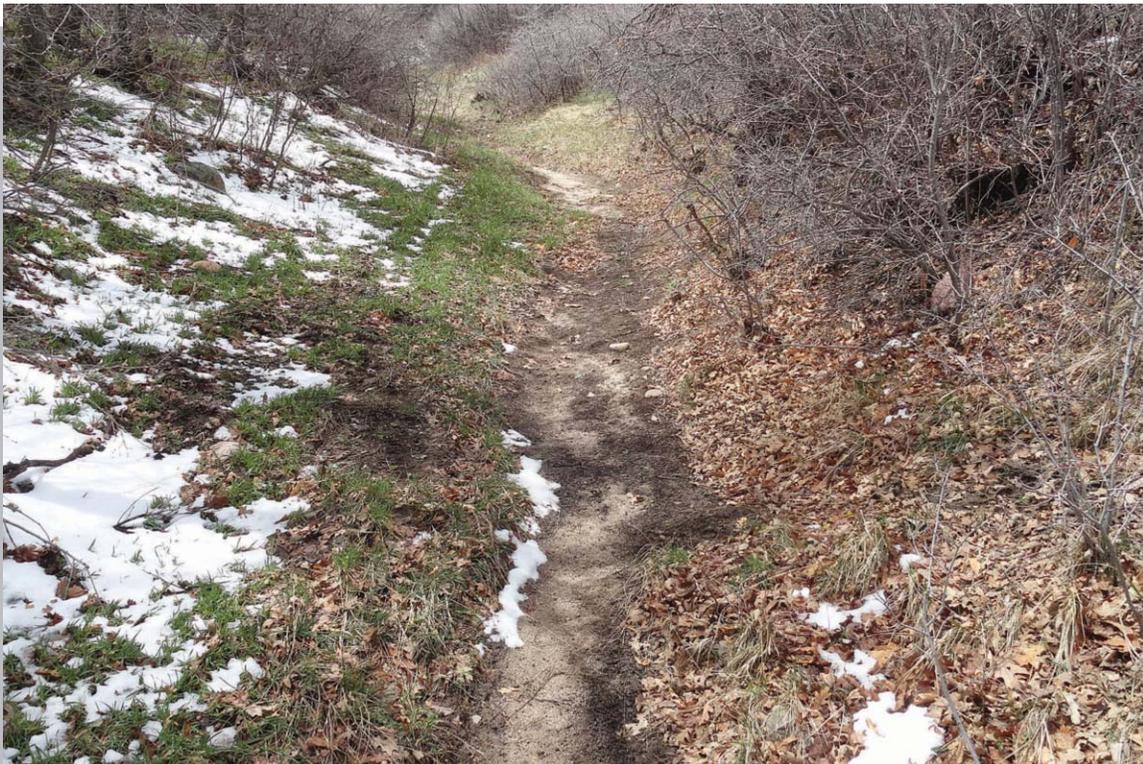


Photo 4 - An intermittent channel in Cottonwood Creek. View is to the west.

**PHOTO LOG
RIDGE GATE TRACT GG
APRIL 15, 2014**



Photo 5 - An intermittent channel in Cottonwood Creek. View is to the northeast.



Photo 6 - An intermittent channel in Cottonwood Creek. View is to the southwest.

1889 York Street
Denver, CO 80206
(303) 333-1105
FAX (303) 333-1107
E-mail: lsc@lscdenver.com



September 14, 2015

Mr. John Vitella
Century Communities
8390 E. Crescent Parkway, Suite 650
Greenwood Village, CO 80111

Re: Ridgeway Tract GG
Traffic Impact Analysis
Lone Tree, CO
(LSC #150900)

Dear Mr. Vitella:

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact analysis for the proposed Ridgeway Tract GG development. As shown on Figure 1, the site is located southwest of Ridgeway Parkway and Cabela Drive in Lone Tree, Colorado.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions in the vicinity of the site including the lane geometries, traffic controls, posted speed limits, etc.; the existing weekday peak-hour traffic volumes; the existing daily traffic volumes in the area; the typical weekday site-generated traffic volume projections for the site; the assignment of the projected traffic volumes to the area roadways; the projected short-term and long-term background and resulting total traffic volumes on the area roadways; the site's projected traffic impacts; and any recommended roadway improvements to mitigate impacts from the site or growth in background traffic.

LAND USE AND ACCESS

The site is currently vacant and is proposed to include about 70 single-family dwelling units. The site location is shown in Figure 1 and a conceptual site plan is shown in Figure 2. Access is proposed to Cabela Drive. A secondary local access may be provided to the neighboring subdivision to the north. Two access scenarios were considered - Scenario 1 assumes the local connection and Scenario 2 does not.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Ridgegate Parkway** is an east-west, six-lane, major arterial roadway northeast of the site. The intersection with Cabela Drive is signalized with auxiliary turn lanes. The posted speed limit in the vicinity of the site is 35 mph.
- **Cabela Drive** is a north-south, two-lane roadway connecting the site to Ridgegate Parkway. The intersection with Ridgegate Parkway is signalized with auxiliary turn lanes.

Existing Traffic Conditions

Figure 3 shows the existing weekday peak-hour traffic volumes, the existing lane geometries, traffic controls, and posted speed limits. These traffic volumes are based on the attached traffic counts conducted by Counter Measures, Inc. in August, 2015. The existing signal timings were provided by the City of Lone Tree.

2017 and 2035 Background Traffic

Figure 4a shows the estimated 2017 background traffic with a connection to the adjacent neighborhood and Figure 4b shows the estimated 2017 background traffic without a connection to the adjacent neighborhood. The 2017 background traffic volumes were based on factoring between the existing volumes in Figure 3 and the 2035 background traffic estimates in Figures 5a and 5b.

Figure 5a shows the estimated 2035 background traffic with a connection to the adjacent neighborhood and Figure 5b shows the estimated 2035 background traffic without a connection to the adjacent neighborhood. The 2035 background traffic volumes are based on the 2035 projections from the March, 2012 *Tract O Development TIS* (TIS) by Felsburg, Holt & Ullevig (FHU) plus the addition of traffic from the up to 364 single-family homes to the south within Ridgegate and in the Southridge Preserve. The FHU TIS assumed full build-out of the Cabelas site by 2035.

Existing, 2017, and 2035 Background Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay and LOS F is indicative of a high level of congestion or delay. Attached are specific level of service definitions for signalized and unsignalized intersections.

The intersections in Figures 3, 4a, 4b, 5a, and 5b were analyzed to determine the existing, 2017 background, and 2035 background levels of service using Synchro Version 8. The existing signal timings were used in the existing and 2017 analyses. The signal timings were adjusted for the 2035 analysis to reflect higher future traffic volumes. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Ridgegate Parkway/Cabela Drive:** This signalized intersection currently operates at an overall LOS "A" during both peak-hours and is expected to do so through 2017 for either scenario. By 2035, the intersection is expected to operate at LOS "D" in the morning peak-hour and LOS "C" in the afternoon peak-hour for either scenario.
- **Cabela Drive/North Cabela Access:** All movements at this unsignalized intersection are expected to operate at LOS "A" through 2017 with the assumed connection. By 2035, all

movements are expected to operate at “B” or better for either scenario, with the exception of the northwestbound left-turn movement, which could operate at LOS “D” in the afternoon peak-hour.

- **Cabela Drive/S. Cabela Access/Site Access:** With the assumed connection, all movements are expected to operate at LOS “B” or better in both peak-hours. Without the assumed connection, all movements are expected to operate at LOS “A” in both peak-hours.

TRIP GENERATION

Table 2 shows the estimated trip generation potential for the site based on the trip generation rates from the 9th edition of the *ITE Trip Generation Manual*, 2012.

The site is expected to generate about 665 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 13 vehicles would enter and about 39 vehicles would exit the site. During the afternoon peak-hour, which generally occurs for one hour between 4:00 and 6:30 p.m., about 44 vehicles would enter and about 26 vehicles would exit the site.

TRIP DISTRIBUTION

Figure 6 shows the estimated directional distribution of the site-generated traffic volumes on the area roadways. The estimates were based on the location of the site with respect to the regional population, employment, and activity centers; and the site’s proposed land use.

TRIP ASSIGNMENT

Figure 7a shows the 2017 site-generated traffic volumes with a connection to the adjacent neighborhood which is based on the trip generation estimate in Table 2 and the directional distribution estimate in Figure 6.

Figure 7b shows the 2017 site-generated traffic volumes without a connection to the adjacent neighborhood which is based on the trip generation estimate in Table 2 and the directional distribution estimate in Figure 6.

2017 AND 2035 TOTAL TRAFFIC

Figure 8a shows the 2017 total traffic with a connection to the adjacent neighborhood which is the sum of the 2017 background traffic volumes (from Figure 4a) and the site-generated traffic volumes (from Figure 7a).

Figure 8b shows the 2017 total traffic without a connection to the adjacent neighborhood which is the sum of the 2017 background traffic volumes (from Figure 4b) and the site-generated traffic volumes (from Figure 7b).

Figure 9a shows the 2035 total traffic with a connection to the adjacent neighborhood which is the sum of the 2035 background traffic volumes (from Figure 5a) and the site-generated traffic volumes (from Figure 7a).

Figure 9b shows the 2035 total traffic without a connection to the adjacent neighborhood which is the sum of the 2035 background traffic volumes (from Figure 5b) and the site-generated traffic volumes (from Figure 7b).

PROJECTED LEVELS OF SERVICE

The intersections in the study area were analyzed to determine the 2017 and 2035 total levels of service. The existing signal timings were used in the 2017 analyses. The signal timings were adjusted for the 2035 analysis to reflect higher future traffic volumes. Table 1 shows the level of service analysis results. The level of service reports are attached.

- **Ridgegate Parkway/Cabela Drive:** This signalized intersection is expected to operate at an overall LOS “A” in the morning peak-hour and LOS “B” in the afternoon peak-hour through 2017 for either scenario. By 2035, the intersection is expected to operate at LOS “D” in the morning peak-hour and LOS “C” in the afternoon peak-hour for either scenario.
- **Cabela Drive/North Cabela Access:** All movements at this unsignalized intersection are expected to operate at LOS “A” during both morning and afternoon peak-hours through 2017 for either scenario. By 2035, all movements are expected to operate at LOS “B” or better in the morning peak-hour and LOS “D” or better in the afternoon peak-hour for either scenario.
- **Cabela Drive/S. Cabela Access/Site Access:** All movements at this unsignalized intersection are expected to operate at LOS “A” during both morning and afternoon peak-hours through 2017 for either scenario. By 2035, all movements are expected to operate at LOS “B” or better in the morning peak-hour and LOS “C” or better in the afternoon peak-hour for either scenario.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

1. The site is expected to generate about 665 vehicle-trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak-hour, about 13 vehicles would enter and about 39 vehicles would exit the site. During the afternoon peak-hour, about 44 vehicles would enter and about 26 vehicles would exit the site.

Projected Levels of Service

2. By 2035, the signalized Ridgegate Parkway/Cabela Drive intersection is expected to operate at an overall LOS “D” in the morning peak-hour and LOS “C” in the afternoon peak-hour for either scenario.
3. All movements at the unsignalized Cabela Drive/North Cabela Access intersection are expected to operate at LOS “D” or better in both peak-hours through 2035 for either scenario.

- 4. All movements at the unsignalized Cabela Drive/South Cabela Access/Site Access intersection are expected to operate at LOS "C" in both peak-hours through 2035 for either scenario.

Recommendations

The impact of the proposed site can be accommodated by the existing street system with the following improvements.

- 5. The two site access approaches to Cabela Drive should be stop-sign controlled with a shared through/left lane and a dedicated right-turn lane. An appropriate length for the right-turn lane would be 100 feet.
- 6. A northeastbound left-turn lane should be striped on Cabela Drive approaching the northern site access. The turning volume is expected to be minimal - the turn lane is recommended to offset the southwestbound left-turn lane into the Cabela site to allow the through lanes to align through the intersection. An appropriate length for the left-turn lane would be 100 feet.
- 7. A local connection to the adjacent neighborhood will have little effect on the roadway network in the area. It is estimated the connection, if provided, will likely be more heavily used by the adjacent neighborhood than by site traffic. It is estimated that residents on the south end of the adjacent neighborhood will be attracted to the connection because of its proximity to the traffic signal at Ridgegate Parkway/Cabela Drive.

* * * * *

We trust our findings will assist you in gaining approval of the proposed Ridgegate Tract GG development. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS

By 
Christopher S. McGranahan, PE, PTO
Principal



9-14-15

CSM/wc

- Enclosures:
- Tables 1 and 2
 - Figures 1 - 9b
 - Traffic Count Reports
 - Level of Service Definitions
 - Level of Service Reports

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**Table 1
Intersection Levels of Service Analysis
Ridgegate Tract GG
Lone Tree, CO
(LSC #150900; September, 2015)**

Intersection Location	Traffic Control	Existing Traffic		2017 Background With Connection		2017 Background Without Connection		2017 Total With Connection		2017 Total Without Connection		2035 Background With Connection		2035 Background Without Connection		2035 Total With Connection		2035 Total Without Connection	
		Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM	Level of Service AM	Level of Service PM
<u>Ridgegate Parkway/Cabela Drive</u>	Signalized																		
SEB Left		--	--	--	--	--	--	--	--	--	--	D	D	D	D	D	D	D	D
SEB Through		A	A	A	A	A	A	A	A	A	A	B	C	B	C	B	C	B	C
SEB Right		A	A	A	A	A	A	A	A	A	A	A	B	A	B	A	B	A	B
NWB Left		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
NWB Through		A	A	A	A	A	A	A	A	A	A	D	B	D	B	D	B	D	B
NWB Right		--	--	--	--	--	--	--	--	--	--	B	B	B	B	B	B	B	B
NEB Left		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
NEB Through/Right		--	--	--	--	--	--	--	--	--	--	D	D	D	D	D	D	D	D
NEB Right		D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
SWB Left		--	--	--	--	--	--	--	--	--	--	D	D	D	D	D	D	D	D
SWB Through/Right		--	--	--	--	--	--	--	--	--	--	D	D	D	D	D	D	D	D
SWB Right		--	--	--	--	--	--	--	--	--	--	D	D	D	D	D	D	D	D
Entire Intersection Delay (sec /veh)		2.8	8.8	3.5	9.4	2.9	9.1	5.0	10.8	4.6	10.5	35.9	29.5	35.9	29.2	36.0	30.2	36.3	29.9
Entire Intersection LOS		A	A	A	A	A	A	A	B	A	B	D	C	D	C	D	C	D	C
<u>Cabela Drive/North Cabela Access</u>	TWSC																		
NWB Approach		--	--	A	A	--	--	A	A	A	A	--	--	--	--	--	--	--	--
NWB Left		--	--	--	--	--	--	--	--	--	--	B	D	B	D	B	D	B	D
NWB Right		--	--	--	--	--	--	--	--	--	--	B	B	B	B	B	C	B	C
SWB Left		--	--	A	A	--	--	A	A	A	A	A	A	A	A	A	A	A	A
Critical Movement Delay (sec/veh)		--	--	8.4	9.0	--	--	8.6	9.2	8.6	9.1	12.7	30.9	12.6	30.2	13.0	33.1	12.9	32.5
<u>Cabela Drive/S. Cabela Access/Site Access</u>	TWSC																		
NWB Left/Through		--	--	--	--	--	--	--	--	--	--	--	--	--	--	A	A	A	A
NWB Right		--	--	--	--	--	--	--	--	--	--	A	A	A	A	--	--	--	--
SEB Approach		--	--	--	--	--	--	A	A	A	A	--	--	--	--	--	--	--	--
SEB Left/Through		--	--	--	--	--	--	--	--	--	--	B	B	--	--	B	C	B	C
SWB Left		--	--	--	--	--	--	--	--	--	--	A	A	A	A	A	A	A	A
Critical Movement Delay (sec/veh)		--	--	--	--	--	--	8.8	8.9	8.7	8.8	11.5	14.8	9.5	9.3	12.0	16.0	11.8	15.5

Table 2
ESTIMATED TRAFFIC GENERATION
Ridgegate Tract GG
Lone Tree, Colorado
(LSC #150900; September, 2015)

Trip Generating Category	Quantity	Trip Generation Rates ⁽¹⁾					Vehicle - Trips Generated				
		Average	AM Peak Hour		PM Peak Hour		Average	AM Peak Hour		PM Peak - Hour	
		Weekday	In	Out	In	Out	Weekday	In	Out	In	Out
Single-Family Residential ⁽²⁾	70 DU ⁽³⁾	9.52	0.188	0.563	0.630	0.370	666	13	39	44	26

Notes:
(1) Source: *Trip Generation*, Institute of Transportation Engineers, 9th Edition, 2012
(2) ITE Land Use No. 210 - Single-Family Detached Housing
(3) DU = Dwelling Unit




 Approximate Scale
 Scale: 1"=1,200'

Figure 1
**Vicinity
 Map**

Ridgegate Tract GG (LSC #150900)

Approximate Scale
Scale: 1"=400'

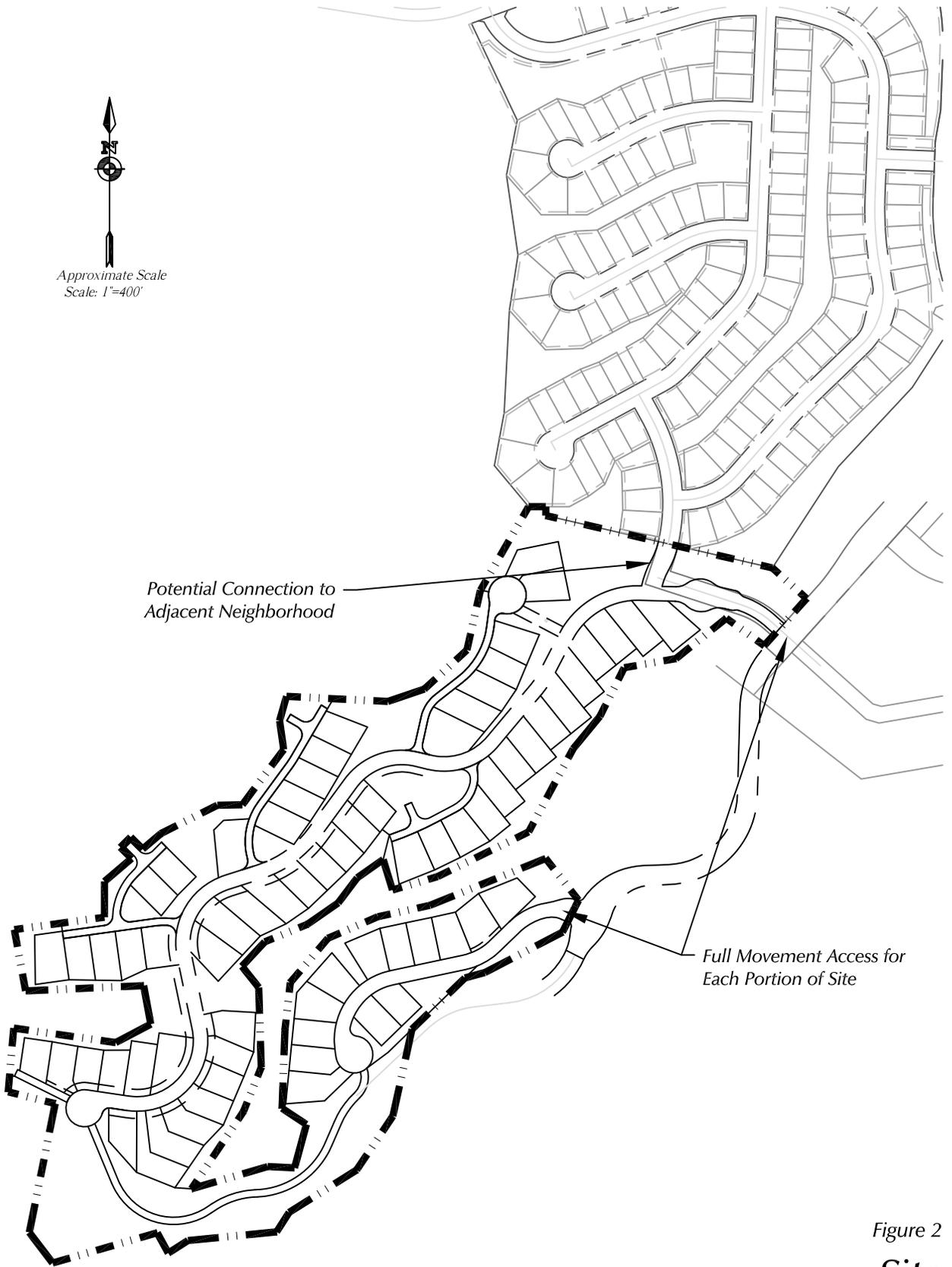
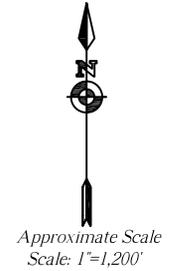


Figure 2
Site Plan

Ridgeway Tract GG (LSC #150900)

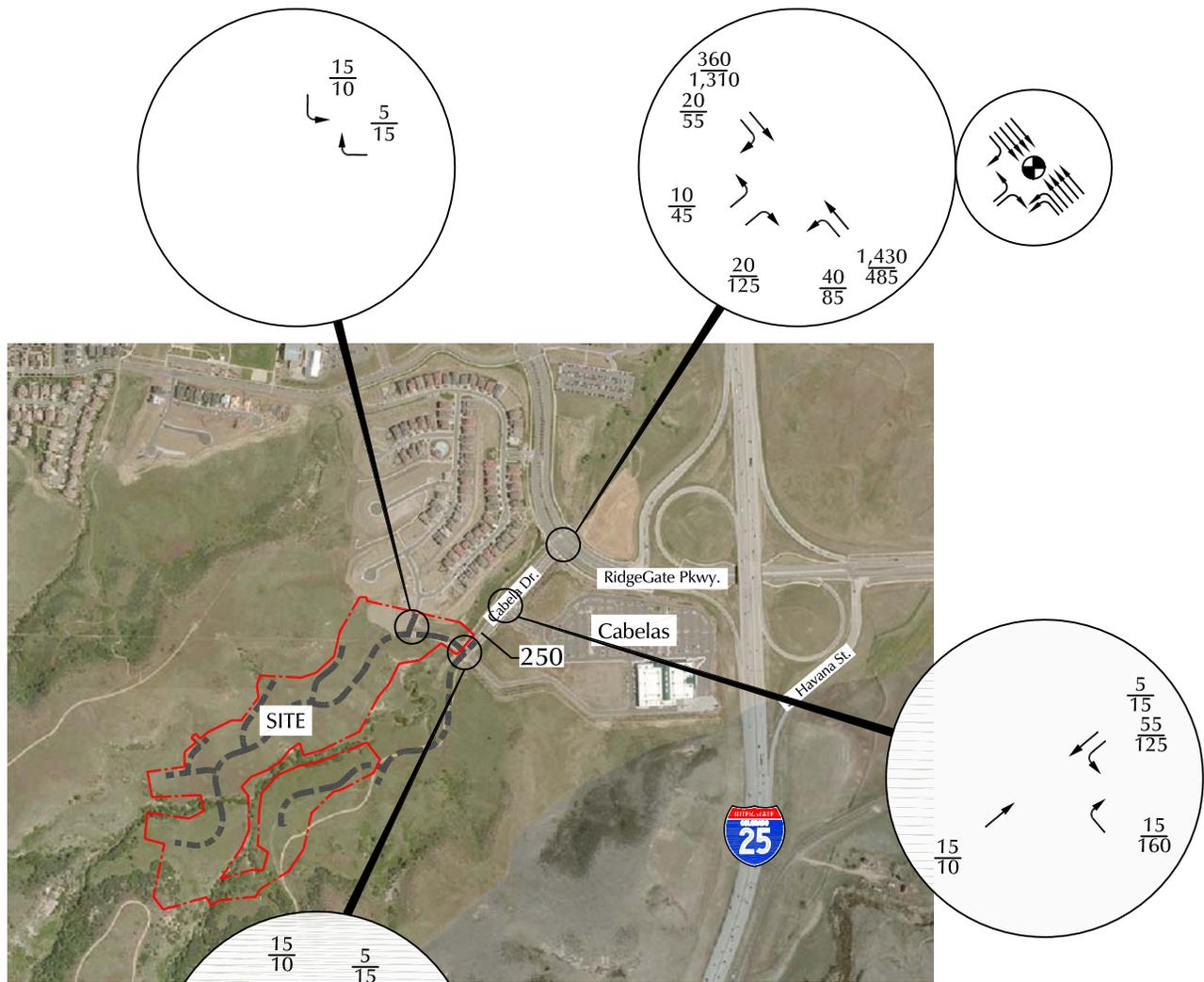




LEGEND:

- = Stop Sign
- = Traffic Signal
- = Speed Limit
- $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic

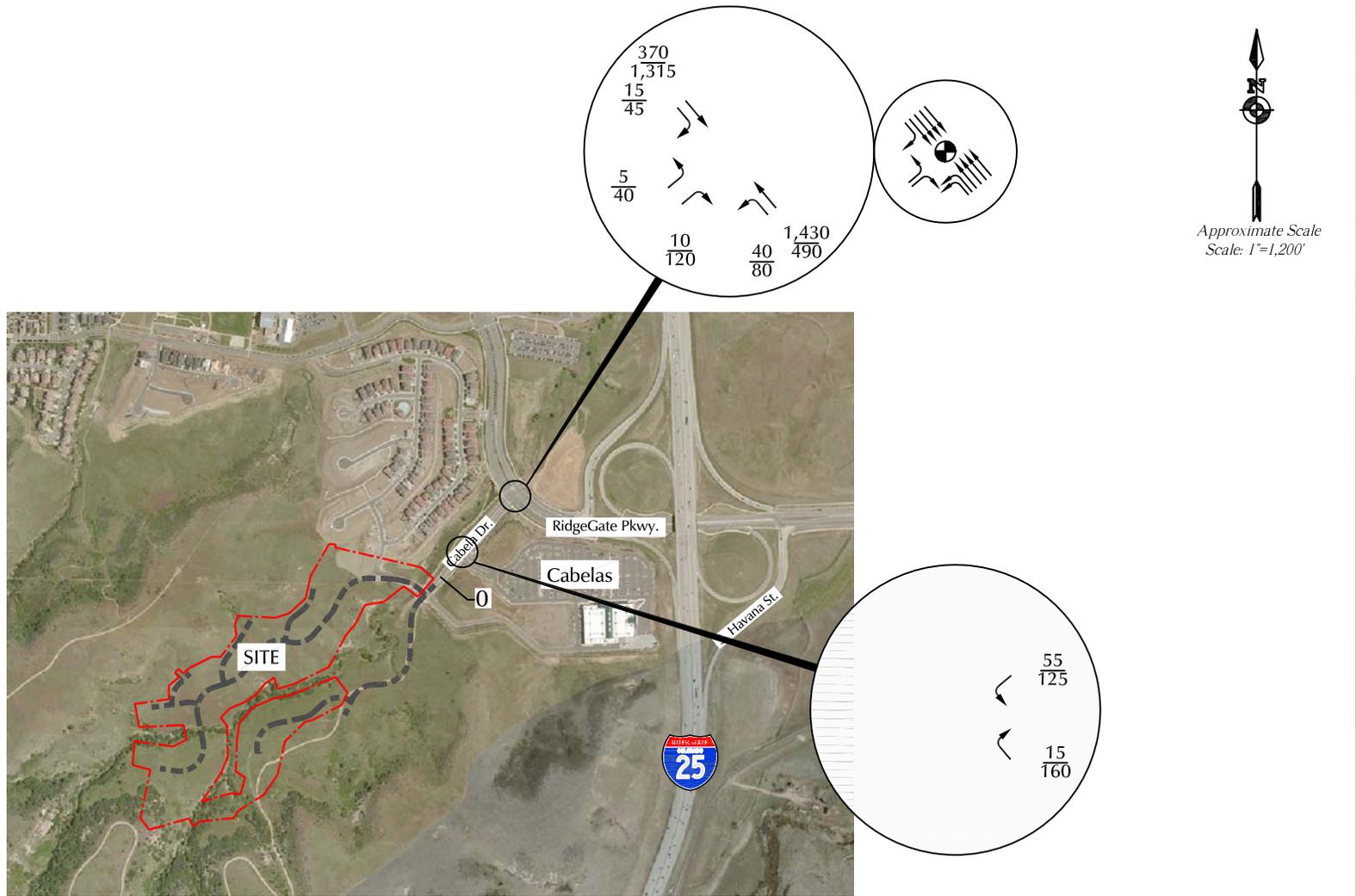
Figure 3
**Existing Traffic, Lane
Geometry and Traffic Control**
Ridgegate Tract GG (LSC #150900)



Approximate Scale
Scale: 1"=1,200'

LEGEND:
 + = Stop Sign
 ⊕ = Traffic Signal
 $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
 2,500 = Average Daily Traffic

Figure 4a
**Year 2017 Background Traffic,
 Lane Geometry and Traffic Control
 with Connection to Adjacent Neighborhood**
 Ridgegate Tract GG (LSC #150900)



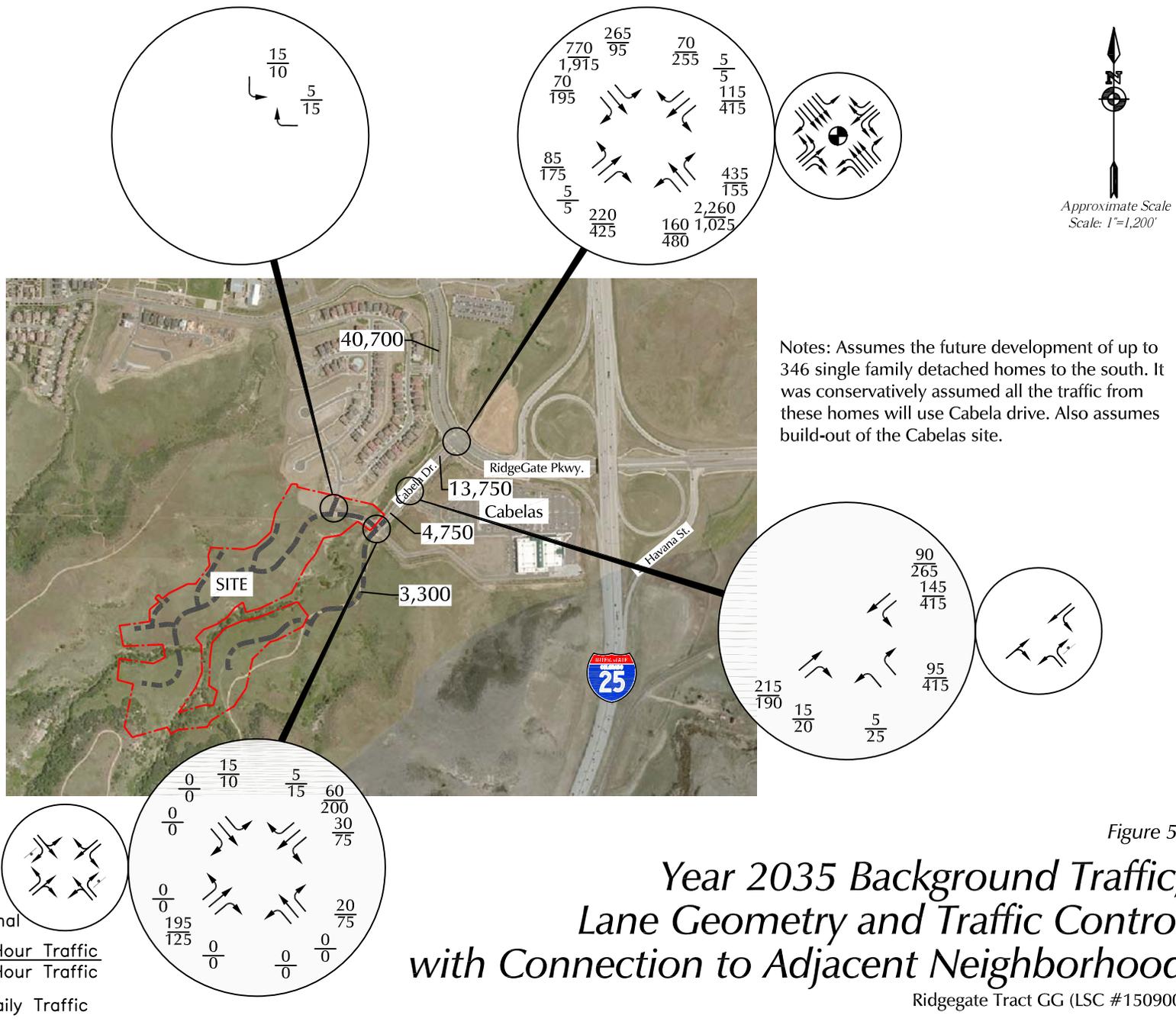
LEGEND:

-  = Stop Sign
-  = Traffic Signal
- $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
- 2,500 = Average Daily Traffic

Figure 4b

*Year 2017 Background Traffic,
Lane Geometry and Traffic Control
without Connection to Adjacent Neighborhood*

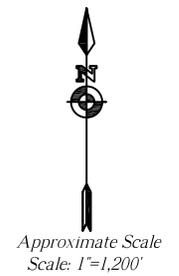
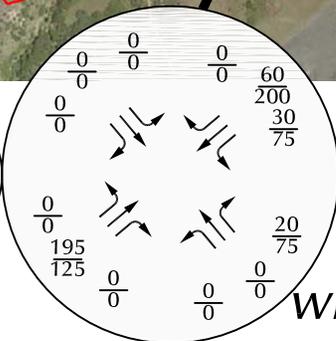
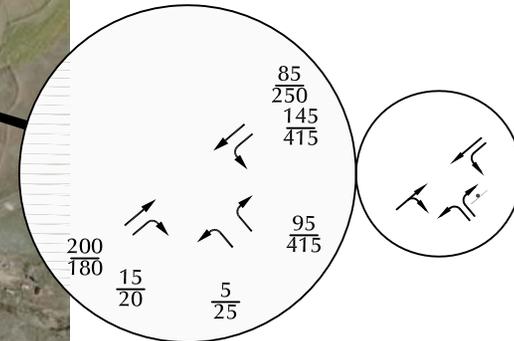
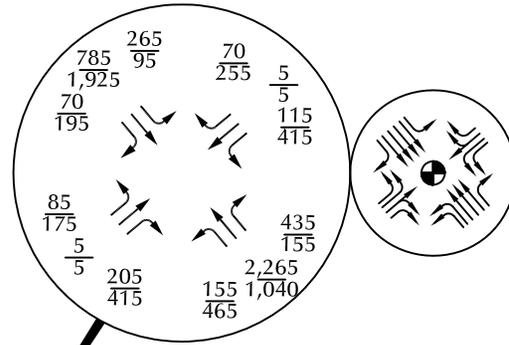
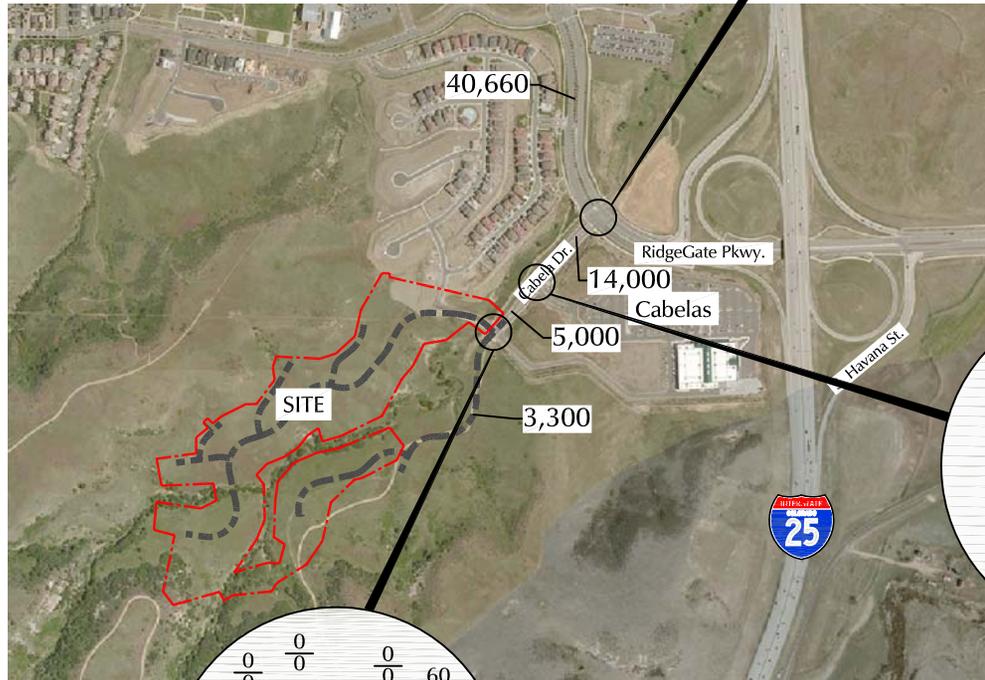
Ridgegate Tract GG (LSC #150900)



LEGEND:

-  = Stop Sign
-  = Traffic Signal
- $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
- 2,500 = Average Daily Traffic

Notes: Assumes the future development of up to 346 single family detached homes to the south. It was conservatively assumed all the traffic from these homes will use Cabela drive.



LEGEND:
 = Stop Sign
 = Traffic Signal
 $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
 2,500 = Average Daily Traffic

Figure 5b
**Year 2035 Background Traffic,
 Lane Geometry and Traffic Control
 without Connection to Adjacent Neighborhood**
 Ridgegate Tract GG (LSC #150900)

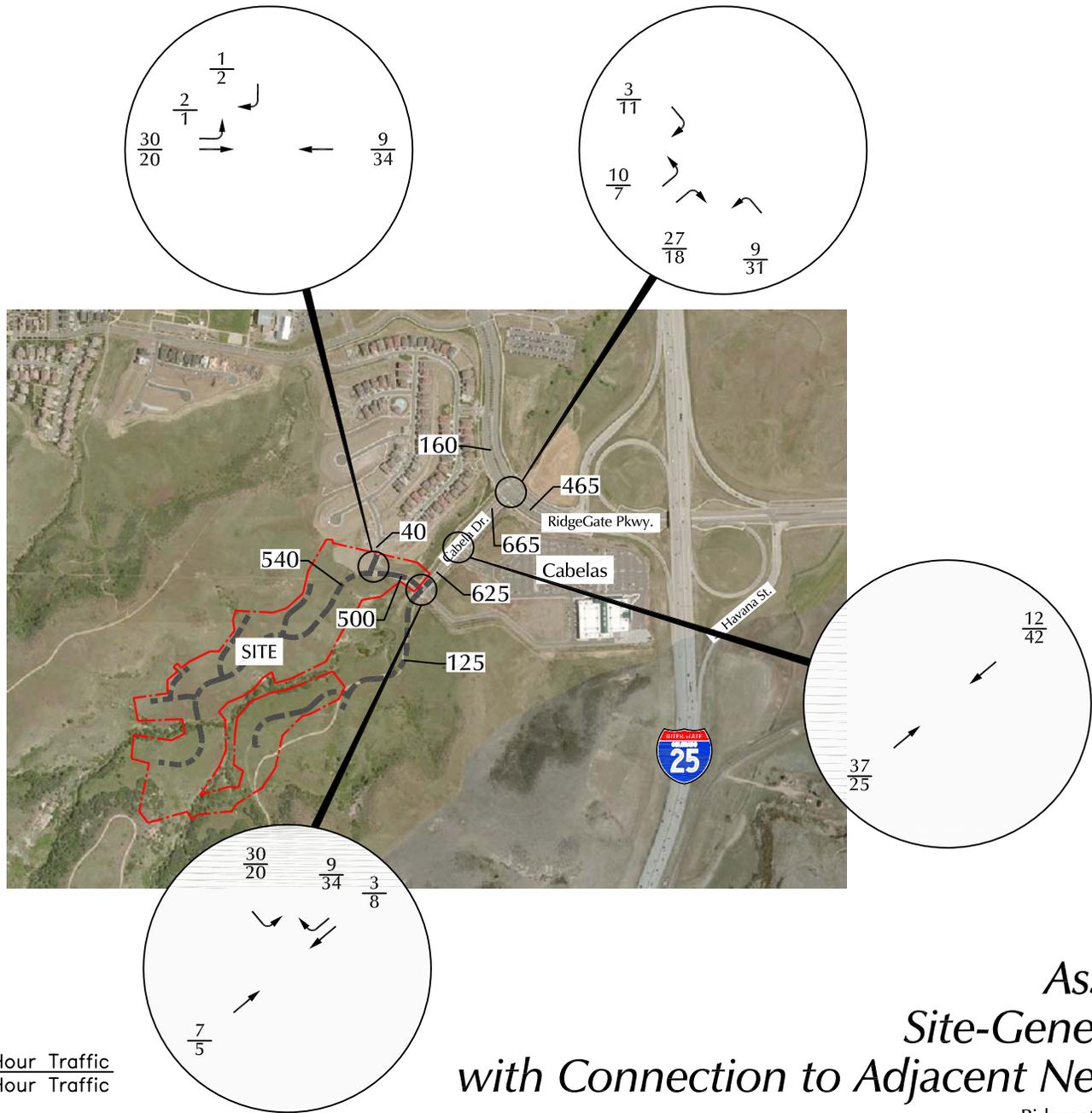


North Arrow
Approximate Scale
Scale: 1"=1,200'

LEGEND:

↔ = Percent Directional Distribution
65%

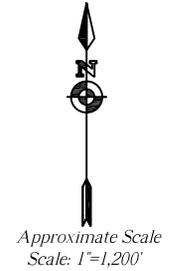
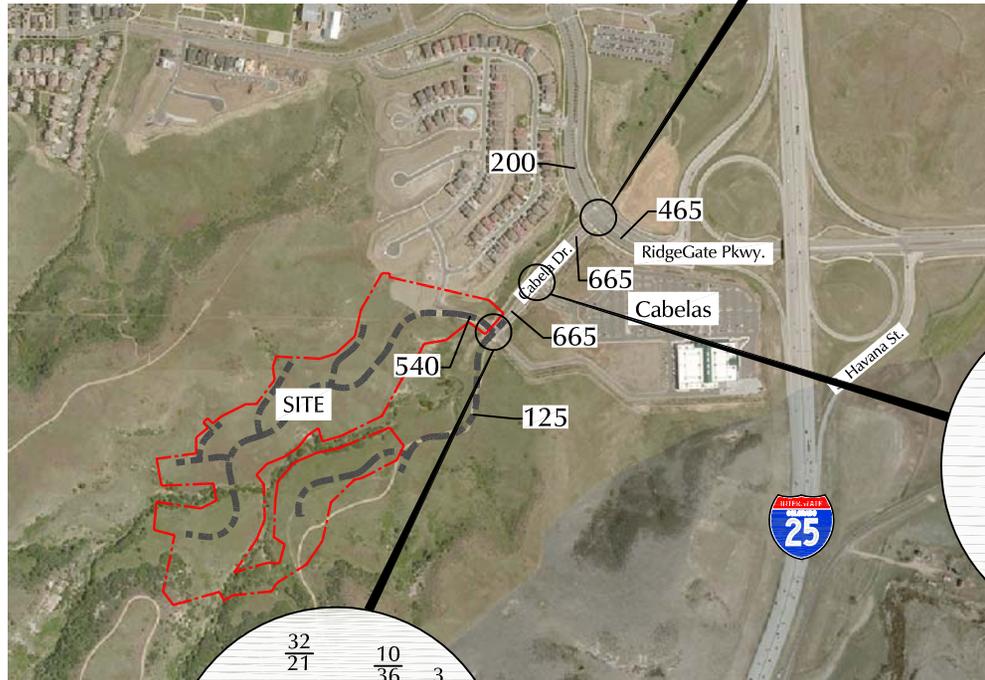
Figure 6
Directional Distribution of Site-Generated Traffic
Ridgegate Tract GG (LSC #150900)



Approximate Scale
Scale: 1"=1,200'

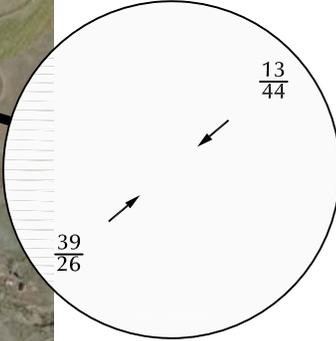
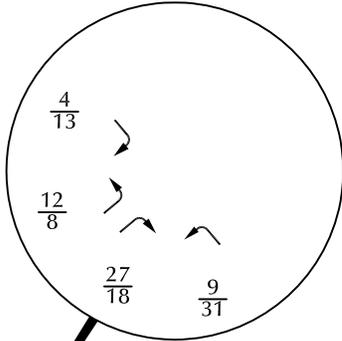
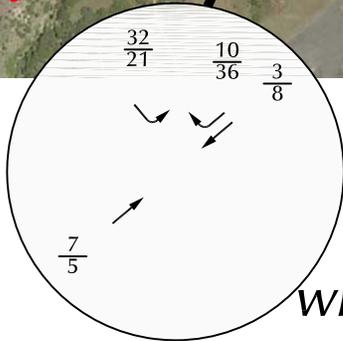
LEGEND:
 $\frac{26}{35}$ = AM Peak Hour Traffic
 PM Peak Hour Traffic
 2,500 = Average Daily Traffic

Figure 7a
Assignment of Site-Generated Traffic with Connection to Adjacent Neighborhood
 Ridgegate Tract GG (LSC #150900)



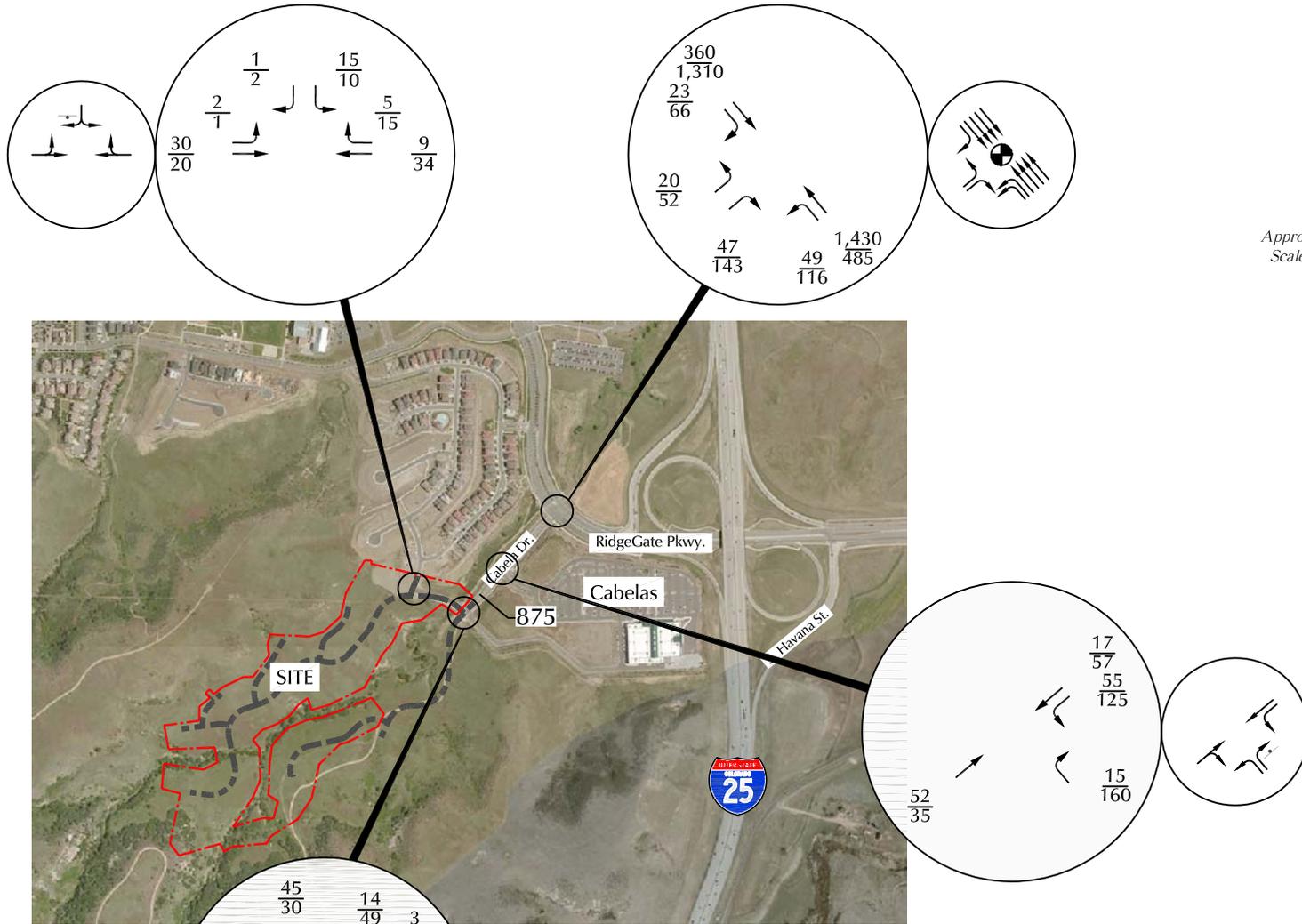
LEGEND:

- $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
- 2,500 = Average Daily Traffic



without Connection to Adjacent Neighborhood

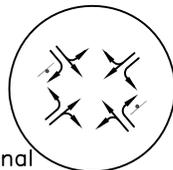
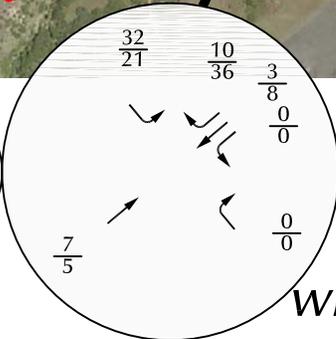
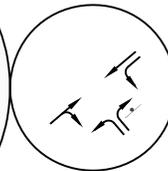
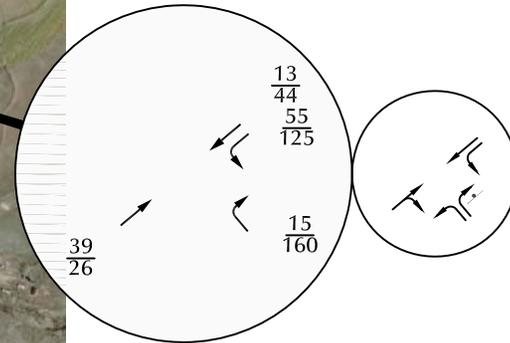
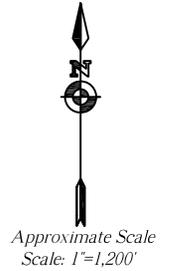
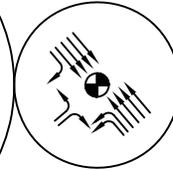
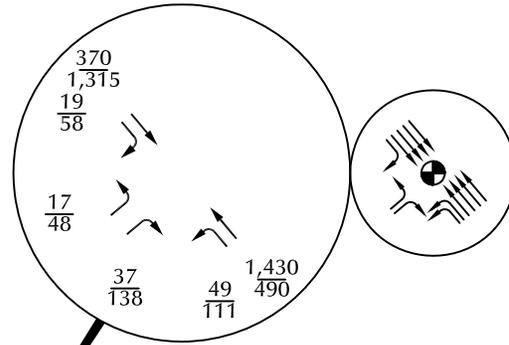
Figure 7b
Assignment of Site-Generated Traffic
 Ridgegate Tract GG (LSC #150900)



Approximate Scale
Scale: 1"=1,200'

LEGEND:
 + = Stop Sign
 ⊕ = Traffic Signal
 $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
 2,500 = Average Daily Traffic

Figure 8a
Year 2017 Total Traffic, Lane Geometry and Traffic Control with Connection to Adjacent Neighborhood
 Ridgegate Tract GG (LSC #150900)

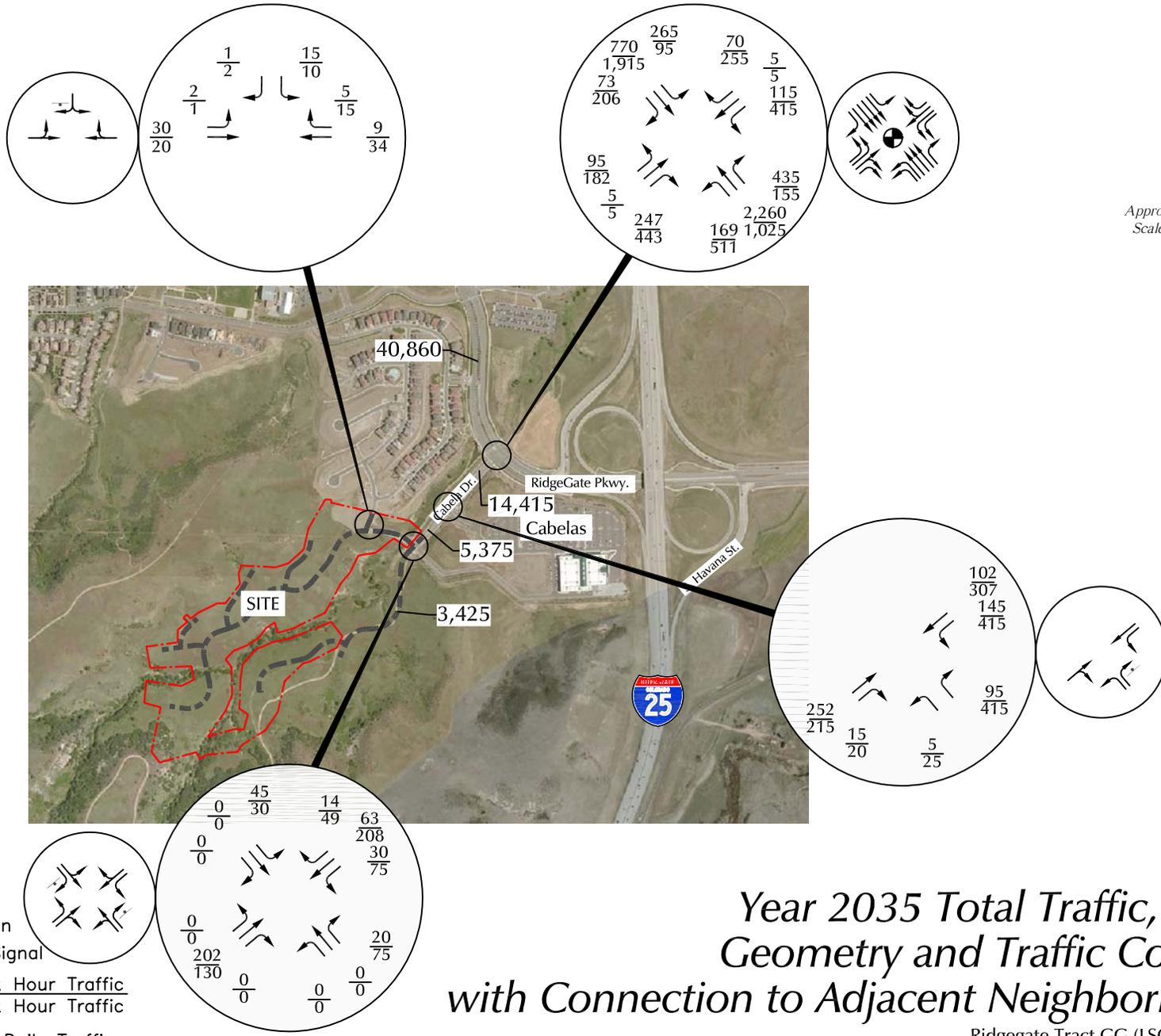


LEGEND:

-  = Stop Sign
-  = Traffic Signal
- $\frac{26}{35}$ = AM Peak Hour Traffic / PM Peak Hour Traffic
- 2,500 = Average Daily Traffic

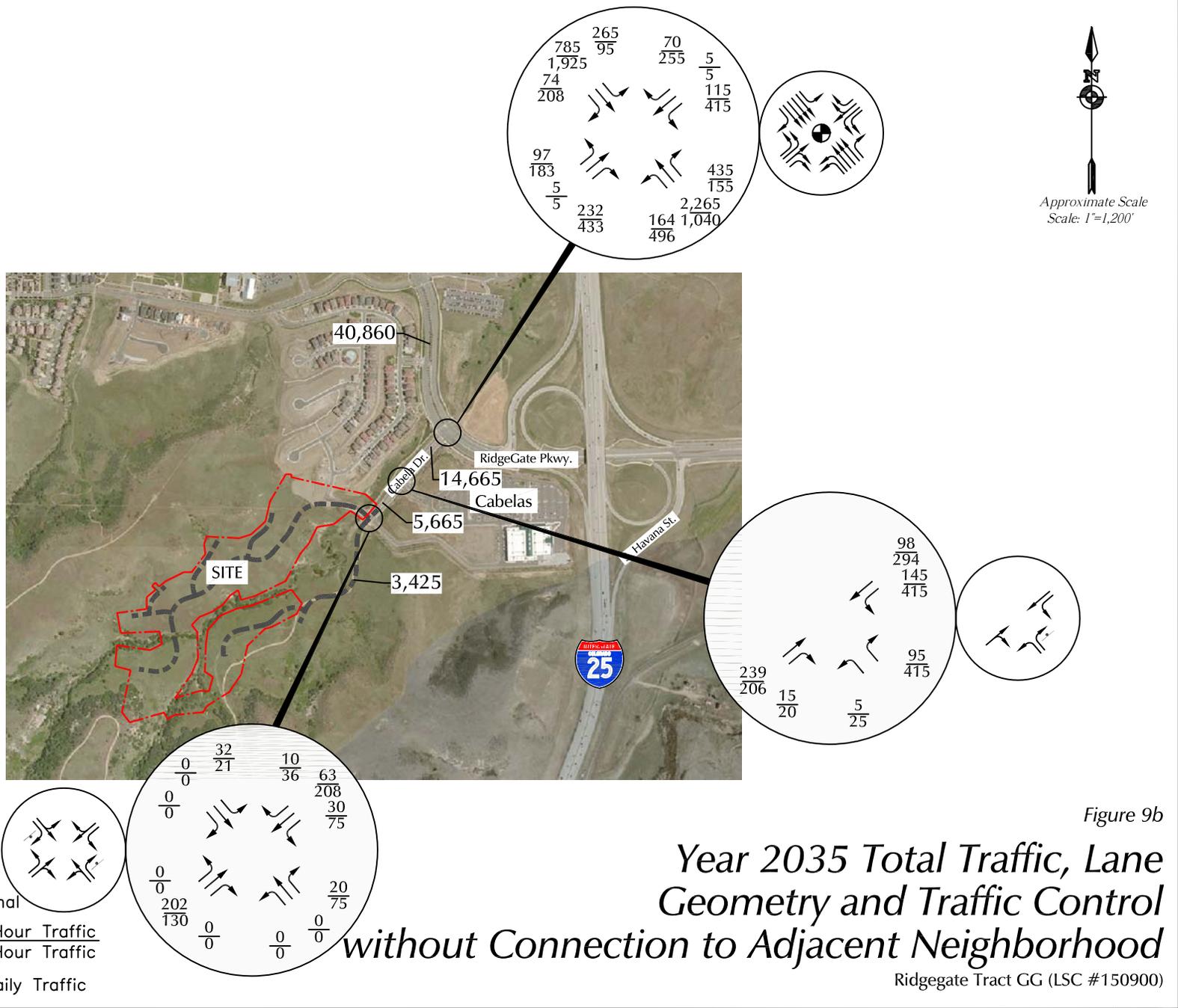
Figure 8b
**Year 2017 Total Traffic, Lane
Geometry and Traffic Control
without Connection to Adjacent Neighborhood**

Ridgegate Tract GG (LSC #150900)



Approximate Scale
Scale: 1"=1,200'

Figure 9a
Year 2035 Total Traffic, Lane Geometry and Traffic Control with Connection to Adjacent Neighborhood
Ridgegate Tract GG (LSC #150900)



Install "No Outlet" sign

ROW to be vacated by City to Montecito HOA -will include 55' easement for public access, utilities and fire lane

Retreat at Ridgegate to provide snow plowing for the vacated ROW

Install "Emergency Access Only" sign

Sidewalk ramp

5' stamped asphalt

10' asphalt

To be owned and maintained by Retreat at Ridgegate HOA along with 55' easement for public access, utilities and fire lane

Sidewalk ramp

Install "Emergency Access Only" sign

WILDFIRE MANAGEMENT PLAN

Ridgegate Tract GG Development Denver, Colorado



September 2015



ANCHORPOINT
WILDLAND FIRE SOLUTIONS

Prepared By:



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Introduction

Statement of Needs

The Ridgeway Tract GG Wildfire Management Plan was created to meet medium and long-range development planning goals, to mitigate the risk of wildfire, to ensure that management activities are ecologically sustainable, and to integrate these directives with social and development preferences. This plan provides specific management recommendations to ensure the sustainability of the development and serve as a management guide for open space.

Project Objectives

The three main objectives of the Ridgeway Tract GG Wildfire Management Plan are to:

- 1) Provide a wildfire mitigation plan for the development.
- 2) Help ensure the support of the South Metro Fire Rescue Authority.
- 3) Provide a tool for current and future residents of Ridgeway Tract GG to understand the complexity of the Ridgeway Tract GG wildfire issue so that they can more effectively manage their property in relation to this ecosystem.

Fire Hazard and Risk Assessment

Current Wildfire Hazard and Risk Overview

For the purposes of this report, the following definitions apply:

Risk is considered to be the likelihood of a wildfire occurrence. This is primarily determined by the fire history of the area.

Hazard is the combination of the wildfire hazard ratings of the Wildland-Urban Interface (WUI) communities and fire behavior potential, as modeled from the fuels, weather and topography of the study area.

The majority of the study area is at low/moderate risk for wildland fires and the majority of the area to be developed is low with some moderate risk in the drainage running southwest-northeast and the southwest corner of the property due to the presence of Gambel Oak shrubs in both areas. The Ridgeway Tract GG development could also be threatened from fires backing down the slopes to the northwest and southeast. Removal of shrubs and keeping the grass mowed in these areas (where possible, on land owned/managed by the development) will largely mitigate this threat.

Mean Fire Return Interval

The Mean Fire Return Interval (MFRI) layer quantifies the average period between fires under the presumed historical fire regime. MFRI is intended to describe one component of historical fire regime characteristics. MFRI is derived from the vegetation and disturbance dynamics

model VDDT (Vegetation Dynamics Development Tool). This geospatial product (from LANDFIRE.gov) should display a reasonable approximation of MFRI.

Almost every terrestrial ecosystem experiences fire eventually. The very idea of a fire regime presupposes that fire is an integral part of ecosystem functioning.

The MFRI of the study area is displayed in **Figure 1**. The grassy areas within the development show the most frequent return interval with the shrub areas showing a longer return interval. The take-away from this assessment is that the frequency of fire could be between 10 and 50 years in or around the development. This map and the one following it refer to the risk situation and these do not describe the type of fire that would be expected, though this is addressed below.

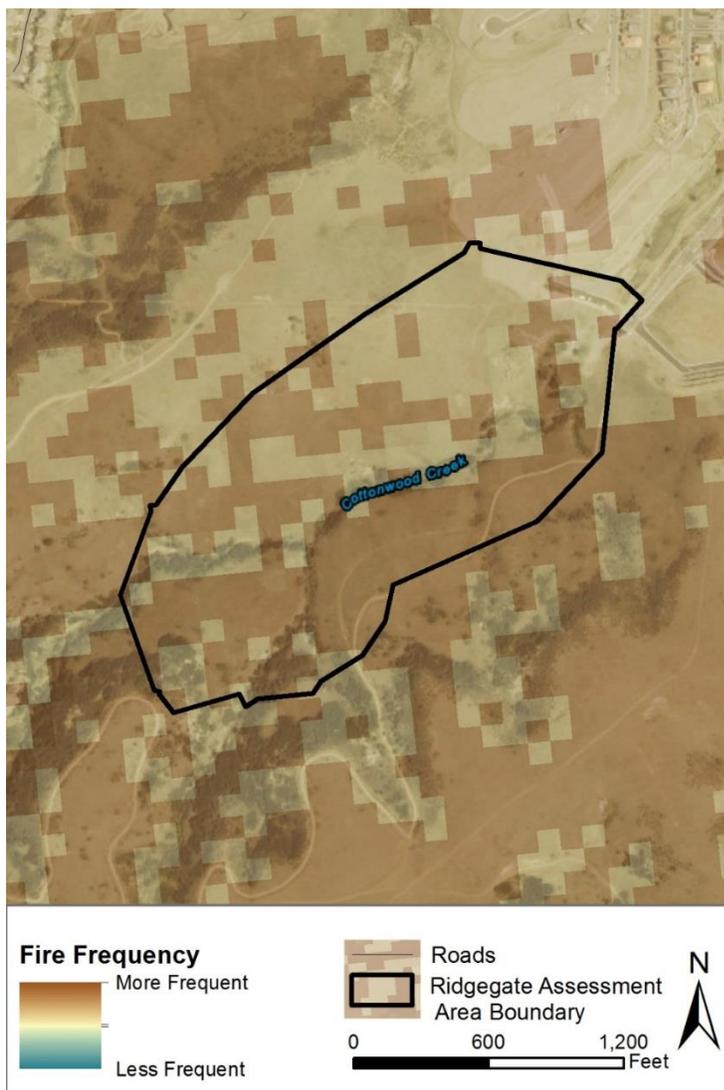
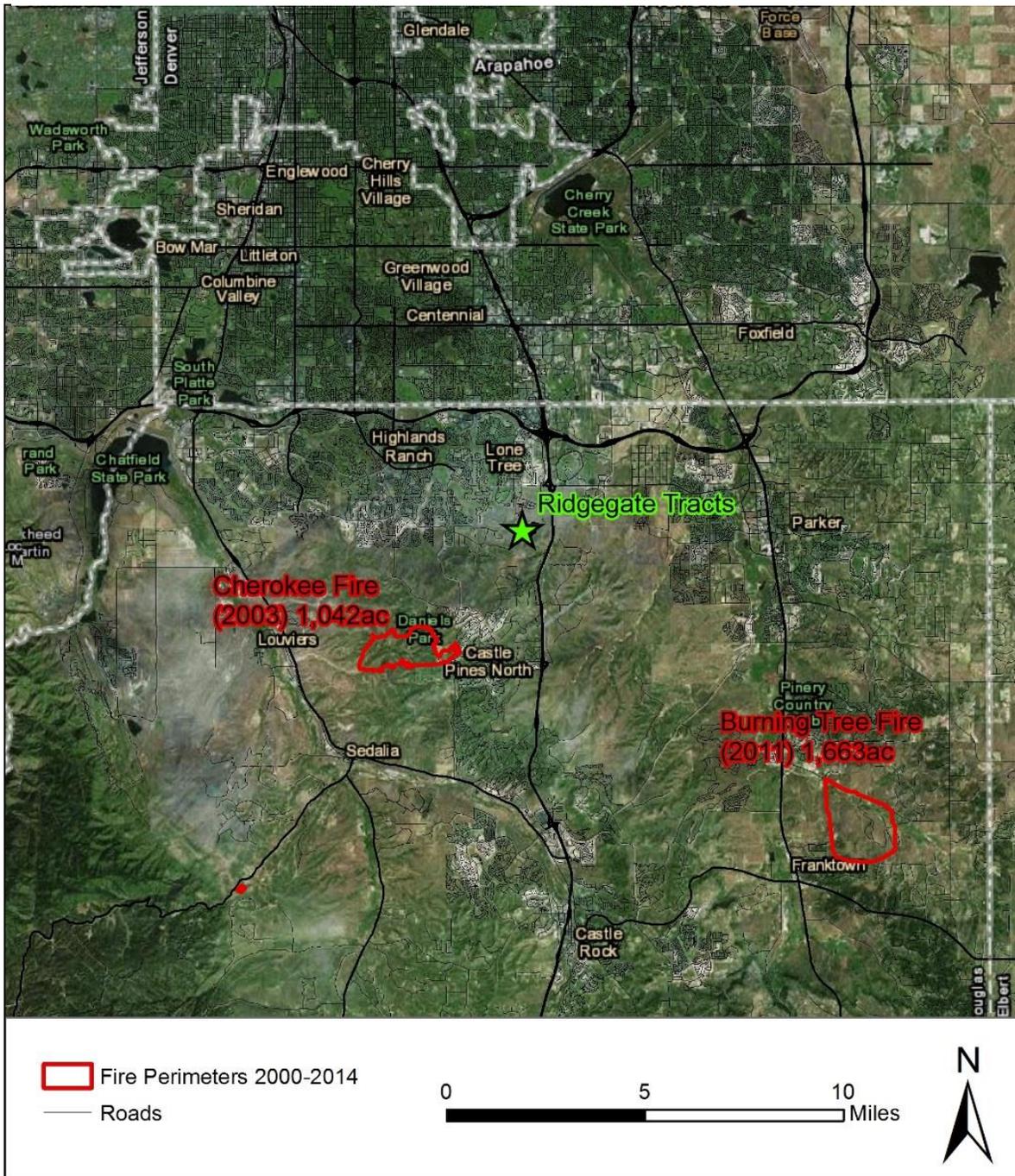


Figure 1 MFRI Map

The MFRI analysis is mainly indicative of what a “natural” return interval for fire would be. It does not include the significant suppression expertise and resources available to the South Metro Fire and Rescue Authority. SMFRA is capable of catching and extinguishing most fires before they get to a size where they will be a threat to structures. This point is supported by the next map, **Figure 2** shows the history of large fires in the roughly 100 mi² area surrounding the development. There have only been two fires of significance since 2000. The Cherokee fire in 2003 burned 1,024 acres, and the Burning Tree fire in 2011 burned 1,663 acres. Though the fuels in this area could burn more often, only two fires in 15 years have burned in the area. This is, in part, due to the effectiveness of the SMFRA in putting out fires before they are large enough to be troublesome.

Figure 2 Historic Fire Map



Fire Behavior Predictions

Fuel Models

Fuel models are general mathematical descriptions that can be used in fire behavior modeling to generate predictions for fire behavior. These fuel models are general enough that they can be applied to any vegetation in the United States but, when used in combination with topography and prevailing weather conditions, they can be used to generate specific predictions for how fires might burn.

Descriptions of the fuel models present in the general area around the development are shown below. There are two kinds of grass (a lower-load and higher-load version) and two shrub-related models. The lower-load (GR1) and higher-load (GR2) grass models are probably scattered throughout the area of the development and surrounding it. The particular model that is more appropriate for each specific site around the development may change in different seasons of the year.

The two shrub models are used to capture Gambel Oak under varying conditions. Gambel Oak is not very receptive to fire under most weather scenarios. In these cases, a fire would primarily be carried by the grass in between the Gambel Oak shrubs. When conditions are dry enough, however, Gambel Oak is capable of producing significant fire behavior. These two situations are reflected in the fire behavior prediction descriptions and graph shown below.

FUEL MODEL 101 (GR1)



Figure 3. Short, Sparse Dry-Climate Grass

General Description

The primary carrier of fire in GR1 is sparse grass, though small amounts of fine dead fuel may be present. The grass in GR1 is generally short, either naturally or by grazing, and may be sparse or discontinuous. The moisture of extinction of GR1 is indicative of a dry climate fuel bed, but GR1 may also be applied in high-extinction moisture fuel beds because in both cases predicted spread rate and flame length are low compared to other GR models.

General Fire Behavior Prediction

Spread rate moderate; flame length low.

FUEL MODEL 102 (GR2)

Figure 4. Moderately Coarse Continuous Grass



Description

The primary carrier of fire in GR2 is grass, though small amounts of fine dead fuel may be present. Load is greater than GR1, and fuel bed may be more continuous. Shrubs, if present, do not affect fire behavior.

General Fire Behavior Prediction

Spread rate high; flame length moderate.

FUEL MODEL 122 (GS2)



Figure 5. Moderate Load, Dry Climate Grass-Shrub (Dynamic)

Description

The primary carrier of fire in GS2 is grass and shrubs combined. All GS fuel models are dynamic, meaning that their live herbaceous fuel load shifts from live to dead as a function of

live herbaceous moisture content. The effect of live herbaceous moisture content on spread rate and intensity is strong and depends on the relative amount of grass and shrub load in the fuel model. Shrubs are 1 to 3 feet high, grass load is moderate.

General Fire Behavior Prediction

Spread rate is high; flame length moderate.

FUEL MODEL 146 (SH6)

Figure 6. Low Load, Humid Climate Shrub



Description

The primary carrier of fire in SH6 is woody shrubs and shrub litter. Dense shrubs; little or no herbaceous fuel; fuel bed depth about 2 feet.

General Fire Behavior Prediction

Spread rate is high; flame length high.

Figure 7. Predicted Flame Length by wind speed and fuel type

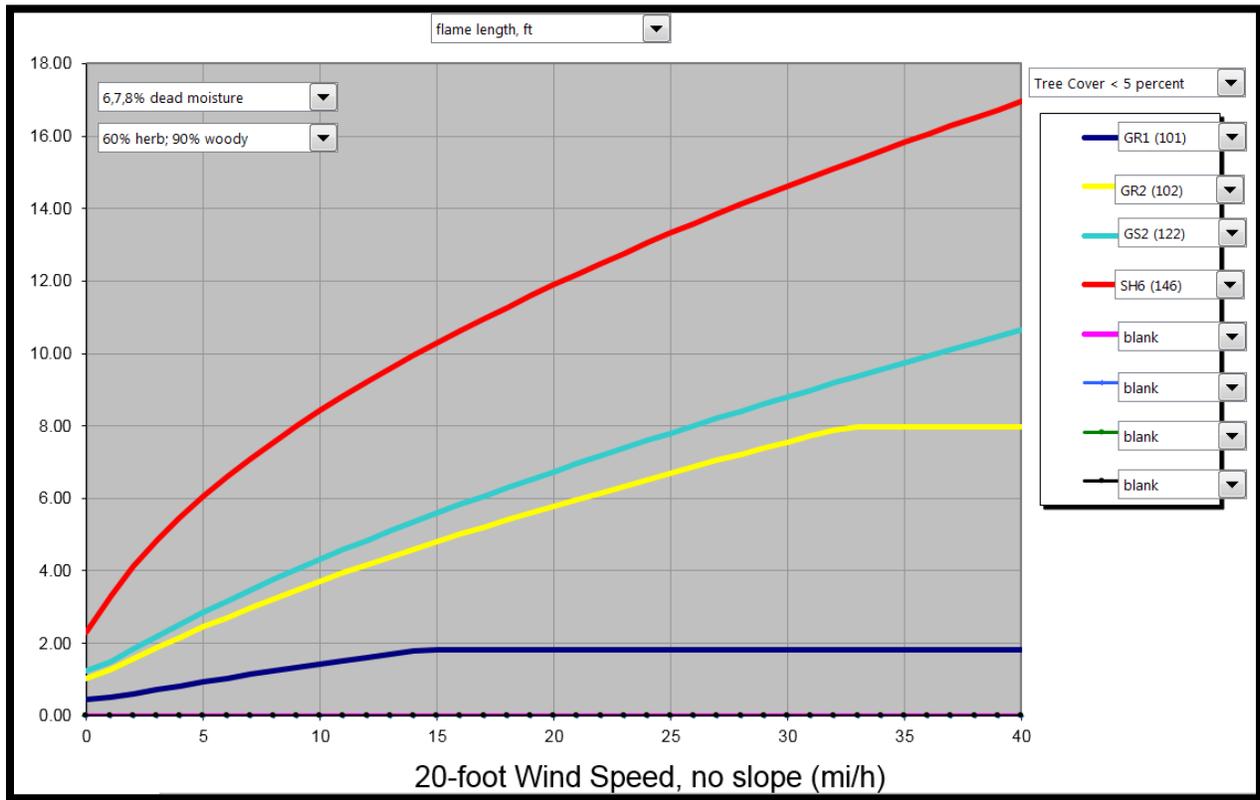


Figure 7. shows a graph of predicted flame length vs. wind speed for the 4 fuel models described above. The lower-load grass (GR1), the grass-shrub model representative of unreceptive Gambel Oak (GS2) and the higher-load grass models all have low to moderate flame lengths. Flame lengths less than 4 feet are the easiest for fire fighters to control and give them the widest options for suppression. The model being used to show receptive Gambel Oak, however, shows much higher flame lengths, especially even with a relatively minimal wind speed. When Gambel Oak is receptive, it would likely generate flame lengths that would make suppression more difficult and be likely to generate embers that can impact homes much farther away than the flames could reach. This type of fire is to be avoided.

Figure 8. Predicted Rate of Spread by wind speed and fuel type

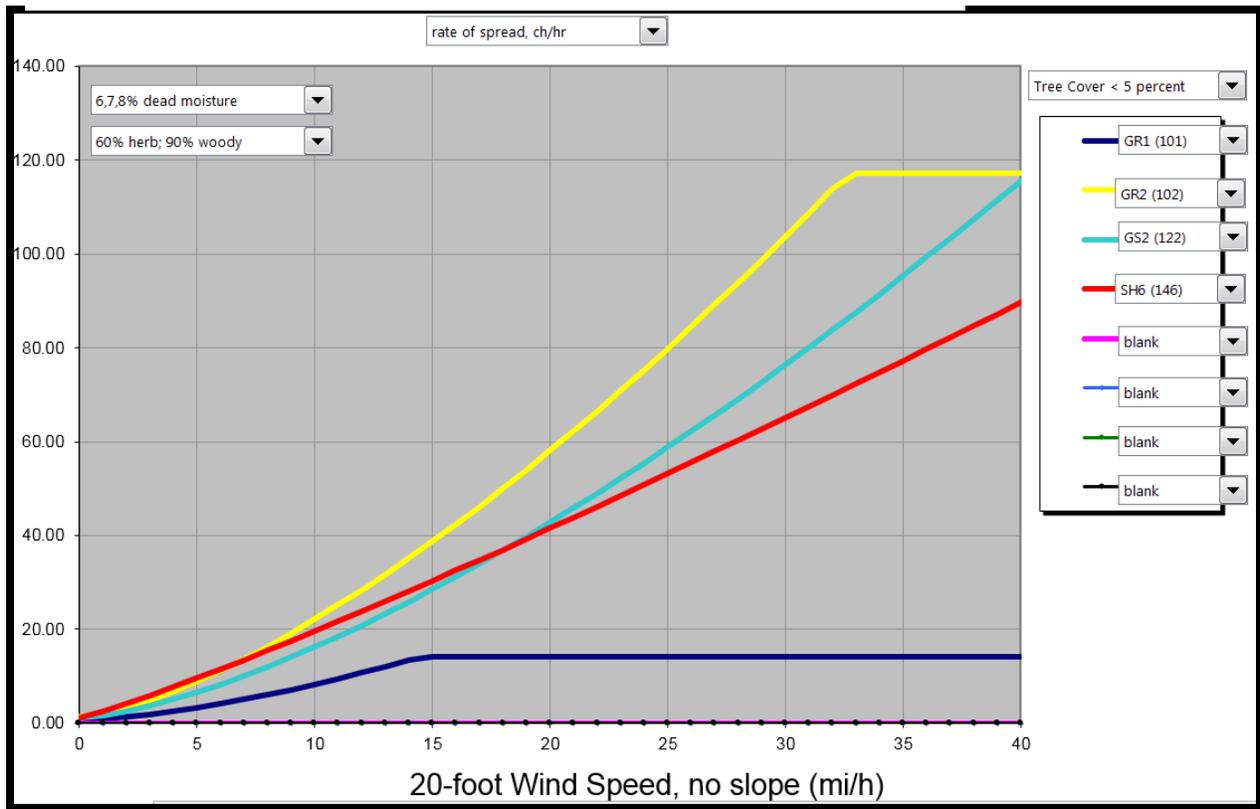
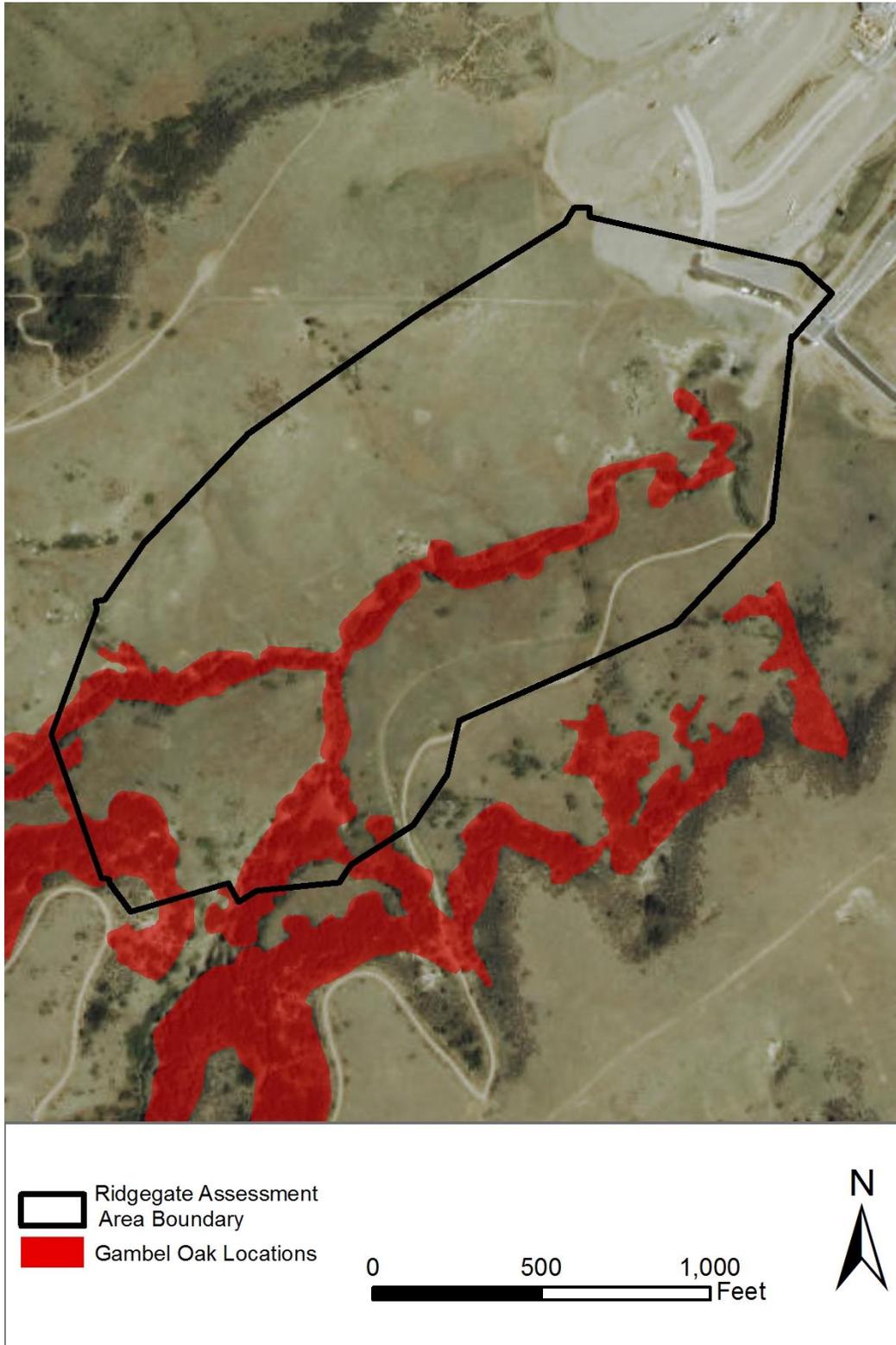


Figure 8. shows a graph of the relationship between rate of spread of the flaming front of a fire vs. wind speed. The units, chains per hour, are mainly used by foresters and fire fighters. 1 chain per hour is roughly equivalent to 1 foot per minute. As can be seen in this graph, even the fuel models from the previous graph that had lower flame length predictions can still move relatively quickly, especially with high winds on them. Of note is the fact that SH6, the receptive Gambel Oak model, can move relatively quickly AND has higher flame lengths. This is further reason to avoid fires in Gambel Oak when it receptive.

Figure 9. shows the locations on and near the development where Gambel Oak exists and where mitigation should be considered.

Figure 9. Areas of Gambel Oak



Wildfire Mitigation Recommendations

The overall wildfire risk of the community is considered moderate. Areas containing Gambel Oak are considered high risk. The following recommendations should be utilized to minimize the impact of a wildfire to the community.

- 1) Mitigate the risk of severe, uncontrollable wildfires by managing grass fuel through mowing, adjacent to fencing and by thinning and low-limbing in Gambel Oak stands.
 - Remove all dead and dying plants and or limbs from the Gambel Oak stands.
- 2) Communicate with SMFRA to be alerted when conditions are such that Gambel Oak becomes receptive to burning.
- 3) Utilize only SMFRA Firewise plant list species for foundation plantings and landscaping.
- 4) Install non-wood, Class B or better roofs.
- 5) Restrict wood fencing.
- 6) Do not allow yard clippings and yard waste to be dumped on open space land.
- 7) Maintain a three (3) foot non-combustible perimeter around the base of all structures and under all below roofline projections, including decks.
- 8) Utilize the retaining wall adjacent to the interior Gambel Oak stand as a fuel break to back yards.

Appendix A

Structure Protection Guidelines

All construction should utilize Class “A” roof coverings. This construction technique, in combination with fuels reduction on both the landscape and home-site level, should create a condition where developed property would have a low to moderate impact from a moderate intensity wildfire. Additionally, other improvements could be made to further ensure protection from fire. Some of these elements are detailed in these fact sheets from the Colorado State Forest Service:

- 6.302, [*Creating Wildfire-Defensible Zones*](#);
- 6.303, [*Fire-Resistant Landscaping*](#);
- 6.305, [*FireWise Plant Materials*](#); and
- 6.306, [*Grass Seed Mixes to Reduce Wildfire Hazard*](#).

The elements of the above referenced fact sheets are not requirements or specific recommendations Ridgegate Tract GG, but merely additional referenced materials.

Below is a typical maintenance checklist for to consider. Do not wait until a fire is approaching to perform these tasks. These should be done as conditions dictate, several times a year.

- Thin tree and brush cover**
- Dispose of slash and debris left from thinning**
- Remove dead limbs and other litter**
- Maintain an irrigated greenbelt if possible, mow dry grasses and weeds regularly around structures**
- Rake debris away from corners and culverts where they may accumulate**
- Prune branches 8 to 10 feet above the ground**
- Reduce forest density surrounding structures**
- Keep flammable materials away from vegetation**

Appendix B

Fire Behavior Analysis Methodology

Purpose

The purpose of this appendix is to describe the methodology used to evaluate the threat represented by physical hazards, such as fuels, weather and topography, to values-at-risk in the study area by modeling their effects on fire behavior potential.

Fuel Models

Fuel models are a set of numbers that describe fuels in terms that a fire behavior model can use. There are seven characteristics that are used to categorize fuel models:

- Fuel Loading
- Size and Shape
- Compactness
- Horizontal Continuity
- Vertical Arrangement
- Moisture Content
- Chemical Content

Fire Behavior Model Description

The fire behavior potential analysis represents a relative ranking of locations based upon fire behavior predicted by the model. The model inputs include aspect, slope, elevation, canopy cover, fuel type, canopy bulk density, canopy base height and stand height. The model outputs are determined using **FlamMap**¹ which combines surface fire predictions with the potential for crown fire development. Calculations for surface fire predictions (rate of spread and flame length) are based on the USDA Forest Service's **BEHAVE**² model.

¹ Mark Finney, Stuart Brittain and Rob Seli., The Joint Fire Sciences Program of the Rocky Mountain Research Station (USDA Forest Service, Missoula, Montana), the Bureau of Land Management and Systems for Environmental Management (Missoula, Montana).

² Patricia L. Andrews, producer and designer, Collin D. Bevins, programmer and designer., The Joint Fire Sciences Program of the Rocky Mountain Research Station (USDA Forest Service, Missoula, Montana) and Systems for Environmental Management (Missoula, Montana).

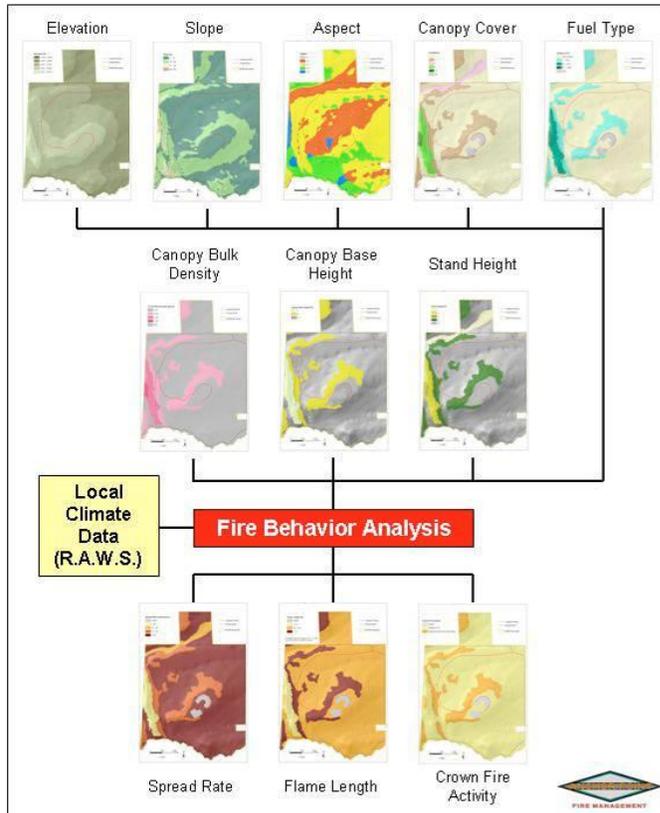


Figure 10 Fire Behavior Flow Chart

Fire Behavior Software

The **BEHAVE** fire behavior prediction and fuel modeling system was utilized to determine surface fire behavior estimates for this study. **BEHAVE** is a nationally-recognized set of calculations used to estimate a surface fire's intensity and rate of spread given certain conditions of topography, fuels and weather. The **BEHAVE** modeling system has been used for a variety of applications including prediction of an ongoing fire, prescribed fire planning, fuel hazard assessment, initial attack dispatch and fire prevention planning and training. Predictions of wildland fire behavior are made for a single point in time and space given simple user-defined fuels, weather and topography. Requested values depend on the modeling choices made by the user.

Assumptions of **BEHAVE**:

- Fire is predicted at the flaming front
- Fire is free burning
- Behavior is heavily weighted towards the fine fuels
- Continuous and uniform fuels
- Surface fires

FlamMap

Anchor Point uses **FlamMap** to evaluate the potential fire conditions in the study area. The study area is broken down into 10-meter grids. Using existing vector and raster spatial data and field data, **ArcGIS** spatial analysis capabilities are utilized to calculate model inputs for each 10m grid cell. These values are input into **FlamMap**, along with reference weather and fuel moisture. The outputs of **FlamMap** include the estimated Rate of Spread (ROS), Flame Length (FL) and Crown Fire Activity for a fire in each 10m grid cell. The model computes these values for each grid cell in the study area.

This evaluation is a prediction of likely fire behavior given a standardized set of conditions and a single point source ignition at every point. It does not consider cumulative impacts of increased fire intensity over time and space. The model does not calculate the probability that a wildfire will occur. It assumes an ignition occurrence for every grid cell (a 10m x 10m area).

Weather conditions are extremely variable and not all combinations are accounted for. These outputs are best used for pre-planning and not as a stand-alone product for tactical planning. It is recommended that whenever possible, fire behavior calculations be done with actual weather observations during the fire. It is also recommended that the most current Energy Release Component (ERC) values be calculated and distributed during the fire season to be used as a guideline for fire behavior potential.

Fuel moisture inputs used in the modeling:

1 Hour Fuel Moisture = 3.58

10 Hour Fuel Moisture = 5.14

100 Hour Fuel Moisture = 9.49

Herbaceous Fuel Moisture = 34.92

Woody Fuel Moisture = 87.06

20' Wind Speed = 9.65

1000 Hour Fuel Moisture = 12.96

Appendix C

Fire Wise Plant Materials

Quick Facts

FireWise landscaping can be aesthetically pleasing while reducing potential wildfire fuel. Plant choice, spacing and maintenance are critical. Your landscape, and the plants in it, must be maintained to retain their FireWise properties. F.C. Dennis³ -- no. 6.305

Creating a "defensible space" around your home is one of the most important and effective steps you can take to protect you, your family and your home from catastrophic wildfire. Defensible space is the area between a structure and an oncoming wildfire where nearby vegetation has been modified to reduce a wildfire's intensity. (See fact sheet [6.302, *Creating Wildfire-Defensible Zones.*](#))

Many people resist creating defensible space around their homes because they believe these areas will be unattractive and unnatural. This is far from true. With careful planning, FireWise landscaping can be aesthetically pleasing while reducing potential wildfire fuel. It can actually enhance beauty and property values, as well as personal safety.

Fire Resistance

Many native plants are highly flammable during different seasons of the year. At such times, left unmanaged, they can accelerate the spread of a wildfire through your neighborhood, threatening homes, property and lives.

All vegetation, naturally occurring and otherwise, is potential fuel for fire. Its type, amount and arrangement has a dramatic effect on fire behavior. There are no truly "fireproof" plant species, so plant choice, spacing and maintenance are critical to defensible space landscaping. In fact, **where** and **how** you plant may be more important than **what** you plant. However, given alternatives, choose plant species that tend to be more resistant to wildfire.

General concepts to keep in mind when choosing and planting FireWise species are:

A plant's moisture content is the single most important factor governing its volatility. (However, resin content and other factors in some species render them flammable even when the plant is well-watered.) Conifers tend to be flammable due to their oil and pitch content, regardless of their water content.

Deciduous plants tend to be more fire resistant because their leaves have higher moisture content and their basic chemistry is less flammable. Also, when deciduous trees are dormant, there is less fuel to carry fire through their canopies.

In some cases, there is a strong correlation between drought tolerance and fire resistance. For example, a plant may shed its leaves or needles during extreme drought. Other drought-tolerant

³ Wildfire Hazard Mitigation Coordinator, Colorado State Forest Service. 10/99. Reviewed 1/06.

species may have smaller leaves or thick, succulent leaves. These plants offer less fuel or have a higher moisture content, both of which help reduce fire hazard.

There also appears to be a correlation between a plant's salt tolerance and natural fire resistance. Plants adapted to salty conditions, and actually growing in salty situations, may better resist burning.

Conifers

In Colorado, conifers make up much of our natural forest. Because of their high resin content, they are more susceptible to fire. Even though conifers are flammable, you do not need to remove all of them from around your home. Wildfire hazards usually can be effectively reduced through proper thinning and pruning of existing trees and shrubs.

When choosing conifers for your defensible space, consider those with characteristics that make them better able to survive fire:

- Thick bark
- Long needles
- Self-pruning. (Self-pruning trees lose lower branches naturally, leaving a greater distance between ground and canopy.)

Plants for a FireWise Landscape

Plants that are more resistant to wildfire have one or more of the following characteristics:

- They grow without accumulating large amounts of combustible dead branches, needles or leaves (example: aspen).
- They have open, loose branches with a low volume of total vegetation (examples: currant and mountain mahogany).
- They have low sap or resin content (examples: many deciduous species).
- They have high moisture content (examples: succulents and some herbaceous species).
- They grow slowly and need little maintenance (do not need frequent pruning).
- They are short and grow close to the ground (examples: wildflowers and groundcovers).
- They can re-sprout following fire, thus reducing re-landscaping costs (example: aspen).

Additional FireWise Guidelines

Some additional tips to follow when planning a FireWise landscape include:

- Landscape according to the recommended defensible-space zones. The plants nearest your home should be more widely spaced and smaller than those farther away.
- Plant in small, irregular clusters and islands, not in large masses.
- Break up the continuity of the vegetation (fuel) with decorative rock, gravel and stepping stone pathways. This will help modify fire behavior and slow its spread across your property.
- Plant a variety of types and species. Besides being aesthetically pleasing, this will help

ensure a healthier forest by reducing insects and diseases. Healthy, vigorous, thinned forests can better resist catastrophic fires than unhealthy ones with insect and disease problems.

- In the event of drought and water rationing, prioritize the plants you wish to save. Provide supplemental water to those nearest your home, perhaps using "gray water."
- Mulch to conserve moisture and reduce weed growth. Mulch can be organic (wood chips or small bark pieces) or inorganic (gravel or rock). Avoid pine bark, thick layers of pine needles or other materials that can easily carry fire.

Don't Forget Maintenance

A landscape is a dynamic, constantly-changing system. Plants considered "fire resistant" and that have low fuel volumes can lose these characteristics over time. Your landscape, and the plants in it, must be maintained to retain their FireWise properties.

Be aware of the growth habits of the plants on your land and of the changes that occur seasonally. Keep a watchful eye for the need to reduce fuel volumes and fuel continuity.

- Remove annual, herbaceous plants after they have gone to seed or when the stems become overly dry.
- Rake up and dispose of litter as it builds up over the season.
- Mow or trim grasses to a low height within your defensible space. This is especially important as they begin to cure and dry.
- Remove plant parts damaged by snow, wind, frost or other agents.
- Timely pruning is critical. It not only reduces fuel volume but also maintains healthier plants with more succulent, vigorous growth.

Wildfire Mitigation Resources

Numerous reference publications can be found at csfs.colostate.edu/pages/wildfire.html:

Additional information can be found at www.firewise.org

FireWise Plant List

The following list was prepared by Phil Hoefer, Colorado State Forest Service. It was reviewed by Jim Knopf, a landscape architect in Boulder, and two landscape architects. Bloom time is approximate (observed in Boulder at 5,600 feet).

Scientific Name	Common Name	Approx. Water Needs	Sun/ Shade Preference	Approx. Mature Height	Elevation (1,000 ft.)					Approx. Bloom Month
					5	6	7	8	9	
Key: Water needs: VL = very low L = low M = medium H = high Sun/Shade: S = sun PS = part sun Sh = shade Elevation: Y = Yes N = No ? = Questionable or unknown										
Flowers and Ground Covers										
<i>Achillea lanulosa</i> ^a	Native yarrow	L-H	S/PS	1.5 - 2'	Y	Y	Y	Y	Y	Jul
<i>Achillea tomentosa</i> ^b	Woolly yarrow	M-H	S/PS	.5'	Y	Y	N	N	N	Jul
<i>Aconitum</i> spp. ^c	Monkshood	M-H	S	2'	Y	Y	Y	Y	Y	Jun-Jul
<i>Aconitum columbianum</i> ^{ac}	Columbian monkshood	M-H	S	2'	Y	Y	Y	Y	Y	Jun-Jul
<i>Ajuga reptans</i> ^b	Bugleweed	H	Sh	< .5'	Y	Y	Y	Y	Y	Jun-Jul
<i>Alchemilla</i> sp.	Ladys mantle	M-H	PS/Sh	1'	Y	Y	Y	Y	?	Jun-Jul
<i>Allium cernuum</i> ^{ac}	Nodding onion	L-H	S/PS	1'	Y	Y	Y	Y	Y	Jun
<i>Allium geayeri</i> ^{ac}	Geyer onion	L-H	S/PS	1'	Y	Y	Y	Y	?	Jun
<i>Anaphalis margaritacea</i> ^a	Pearly everlasting	L-H	S	1.5 - 2.5'	Y	Y	Y	Y	?	Aug
<i>Anemone blanda</i>	Windflower	M-H	S/PS	1'	Y	Y	Y	Y	?	Apr-May
<i>Antennaria parvifolia</i> ^{ab}	Small-leaf pussytoes	M	S/PS	<.5'	Y	Y	Y	Y	Y	Jun
<i>Antennaria rosea</i> ^{ab}	Rosy pussytoes	M	S/PS	<.5'	Y	Y	Y	Y	Y	Jun
<i>Aquilegia</i> spp.	Columbine	M-H	S/PS	1 - 2'	Y	Y	Y	Y	Y	Jun-Jul
<i>Aquilegia coerulea</i> ^a	Colorado blue columbine	M-H	S/PS	1 - 2'	Y	Y	Y	Y	Y	Jun-Jul
<i>Aquilegia chrysantha</i> ^a	Yellow columbine	M-H	S/PS	1 - 2'	Y	Y	Y	Y	Y	Jun-Aug
<i>Arabis</i> sp. ^b	Rockcress	L-H	S	< 1'	Y	Y	Y	Y	Y	May-Jun
<i>Armeria maritima</i>	Sea thrift	L-H	S/PS	.5'	Y	Y	Y	Y	Y	Apr-Jun
<i>Artemisia caucasica</i>	Caucasian sage	L-M	S/PS	1 - 2'	Y	Y	Y	?	?	n/a
<i>Artemisia frigida</i> ^{ac}	Fringed sage	L-M	S	1 - 1.5'	Y	Y	Y	Y	Y	n/a
<i>Artemisia ludoviciana</i> ^a	Prairie sage	L-M	S	1 - 1.5'	Y	Y	Y	?	?	n/a
<i>Aster laevis</i> ^a	Smooth aster	L-H	S/PS	1 - 3'	Y	Y	Y	Y	?	Aug-Sep

<i>Aster porteri</i> ^a	Porter aster	L-M	S	1'	Y	Y	Y	?	?	Aug-Sep
<i>Aubrieta</i> sp. ^b	False rockcress	M	S	1'	Y	Y	Y	Y	Y	Apr-May
<i>Aurinia</i> sp. ^b	Basket of gold	M	S/PS	1'	Y	Y	Y	Y	Y	Apr-May
<i>Calochortus gunnisonii</i> ^a	Mariposa lily	M-H	S	.5 - 2'	Y	Y	Y	Y	?	Jul-Aug
<i>Campanula rotundifolia</i> ^a	Common harebell	M-H	S	.5 - 1'	Y	Y	Y	Y	Y	May-Oct
<i>Centranthus ruber</i>	Jupiters beard	L-H	S/Sh	2 - 2.5'	Y	Y	Y	Y	?	May-Oct
<i>Cerastium strictum</i> ^{ab}	Mouse ear chickweed	M	S/PS	1'	Y	Y	Y	Y	?	May-Jun
<i>Cerastium tomentosum</i> ^b	Snow-in-summer	L-M	S/PS	1'	Y	Y	Y	Y	Y	May-Jun
<i>Claytonia lanceolata</i> ^a	Spring beauty	M	Sh	.5 - 1.5'	Y	Y	Y	?	?	Mar-Apr
<i>Convallaria majalis</i> ^{bc}	Lily-of-the-valley	H	Sh	< 1'	Y	Y	Y	Y	?	May-Jun
<i>Delosperma nubigenum</i> ^b	Hardy yellow iceplant	M-H	S	.5'	Y	Y	Y	?	?	Jun
<i>Delphinium</i> spp. ^c	Delphinium	M-H	S/PS	.5 - 3'+	Y	Y	Y	Y	Y	Jun-Jul
<i>Dianthus</i> spp.	Pinks	L-H	S	<.5' - 2'	Y	Y	Y	Y	Y	May-Aug
<i>Doronicum</i> sp.	Leopards bane	H	S/PS	2 - 3'	Y	Y	Y	Y	?	Jul-Aug
<i>Echinacea purpurea</i>	Purple coneflower	M	S	2 - 3'	Y	Y	Y	Y	Y	Jul-Aug
<i>Epilobium angustifolium</i>	Fireweed	H	S/PS	3'	N	Y	Y	Y	Y	Jul-Aug
<i>Erigeron flagellaris</i> ^a	Whiplash daisy, trailing fleabane	L-M	S	< 1'	Y	Y	?	?	?	Jun-Jul
<i>Eriogonum umbellatum</i> ^a	Sulphur flower	M	S/PS	<.5'	Y	Y	Y	Y	Y	Jun-Jul
<i>Erysimum asperum</i> ^a	Western wallflower	M	S/PS	1'+	Y	Y	Y	Y	?	Jun-Jul
<i>Gaillardia aristata</i> ^a	Blanket flower	L-M	S	1 - 1.5'	Y	Y	Y	Y	Y	Jul-Sep
<i>Galium boreale</i> ^{ab}	Northern bedstraw	M-H	Sh	<1'	Y	Y	Y	Y	Y	May-Jun
<i>Geranium</i> spp.	Hardy geraniums	M	Sh/PS	2'	Y	Y	Y	Y	Y	May-Oct
<i>Geranium caespitosum</i> ^a	Wild geranium	M	Sh/PS	2'	Y	Y	Y	Y	Y	May-Oct
<i>Geum triflorum</i>	Prairie smoke	M-H	S/PS	1.5'	Y	Y	Y	?	?	Jun
<i>Helianthella quinquenervis</i> ^a	Aspen sunflower	M	S	1'	?	?	?	Y	Y	?
<i>Helianthemum nummularium</i>	Rockrose	M-H	S	< 1'	Y	Y	Y	?	?	May-Jun
<i>Helianthus pumilus</i> ^a	Small sunflower	M	S	1 - 2'	Y	Y	Y	?	?	Jun-Jul
<i>Heuchera</i> spp.	Coral bells	M-H	PS/Sh	1 - 2'	Y	Y	Y	Y	Y	Jun-Aug

<i>Ipomopsis aggregata</i> ^a	Scarlet gilia	M	S/PS	1 - 2'	Y	Y	Y	Y	Y	Jun-Aug
<i>Iris germanica</i>	Bearded iris	L-M	S	1 - 3'	Y	Y	Y	Y	Y	May-Jun
<i>Iris missouriensis</i> ^{ac}	Missouri or Native iris	M-H	S	1 - 2'	Y	Y	Y	Y	Y	May
<i>Lamium</i> sp. ^b	Dead nettle	M-H	Sh	< 1'	Y	Y	Y	Y	?	May-Jun
<i>Lavandula</i> spp.	Lavender	L-M	S	1 - 2'	Y	Y	Y	?	?	Jun-Nov
<i>Leucocrinum montanum</i> ^a	Sand lily	L-M	S	< 1'	Y	Y	Y	?	?	May
<i>Liatris punctata</i> ^a	Dotted gayfeather	VL-L	S	1 - 2'	Y	Y	Y	Y	Y	Aug-Oct
<i>Linum lewisii</i> ^{ac}	Wild blue flax	L-H	S/PS	1 - 2'	Y	Y	Y	Y	Y	May-Sep
<i>Lupinus argenteus</i> ^{ac}	Silver lupine	M	Sh/PS	1 - 3'	Y	Y	Y	Y	Y	Jun-Jul
<i>Mertensia lanceolata</i> ^a	Narrow-leaved chiming bells	M-H	Sh/PS	1 - 2'	Y	Y	Y	Y	Y	May-Jun
<i>Mimulus guttatus</i> ^a	Yellow monkey-flower	H	Sh	1'	?	Y	Y	Y	Y	?
<i>Monarda fistulosa</i> ^a	Native beebalm	M-H	S/PS	1 - 2'	Y	Y	Y	Y	Y	Jul-Oct
<i>Oenothera caespitosa</i> ^a	White stemless evening primrose	L-M	S	1 - 2'	Y	Y	Y	Y	Y	Jun-Aug
<i>Papaver orientale</i>	Oriental poppy	H	S/Sh	2 - 3'	Y	Y	Y	Y	Y	May-Jun
<i>Penstemon caespitosus</i> ^{ab}	Mat penstemon	L-M	S	< .5'	Y	Y	Y	Y	Y	Jun
<i>Penstemon secundiflorus</i>	Sidebells	L-M	S	1 - 2'	Y	Y	Y	Y	?	May-Jun
<i>Penstemon teucrioides</i> ^a	Germander penstemon	L-M	S	.5'	Y	Y	Y	?	?	Jun-Jul
<i>Penstemon virens</i> ^{ac}	Blue mist penstemon	M	S/PS	.5'	Y	Y	Y	Y	Y	May-Jun
<i>Phlox subulata</i>	Moss phlox	M	S	< .5'	Y	Y	Y	Y	Y	May
<i>Polemonium</i> sp.	Jacobs ladder	H	S/PS	1 - 2'	Y	Y	Y	Y	Y	May-Aug
<i>Potentilla fissa</i> ^a	Leafy potentilla	M-H	PS	1'	Y	Y	Y	Y	?	?
<i>Potentilla verna</i> ^b	Spring potentilla	M-H	PS	< .5'	Y	Y	Y	Y	Y	Mar-May
<i>Pulsatilla patens</i> ^a	Pasque flower	M	S/PS	1'	Y	Y	Y	Y	Y	Mar-May
<i>Ratibida columnifera</i> ^a	Prairie coneflower	L-M	S	2'	Y	Y	Y	Y	Y	Jul-Sep
<i>Rudbeckia hirta</i> ^a	Black-eyed Susan	M-H	S	2 - 3'	Y	Y	Y	Y	Y	Jul-Sep
<i>Salvia officinalis</i>	Cooking sage	L-M	S/PS	2'	Y	Y	Y	Y	?	Jun
<i>Saxifraga hirsuta</i>	Saxifrage	H	S/PS	.5'+	Y	Y	Y	Y	Y	May-Jun
<i>Scutellaria brittonii</i> ^a	Skullcap	M	S/PS	.5 - 1'	Y	Y	Y	Y	?	Aug-Sep
<i>Sedum</i> spp. ^b	Stonecrop	M	S/PS	1 - 1.5'	Y	Y	Y	Y	Y	Jul-Aug
<i>Sedum lanceolatum</i> ^d	Yellow stonecrop	M	S/PS	.5'	Y	Y	Y	Y	Y	Jul-Aug
<i>Sempervivum</i> sp.	Hens and chicks	L-M	S/PS	.5'	Y	Y	Y	Y	Y	n/a

<i>Senecio spartioides</i> ^{ac}	Broom groundsel	VL-L	S	2 - 3'	Y	Y	?	?	?	Sep-Oct
<i>Solidago missouriensis</i> ^a	Smooth goldenrod	L-M	S	1 - 2'	Y	Y	Y	Y	?	Jul-Aug
<i>Thalictrum fendleri</i> ^a	Fendler meadowrue	H	S/PS	2 - 3'	?	?	Y	Y	Y	Jul-Aug
<i>Thermopsis divaricarpa</i> ^a	Spreading golden banner	M-H	S/PS	2'	Y	Y	Y	Y	?	May
<i>Tradescantia occidentalis</i> ^a	Western spiderwort	M	S/PS	1.5'	Y	Y	Y	Y	?	Jun-Aug
<i>Thymus</i> spp. ^b	Thyme	L-M	S	< .5'	Y	Y	Y	Y	Y	Jun-Jul
<i>Veronica pectinata</i>	Speedwell	L-M	S	< .5'	Y	Y	Y	Y	Y	Apr-Jul
<i>Vinca minor</i> ^b	Periwinkle, myrtle	H	Sh	< 1'	Y	Y	Y	Y	?	Apr-Jun
<i>Waldsteinia</i> sp. ^b	Barren strawberry	M-H	Sh/PS	< 1'	Y	Y	Y	Y	?	May-Jun
Shrubs										
<i>Arctostaphylos nevadensis</i> ^{ab}	Pinemat manzanita	M	S/PS	1 - 2'	Y	Y	Y	N	N	n/a
<i>Arctostaphylos patula</i> ^a	Greenleaf manzanita	M	S/PS	3 - 4'	Y	Y	Y	N	N	n/a
<i>Arctostaphylos uva-ursi</i> ^{ab}	Kinnikinnick, bearberry	M	S/Sh	1'	Y	Y	Y	Y	Y	n/a
<i>Betula glanulosa</i> ^a	Bog birch	H	S/PS	6 - 8'	Y	Y	Y	Y	Y	n/a
<i>Calluna</i> sp.	Heather	H	S/PS	2'	Y	Y	Y	?	?	Jul-Aug
<i>Ceanothus fendleri</i> ^a	Buckbrush, mountain lilac	M	S	2'	Y	Y	Y	?	?	Jul
<i>Cercocarpus intricatus</i>	Little-leaf mountain mahogany	VL-L	S	4 - 6'	Y	Y	Y	Y	?	n/a
<i>Cercocarpus montanus</i> ^{ac}	True mountain mahogany	L-M	S	4 - 6'	Y	Y	Y	Y	?	n/a
<i>Chrysothamnus</i> spp. ^a	Rabbitbrush	VL-L	S	2 - 6'	Y	Y	Y	Y	Y	Jul-Aug
<i>Cornus stolonifera</i> ^a	Redtwig dogwood	H	S/Sh	4 - 6'	Y	Y	Y	Y	Y	n/a
<i>Cotoneaster horizontalis</i>	Spreading cotoneaster	M	S/PS	2 - 3'	Y	Y	Y	Y	?	May-Jun
<i>Daphne burkwoodii</i>	Burkwood daphne	M	S/PS	2 - 3'	Y	Y	Y	?	?	Apr-Jun
<i>Erica</i> sp.	Heath	H	S/PS	1'	Y	Y	Y	?	?	Jan-Mar
<i>Euonymus alatus</i>	Burning bush euonymus	M	S/Sh	1 - 6'	Y	Y	Y	?	?	n/a
<i>Fallugia paradoxa</i> ^a	Apache plume	VL-L	S	2 - 4'	Y	Y	Y	Y	Y	Jun-Oct
<i>Holodiscus dumosus</i> ^a	Ocean spray, cliff/rock spirea	L-M	S/PS	4'	Y	Y	Y	Y	Y	Jun
<i>Jamesia americana</i> ^a	Wax flower	M-H	S/Sh	2 - 6'	Y	Y	Y	Y	Y	Jun
<i>Lonicera tatarica</i>	Tatarian honeysuckle	M	S/PS	4 - 6'	Y	Y	Y	Y	Y	May-Jun

<i>Mahonia aquifolium</i>	Oregon grape holly	M-H	S/Sh	4 - 6'	Y	Y	Y	?	?	May-Jun
<i>Mahonia repens</i> ^{ab}	Creeping grape holly	L-H	S/Sh	1 - 2'	Y	Y	Y	Y	Y	Mar-May
<i>Philadelphus microphyllus</i> ^a	Little-leaf mockorange	M	S	2 - 3'	Y	Y	Y	Y	?	Jun
<i>Physocarpus monogynus</i> ^a	Mountain ninebark	M	S/Sh	2 - 4'	Y	Y	Y	Y	Y	Jun
<i>Potentilla fruticosa</i> ^a	Shrubby cinquefoil	M	S/PS	2 - 3'	Y	Y	Y	Y	Y	May-Sep
<i>Prunus besseyi</i> ^a	Western sand cherry	L-M	S	1 - 3'	Y	Y	Y	Y	?	May
<i>Purshia tridentata</i> ^a	Antelope bitterbrush	L-M	S	1 - 2'	Y	Y	Y	?	?	Jun-Aug
<i>Ribes aureum</i> ^a	Golden currant	M	S/PS	2 - 3'	Y	Y	Y	Y	Y	Apr-May
<i>Rosa woodsii</i> ^a	Woods' or native wild rose	M	S/PS	2 - 3'	Y	Y	Y	Y	Y	Jun-Jul
<i>Shepherdia canadensis</i> ^a	Russet buffaloberry	M-H	S	5 - 6'	Y	Y	Y	Y	Y	n/a
<i>Symphoricarpos</i> spp. ^d	Snowberry, coralberry	M	S/PS	2 - 3'	Y	Y	Y	Y	Y	n/a
<i>Viburnum edule</i> ^a	Highbush cranberry	H	S	6 - 8'	Y	Y	Y	Y	Y	May-Jun
<i>Yucca baccata</i> ^a	Banana or broad-leaf yucca	VL-L	S/PS	2 - 3'	Y	Y	Y	N	N	Jun
<i>Yucca filamentosa</i>	Adams needle	M	S/PS	2 - 3'	Y	Y	Y	N	N	Jun
<i>Yucca glauca</i> ^a	Spanish bayonet, small soapweed, Great Plains yucca	VL-L	S/PS	2 - 3'	Y	Y	Y	Y	?	Jun
Large Shrubs and Trees										
<i>Acer ginnala</i>	Ginnala maple	M-H	S	6 - 10'	Y	Y	Y	Y	Y	n/a
<i>Acer glabrum</i> ^a	Rocky Mountain maple	M-H	S/Sh	6 - 10'	Y	Y	Y	Y	Y	n/a
<i>Acer grandidentatum</i> ^a	Wasatch maple	M	S/PS	10 - 20'	Y	Y	Y	Y	?	n/a
<i>Alnus tenuifolia</i> ^a	Thinleaf alder	H	S/PS	6 - 8'	Y	Y	Y	Y	Y	Apr
<i>Amelanchier alnifolia</i> ^{ac}	Saskatoon alder-leaf serviceberry	M	S/PS	6 - 8'	Y	Y	Y	Y	Y	Apr-May
<i>Amelanchier utahensis</i> ^a	Utah serviceberry	VL-M	S	4 - 6'	Y	Y	N	N	N	May
<i>Betula fontinalis</i> ^a	River birch	H	S/PS	6 - 8'	Y	Y	Y	Y	?	n/a
<i>Cercocarpus ledifolius</i> ^a	Mountain mahogany	VL-L	S	6 - 15'	Y	Y	?	N	N	n/a
<i>Corylus cornuta</i> ^a	Filbert, beaked hazelnut	H	S/Sh	5 - 6'	Y	Y	Y	?	?	n/a
<i>Crataegus</i> spp. ^a	Hawthorn (several native)	M	S	6 - 8'	Y	Y	Y	Y	?	May
<i>Fraxinus pennsylvanica</i>	Green ash	M-H	S	20 - 25'	Y	Y	Y	Y	?	n/a
<i>Gleditsia triacanthos</i>	Honeylocust	M-H	S	60 - 70'	Y	Y	N	N	N	May

<i>Malus</i> sp.	Crabapple	M	S	10 - 15'	Y	Y	Y	Y	N	Apr-May
<i>Physocarpus opulifolius</i> ^a	Tall ninebark	M	S/PS	4 - 6'	Y	Y	Y	?	N	May
<i>Populus tremuloides</i> ^a	Aspen	M	S	8 - 25'	Y	Y	Y	Y	Y	n/a
<i>Prunus americana</i> ^a	American wild plum	M	S/PS	4 - 6'	Y	Y	Y	Y	N	Apr
<i>Prunus cerasifera</i>	Flowering plum	M	S/PS	8 - 10'	Y	Y	Y	?	N	Apr
<i>Prunus pennsylvanica</i> ^a	Pin/fire/wild/red cherry	M	S/PS	6 - 8'	Y	Y	Y	?	N	May
<i>Prunus virginiana melanocarpa</i> ^{ac}	Western chokecherry	M-H	S/PS	6 - 8'	Y	Y	Y	Y	Y	Apr-May
<i>Rubus deliciosus</i> ^a	Boulder raspberry, thimbleberry	M	S/Sh	4 - 6'	Y	Y	Y	Y	Y	Apr-May
<i>Salix amygdaloides</i> ^a	Peachleaf willow	H	S/PS	20 - 30'	Y	Y	Y	Y	?	n/a
<i>Shepherdia argentea</i> ^a	Silver buffaloberry	M	S/PS	4 - 6'	Y	Y	Y	Y	?	Apr
<i>Sorbus scopulina</i> ^a	Western mountain ash	M-H	S/Sh	6 - 8'	Y	Y	Y	Y	?	May
<i>Syringa vulgaris</i>	Common lilac	M	S	6 - 8'	Y	Y	Y	Y	Y	May

a - Native species.

b - Ground cover plant.

c - This species, or some species in this genus, may be poisonous to livestock, pets, wildlife and/or people under some conditions. Before planting, check with Colorado State University Cooperative Extension, Colorado State Forest Service, or other knowledgeable personnel.

d - Several species of symphoricarpos are native.

Appendix D

Creating Wildfire-Defensible Space Zones

Quick Facts

Wildfire will find the weakest links in the defense measures you have taken on your property. The primary determinants of a home's ability to survive wildfire are its roofing material and the quality of the "defensible space" surrounding it. Even small steps to protect your home and property will make them more able to withstand fire. Consider these measures for all areas of your property, not just the immediate vicinity of the house.

Fire is capricious. It can find the weak link in your home's fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. While you may not be able to accomplish all measures below (and there are no guarantees), each will increase your home's, and possibly your family's, safety and survival during a wildfire.

Start with the easiest and least expensive actions. Begin your work closest to your house and move outward. Keep working on the more difficult items until you have completed your entire project.

Defensible Space

Two factors have emerged as the primary determinants of a home's ability to survive wildfire. These are the home's roofing material and the quality of the "defensible space" surrounding it.

Use fire-resistive materials (Class B or better rating), not wood or shake shingles, to roof homes in or near forests and grasslands. When your roof needs significant repairs or replacement, do so with a fire-resistant roofing material. Check with your county building department. Some counties now restrict wood roofs or require specific classifications of roofing material.

Defensible space is an area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards the structure. It also reduces the chance of a structure fire moving from the building to the surrounding forest. Defensible space provides room for firefighters to do their jobs. Your house is more likely to withstand a wildfire if grasses, brush, trees and other common forest fuels are managed to reduce a fire's intensity.

The measure of fuel hazard refers to its continuity, both horizontal (across the ground) and vertical (from the ground up into the vegetation crown). Fuels with a high degree of both vertical and horizontal continuity are the most hazardous, particularly when they occur on slopes. Heavier fuels (brush and trees) are more hazardous (i.e. produce a more intense fire) than light fuels such as grass.

Mitigation of wildfire hazards focuses on breaking up the continuity of horizontal and vertical fuels. Additional distance between fuels is required on slopes.

Creating an effective defensible space involves developing a series of management zones in which different treatment techniques are used. See Figure 1 for a general view of the

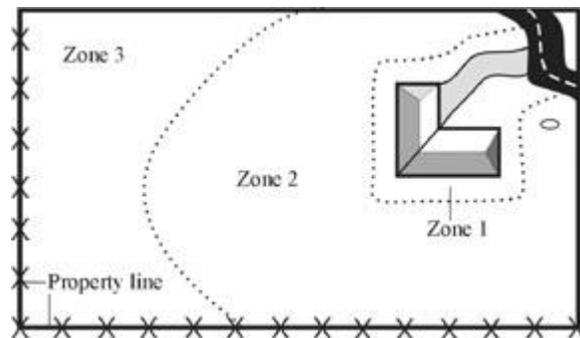
relationships among these management zones. Develop defensible space around each building on your property. Include detached garages, storage buildings, barns and other structures in your plan.

The actual design and development of your defensible space depends on several factors: size and shape of buildings, materials used in their construction, the slope of the ground on which the structures are built, surrounding topography, and sizes and types of vegetation on your property. These factors all affect your design. You may want to request additional guidance from your local Colorado State Forest Service (CSFS) forester or fire department. (See the Special Recommendations section of this fact sheet for shrubs, lodgepole pine, Engelmann spruce, and aspen.)

Defensible Space Management Zones

Zone 1 is the area of maximum modification and treatment. It consists of an area of 15 feet around the structure in which all flammable vegetation is removed. This 15 feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.

Zone 2 is an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built. Typically, the defensible space should extend at least 75 to 125 feet from the structure. See Figure 2 for the appropriate distance for your home's defensible space. Within this zone, the continuity and arrangement of vegetation is modified. Remove stressed, diseased, dead or dying trees and shrubs. Thin and prune the remaining larger trees and shrubs. Be sure to extend thinning along either side of your driveway all the way to your main access road. These actions help eliminate the continuous fuel surrounding a structure while enhancing home site safety and the aesthetics of the property.



Forested property showing the three fire-defensible zones around a home or other structure.

Zone 3 is an area of traditional forest management and is of no particular size. It extends from the edge of your defensible space to your property boundaries.

Prescriptions

Zone 1

The size of Zone 1 is 15 feet, measured from the edges of the structure. Within this zone, several specific treatments are recommended.

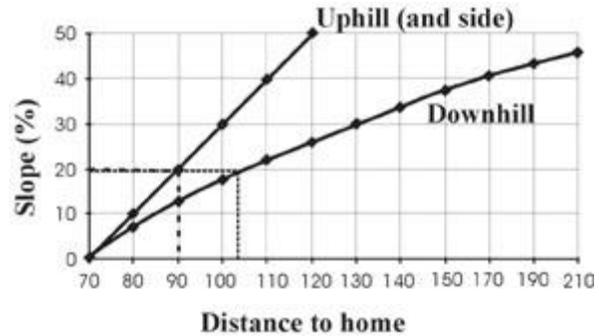
Plant nothing within 3 to 5 feet of the structure, particularly if the building is sided with wood, logs or other flammable materials. Decorative rock, for example, creates an attractive, easily maintained, nonflammable ground cover.

If the house has noncombustible siding, widely spaced foundation plantings of low growing shrubs or other “fire wise” plants are acceptable. Do not plant directly beneath windows or next to foundation vents. Be sure there are no areas of continuous grass adjacent to plantings in this area.

Frequently prune and maintain plants in this zone to ensure vigorous growth and a low growth habit. Remove dead branches, stems and leaves.

Do not store firewood or other combustible materials in this area. Enclose or screen decks with metal screening. Extend the gravel coverage under the decks. Do not use areas under decks for storage.

Ideally, remove all trees from Zone 1 to reduce fire hazards. If you do keep a tree, consider it part of the structure and extend the distance of the entire defensible space accordingly. Isolate the tree from any other surrounding trees. Prune it to at least 10 feet above the ground. Remove any branches that interfere with the roof or are within 10 feet of the chimney. Remove all “ladder fuels” from beneath the tree. Ladder fuels are vegetation with vertical continuity that allows fire to burn from ground level up into the branches and crowns of trees. Ladder fuels are potentially very hazardous but are easy to mitigate. No ladder fuels can be allowed under tree canopies. In all other areas, prune all branches of shrubs or trees up to a height of 10 feet above ground (or $\frac{1}{2}$ the height, whichever is the least).



This chart indicates the minimum recommended dimensions for defensible space from the home to the outer edge of Zone 2. For example, if your home is situated on a 20 percent slope, the minimum defensible space dimensions would be 90 feet uphill and to the sides of the home and 104 feet downhill from the home.

Zone 2

Zone 2 is an area of fuel reduction designed to reduce the intensity of any fire approaching your home. Follow these recommended management steps.

Thin trees and large shrubs so there is at least 10 feet between crowns. Crown separation is measured from the furthest branch of one tree to the nearest branch on the next tree (Figure 3). On steep slopes, allow more space between tree crowns. (See Figure 4 for minimum recommended spacing for trees on steep slopes.) Remove all ladder fuels from under these remaining trees. Carefully prune trees to a height of at least 10 feet.

Small clumps of 2 to 3 trees may be occasionally left in Zone 2. Leave more space between the crowns of these clumps and surrounding trees.

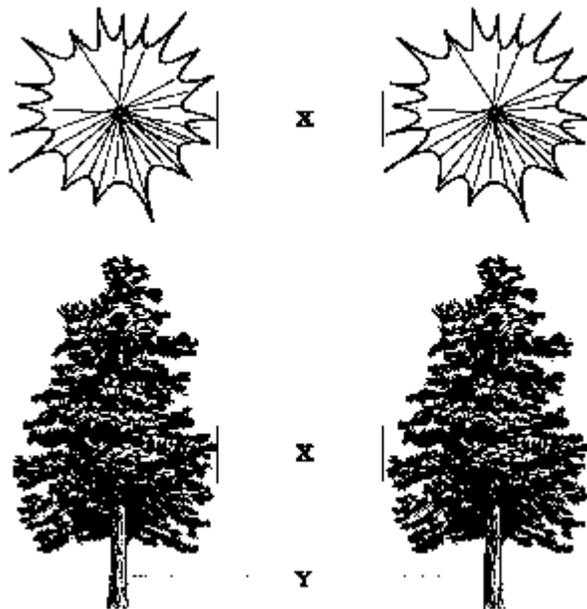
Because Zone 2 forms an aesthetic buffer and provides a transition between zones, it is necessary to blend the requirements for Zones 1 and 3. Thin the portions of Zone 3 adjacent to Zone 2 more heavily than the outer portions.

Isolated shrubs may remain, provided they are not under tree crowns. Prune and maintain these plants periodically to maintain vigorous growth. Remove dead stems from trees and shrubs annually. Where shrubs are the primary fuel in Zone 2, refer to the Special Recommendations section of this fact sheet.

Limit the number of dead trees (snags) retained in this area. Wildlife needs only one or two snags per acre. Be sure any snags left for wildlife cannot fall onto the house or block access roads or driveways.

Mow grasses (or remove them with a weed trimmer) as needed through the growing season to keep them low, a maximum of 6 to 8 inches. This is extremely critical in the fall when grasses dry out and cure or in the spring after the snow is gone but before the plants green up.

Stack firewood and woodpiles uphill or on the same elevation as the structure but at least 30 feet away. Clear and keep away flammable vegetation within 10 feet of these woodpiles. Do not stack wood against your house or on or under your deck, even in winter. Many homes have burned from a woodpile that ignited as the fire passed. Wildfires can burn at almost any time in Colorado.



X = crown spacing; Y = stem spacing. Do not measure between stems for crown -- measure between the edges of tree crowns.

Locate propane tanks at least 30 feet from any structures, preferably on the same elevation as the house. You don't want the LP container below your house — if it ignites, the fire would tend to burn uphill. On the other hand, if the tank is above your house and it develops a leak, LP gas will flow downhill into your home. Clear and keep away flammable vegetation within 10 feet of these tanks. Do not screen propane tanks with shrubs or vegetation.

Minimum tree crown and shrub clump spacing.		
% slope	Tree Crown Spacing	Brush and Shrub Clump Spacing
0 -10 %	10'	2 1/2 x shrub height
11 - 20%	15'	3 x shrub height
21 - 40%	20'	4 x shrub height
> 40%	30'	6 x shrub height

Dispose of slash (limbs, branches and other woody debris) from your trees and shrubs through chipping or by piling and burning. Contact your local CSFS office or county sheriff's office for information about burning slash piles. If neither of these alternatives is possible, lop and scatter slash by cutting it into very small pieces and distributing it over the ground. Avoid heavy accumulations of slash. Lay it close to the ground to speed decomposition. If desired, no more than two or three small, widely spaced brush piles may be left for wildlife purposes. Locate these towards the outer portions of your defensible space.

Zone 3

This zone is of no specified size. It extends from the edge of your defensible space to your property lines. A gradual transition into this zone from defensible space standards to other management objectives you may have is suggested. Typical management objectives for areas surrounding home sites or subdivisions are: provide optimum recreational opportunities; enhance aesthetics; maintain tree health and vigor; provide barriers for wind, noise, dust and visual intrusions; support limited production of firewood, fence posts and other forest commodities; or grow Christmas trees or trees for transplanting.

Minimum tree spacing for Zone 3	
Tree Diameter (in inches)	Average Stem Spacing Between Trees (in feet)
3	10
4	11
5	12
6	13
7	14
8	15
9	16
10	17
11	19
12	21
13	23
14	24
15	26
16	28
17	29
18	31
19	33
20	35
21	36
22	38
23	40
24	42

Specific requirements will be dictated by your objectives for your land and the kinds of trees present. See Figure 5 for the minimum suggested spacing between “leave” trees. Forest management in Zone 3 is an opportunity for you to increase the health and growth rate of the forest in this zone. Keep in mind that root competition for available moisture limits tree growth and ultimately the health of the forest.

A high canopy forest reduces the chance of a surface fire climbing into the tops of the trees and might be a priority for you if this zone slopes steeply. The healthiest forest is one that has multiple ages, sizes, and species of trees where adequate growing room is maintained over time. Remember to consider the hazards of ladder fuels. Multiple sizes and ages of trees might increase the fire hazard from Zone 3 into Zone 2, particularly on steep slopes.

A greater number of wildlife trees can remain in Zone 3. Make sure that dead trees pose no threat to power lines or fire access roads.

While pruning generally is not necessary in Zone 3, it may be a good idea from the standpoint of personal safety to prune trees along trails and fire access roads. Or, if you prefer the aesthetics of a well-manicured forest, you might prune the entire area. In any case, pruning helps reduce ladder fuels within the tree stand, thus enhancing wildfire safety.

Mowing is not necessary in Zone 3.

Any approved method of slash treatment is acceptable for this zone, including piling and burning, chipping or lop-and-scatter.

Special Recommendations

Tree spacing guidelines do not apply to mature stands of aspen trees where the recommendations for ladder fuels have been complied with. In areas of aspen regeneration and young trees, the spacing guidelines should be followed.

Brush and shrubs

Brush and shrubs are woody plants, smaller than trees, often formed by a number of vertical or semi-upright branches arising close to the ground. Brush is smaller than shrubs and can be either woody or herbaceous vegetation.

On nearly level ground, minimum spacing recommendations between clumps of brush and/or shrubs is 2 1/2 times the height of the vegetation. Maximum diameter of clumps should be 2 times the height of the vegetation. As with tree crown spacing, all measurements are made from the edges of vegetation crowns (Figure 3).

For example: For shrubs 6 feet high, spacing between shrub clumps should be 15 feet or more apart (measured from the edges of the crowns of vegetation clumps). The diameter of shrub clumps should not exceed 12 feet (measured from the edges of the crowns). Branches should be pruned to a height of 3 feet.

Grasses

Keep dead, dry or curing grasses mowed to less than 6 inches. Defensible space size where grass is the predominant fuel can be reduced (Figure 5) when applying this practice.

Windthrow

In Colorado, certain locations and tree species, including Lodgepole pine and Engelmann spruce, are especially susceptible to damage and uprooting by high winds (windthrow). If you see evidence of this problem in or near your forest, or have these tree species, consider the following adjustments to the defensible space guidelines. It is highly recommended that you contact a professional forester to help design your defensible space.

Adjustments: If your trees or home site are susceptible to windthrow and the trees have never been thinned, use a stem spacing of diameter plus five instead of the guides listed in the Zone 3 section. Over time (every 3 to 5 years) gradually remove additional trees. The time between cutting cycles allows trees to “firm up” by expanding their root systems. Continue this periodic thinning until the desired spacing is reached.

Also consider leaving small clumps of trees and creating small openings on their lee side (opposite of the predominant wind direction). Again, a professional forester can help you design the best situation for your specific homesite and tree species. Remember, with species such as Lodgepole pine and Engelmann spruce, the likelihood of a wildfire running through the tree tops or crowns (crowning) is closely related to the overabundance of fuels on the forest floor. Be sure to remove downed logs, branches and excess brush and needle buildup.

Minimum defensible space size for grass fuels.	
% slope	D-space size (uphill, downhill, sidehill)
0 - 20 %	30'
21 - 40%	50'
> 40%	70'

Maintaining Your Defensible Space

Your home is located in a forest that is dynamic, always changing. Trees and shrubs continue to grow, plants die or are damaged, new plants begin to grow, and plants drop their leaves and needles. Like other parts of your home, defensible space requires maintenance. Use the following checklist each year to determine if additional work or maintenance is necessary.

Defensible Space and FireWise Annual Checklist

- Trees and shrubs are properly thinned and pruned within the defensible space. Slash from the thinning is disposed of.
- Roof and gutters are clear of debris.
- Branches overhanging the roof and chimney are removed.
- Chimney screens are in place and in good condition.
- Grass and weeds are mowed to a low height.
- An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house.
- Fire extinguishers are checked and in working condition.
- The driveway is wide enough. The clearance of trees and branches is adequate for fire and emergency equipment. (Check with your local fire department.)
- Road signs and your name and house number are posted and easily visible.
- There is an easily accessible tool storage area with rakes, hoes, axes and shovels for use in case of fire.
- You have practiced family fire drills and your fire evacuation plan.
- Your escape routes, meeting points and other details are known and understood by all family members.

- ❑ Attic, roof, eaves and foundation vents are screened and in good condition. Stilt foundations and decks are enclosed, screened or walled up.
- ❑ Trash and debris accumulations are removed from the defensible space.
- ❑ A checklist for fire safety needs inside the home also has been completed. This is available from your local fire department.

References

Colorado State Forest Service, Colorado State University, Fort Collins, CO 80523-5060; (970) 491-6303:

FireWise Construction -- Design and Materials

Home Fire Protection in the Wildland Urban Interface

Wildfire Protection in the Wildland Urban Interface

Landowner Guide to Thinning

Colorado State University Cooperative Extension, 115 General Services Bldg., Fort Collins, CO 80523-4061; (970) 491-6198; E-mail: resourcecenter@ucm.colostate.edu.

6.303, *Fire-Resistant Landscaping*

6.304, *Forest Home Fire Safety*

6.305, *FireWise Plant Materials*

6.306, *Grass Seed Mixes to Reduce Wildfire Hazard*

7.205, *Pruning Evergreens*

7.206, *Pruning Shrubs*

7.207, *Pruning Deciduous Trees*

7.402, *Protecting Trees During Construction*

Appendix E

Fire Resistant Landscaping

Quick Facts

More people are moving into Colorado's rural areas, increasing the chances of wildfire.

"Defensible space" is the primary determinant of a structure's ability to survive wildfire.

Native species are generally the best plant materials for landscaping in defensible space, but others can be grown successfully in Colorado.

To be a FireWise homeowner, plan well, plant well and maintain well. by F.C. Dennis⁴ -- no. 6.303

Colorado's population is growing, its urban areas are rapidly expanding, and people are building more homes in what was once natural forest and brushlands. Newcomers to rural areas need to know how to correctly landscape their property to reduce wildfire hazards.

Improper landscaping worries land managers and fire officials because it can greatly increase the risk of structure and property damage from wildfire. It is a question of when, not if, a wildfire will strike any particular area.

Vegetative clearance around the house (defensible space) is a primary determinant of a home's ability to survive wildfire. Defensible space is, simply, room for firefighters to do their job. If grasses, brush, trees and other common forest fuels are removed, reduced, or modified to lessen a fire's intensity and keep it away from the home, chances increase that the structure will survive.

It is a little-known fact that in the absence of a defensible space, firefighters will often bypass a house, choosing to make their stand at a home where their safety is more assured and the chance to successfully protect the structure is greater.

Landscaping Defensible Space

People often resist creating defensible space because they believe that it will be unattractive, unnatural and sterile-looking. It doesn't have to be! Wise landowners carefully plan landscaping within the defensible space. This effort yields a many-fold return of beauty, enjoyment and added property value. Development of defensible space is outlined in fact sheet 6.302, Creating Wildfire-Defensible Zones.

Colorado has great diversity in climate, geology and vegetation. Home and cabin sites can be found from the foothills through 10,000-foot elevations. Such extremes present a challenge in recommending plants. While native plant materials generally are best, a wide range of species can be grown successfully in Colorado. Many plant species are suitable for landscaping in defensible space. Use restraint and common sense, and pay attention to plant arrangement and maintenance. It has often been said that how and where you plant are more important than what you plant. While this is indeed true, given a choice among plants, choose those that are more resistant to wildfire.

⁴ Wildfire Hazard Mitigation Coordinator, Colorado State Forest Service. This fact sheet was produced in cooperation with the Colorado State Forest Service. FIREWISE is a multi-agency program that encourages the development of defensible space and the prevention of catastrophic wildfire. 5/99. Reviewed 10/04.

Consider the following factors when planning, designing and planting the FireWise landscape within your home's defensible space:

- Landscape according to the recommended defensible-space zones. That is, the plants near your home should be more widely spaced and lower growing than those farther away.
- Do not plant in large masses. Instead, plant in small, irregular clusters or islands.
- Use decorative rock, gravel and stepping stone pathways to break up the continuity of the vegetation and fuels. This can modify fire behavior and slow the spread of fire across your property.
- Incorporate a diversity of plant types and species in your landscape. Not only will this be visually satisfying, but it should help keep pests and diseases from causing problems within the whole landscape.
- In the event of drought and water rationing, prioritize plants to be saved. Provide available supplemental water to plants closest to your house.
- Use mulches to conserve moisture and reduce weed growth. Mulch can be organic or inorganic. Do not use pine bark, thick layers of pine needles or other mulches that readily carry fire.
- Be creative! Further vary your landscape by including bulbs, Garden art and containers for added color.

Grasses

During much of the year, grasses ignite easily and burn rapidly. Tall grass will quickly carry fire to your house. Mow grasses low in the inner zones of the defensible space. Keep them short closest to the house and gradually increase height outward from the house, to a maximum of 8 inches. This is particularly important during fall, winter and before green-up in early spring, when grasses are dry, dormant and in a "cured" fuel condition. Given Colorado's extremely variable weather, wildfires can occur any time of the year. Maintenance of the grassy areas around your home is critical.

Mow grasses low around the garage, outbuildings, decks, firewood piles, propane tanks, shrubs, and specimen trees with low-growing branches.

Ground Cover Plants

Replace bare, weedy or unsightly patches near your home with ground covers, rock Gardens, vegetable Gardens and mulches. Ground cover plants are a good alternative to grass for parts of your defensible space. They break up the monotony of grass and enhance the beauty of your

landscape. They provide a variety of textures and color and help reduce soil erosion. Consider ground cover plants for areas where access for mowing or other maintenance is difficult, on steep slopes and on hot, dry exposures.

Ground cover plants are usually low growing. They are succulent or have other FireWise characteristics that make them useful, functional and attractive. When planted in beds surrounded by walkways and paths, in raised beds or as part of a rock Garden, they become an effective barrier to fire spread. The ideal groundcover plant is one which will spread, forming a dense mat of roots and foliage that reduces soil erosion and excludes weeds.

Mulch helps control erosion, conserve moisture and reduce weed growth. It can be organic (compost, leaf mold, bark chips, shredded leaves) or it can be inorganic (gravel, rock, decomposing granite).

When using organic mulches, use just enough to reduce weed and grass growth. Avoid thick layers. When exposed to fire, they tend to smolder and are difficult to extinguish. Likewise, while your property might yield an abundance of needles from your native pines or other conifers, don't use them as mulch because they can readily catch and spread wildfire. Rake, gather and dispose of them often within your defensible space.

Wildflowers

Wildflowers bring variety to a landscape and provide color from May until frost. Wildflower beds give a softer, more natural appearance to the otherwise manicured look often resulting from defensible space development.

A concern with wildflowers is the tall, dense areas of available fuel they can form, especially in dormancy. To reduce fire hazard, plant wildflowers in widely separated beds within the defensible space. Do not plant them next to structures unless the beds are frequently watered and weeded and vegetation is promptly removed after the first hard frost. Use gravel walkways, rock retaining walls or irrigated grass areas mowed to a low height to isolate wildflower beds from each other and from other fuels.

Shrubs

Shrubs lend color and variety to the landscape and provide cover and food for wildlife. However, shrubs concern fire professionals because, as the next level in the "fuel continuum," they can add significantly to total fuel loading. Because of the woody material in their stems and branches, they are a potential source of fire brands. When carried in the smoke column ahead of the main fire, fire brands can rapidly spread the fire in a phenomenon known as "spotting."

But the primary concern with shrubs is that they are a "ladder fuel" -- they can carry a relatively easy-to-control surface grass fire into tree crowns. Crown fires are difficult, sometimes impossible, to control.

To reduce the fire-spreading potential of shrubs, plant only widely separated, low-growing, nonresinous varieties close to structures. Do not plant them directly beneath windows or vents or where they might spread under wooden decks. Do not plant shrubs under tree crowns or use them to screen propane tanks, firewood piles or other flammable materials. Plant shrubs

individually, as specimens, or in small clumps apart from each other and away from any trees within the defensible space.

Mow grasses low around shrubs. Prune dead stems from shrubs annually. Remove the lower branches and suckers from species such as Gambel oak to raise the canopy away from possible surface fires.

Trees

Trees provide a large amount of available fuel for a fire and can be a significant source of fire brands if they do burn. Radiant heat from burning trees can ignite nearby shrubs, trees and structures.



Colorado's elevation and temperature extremes limit tree selection. The best species to plant generally are those already growing on or near the site. Others may be planted with careful selection and common sense.

Ladder fuels enable fire to travel from the ground surface into shrubs and then into the tree canopy.

If your site receives enough moisture to grow them, plant deciduous trees such as aspen or narrow-leaf cottonwood. These species, even when planted in dense clumps, generally do not burn well, if at all. The greatest problem with these trees is the accumulation of dead leaves in the fall. Remove accumulations close to structures as soon as possible after leaf drop.

When site or available moisture limits recommended species to evergreens, carefully plan their placement. Do not plant trees near structures. Leave plenty of room between trees to allow for their growth. Spacing within the defensible space should be at least 10 feet between the edges of tree crowns. On steep ground, allow even more space between crowns. Plant smaller trees initially on a 20- to 25-foot spacing to allow for tree growth. At some point, you will have to thin your trees to retain proper spacing.

As the trees grow, prune branches to a height of 10 feet above the ground. Do not over prune the crowns. A good rule of thumb is to remove no more than one-third of the live crown of the tree when pruning. Prune existing trees as well as ones you planted.

Some trees (for example, Colorado blue spruce) tend to keep a full crown. Other trees grown in the open may also exhibit a full growth habit. Limit the number of trees of this type within the defensible space. Prune others as described above and mow grasses around such specimen trees.

Structural Elements of a FireWise Landscape

When building a deck or patio, use concrete, flagstone or rock instead of wood. These materials do not burn and do not collect flammable debris like the space between planks in wooden decking.

Where appropriate on steeper ground, use retaining walls to reduce the steepness of the slope. This, in turn, reduces the rate of fire spread. Retaining walls also act as physical barriers to fire spread and help deflect heat from the fire upwards and away from structures.

Rock or masonry walls are best, but even wooden tie walls constructed of heavy timbers will work. Put out any fires burning on tie walls after the main fire front passes.

On steep slopes, consider building steps and walkways around structures. This makes access easier for home maintenance and enjoyment. It also serves as a physical barrier to fire spread and increases firefighters' speed and safety as they work to defend your home.

Maintenance

A landscape is a dynamic system that constantly grows and changes. Plants considered fire resistant and which have low fuel volumes can lose these characteristics over time. Your landscape, and the plants in it, must be maintained to retain their FireWise properties.

- Always keep a watchful eye towards reducing the fuel volumes available to fire. Be aware of the growth habits of the plants within your landscape and of the changes that occur throughout the seasons.
- Remove annuals and perennials after they have gone to seed or when the stems become overly dry.
- Rake up leaves and other litter as it builds up through the season.
- Mow or trim grasses to a low height within your defensible space. This is particularly important as grasses cure.
- Remove plant parts damaged by snow, wind, frost or other agents.
- Timely pruning is critical. Pruning not only reduces fuel volumes but also maintains healthier plants by producing more vigorous, succulent growth.

Landscape maintenance is a critical part of your home's defense system. Even the best defensible space can be compromised through lack of maintenance. The old adage "An ounce of prevention is worth a pound of cure" applies here.

References

- 6.302 (newly redone to FIRE 2012-1), *Creating Wildfire-Defensible Zones*
 6.303, *Fire-Resistant Landscaping*
 6.305, *FireWise Plant Materials*
 6.306, *Grass Seed Mixes to Reduce Wildfire Hazard*

7.205, Pruning Evergreens

7.206, Pruning Shrubs

7.207, Pruning Deciduous Trees

7.402, Protecting Trees During Construction

7.233, Wildflowers for Colorado

7.406, Flowers for Mountain Communities

7.413, Ground Covers for Mountain Communities

7.423, Trees and Shrubs for Mountain Areas

Front



Rear



Residence 1 | 60191



Stone
Old World Lege, Monach
by Coronado Stone



Siding
Cappuccino by Kwal Paints



Body 2
Stigma 3026 by Kwal Paints

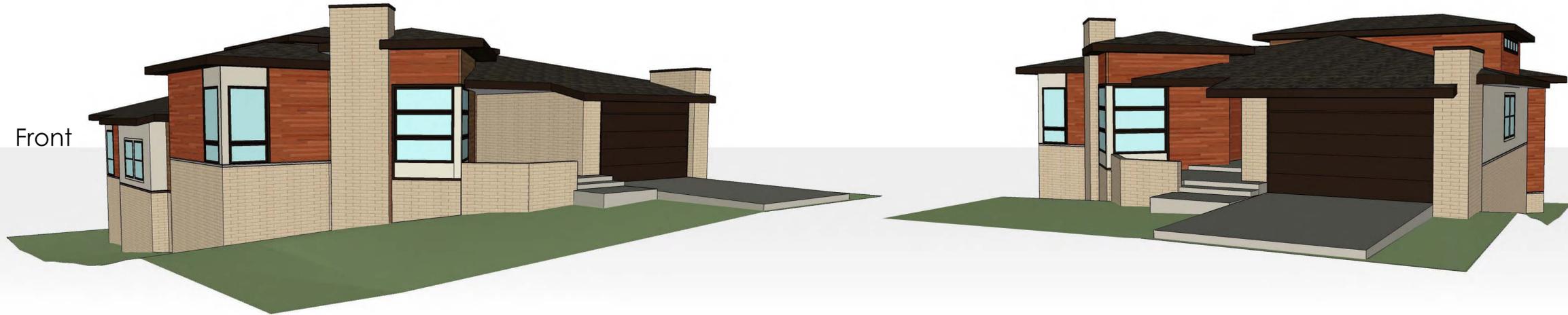


Accent
Berlin 3226 by Kwal Paints



Roof
Concrete Tile, Black Canyon
by Boral

Front



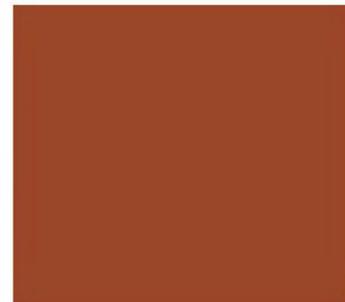
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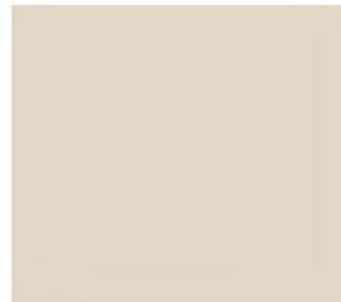
Residence 2 | 60192



Stone
Sand Canyon Honed
by Coronado Stone



Siding
Anthem 1111 by Kwal Paints



Body 2
Loop 2841 by Kwal Paints



Accent
Fudge 2647 by Kwal Paints



Roof
Concrete Tile, Western Trail
by Boral

Front



Rear



Residence 3 | 60193



Stone
Quick Stack, Cathedral Grey
by Coronado Stone



Body 1
Poco 2743 by Kwal Paints



Body 2
Angle 3246 by Kwal Paints



Accent
Bon Nuit 3277 by Kwal Paints



Roof
Concrete Tile, Telluride
by Boral

Front



Rear



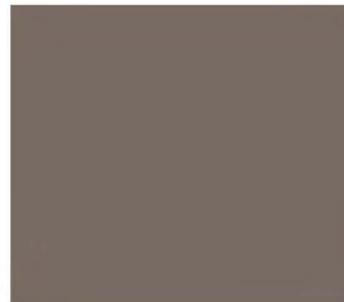
Residence 4 | 60194



Stone
Quick Stack, Antique Cream
by Coronado Stone



Siding
Basswood 1263 by Kwal Paints



Body 2
Rickshaw 3275 by Kwal Paints



Accent
Blacktop 3237 by Kwal Paints



Roof
Concrete Tile, Meadowlark
by Boral

Front



Rear



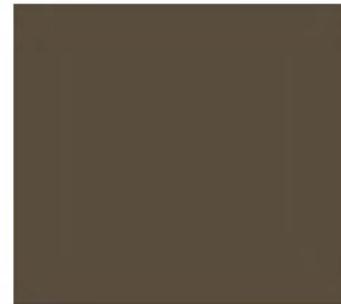
Residence 5 | 60195



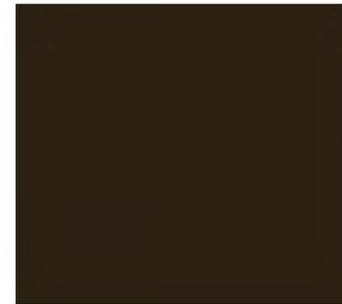
Stone
Quick Stack, Cape Cod Grey
by Coronado Stone



Body 1
Old Washer 2902 by Kwal Paints



Body 2
Bittersweet 2656 by Kwal Paints



Accent
Fudge 2647 by Kwal Paints



Roof
Concrete Tile, Western Trail
by Boral