

TECHNICAL MEMORANDUM

Subject: Grading and Limits of Disturbance (Preliminary Plat Applications SB25-0009 & SB25-0010)

Prepared for: City of Lone Tree Planning Division

Prepared by: JR Engineering - Kevin Rohrbough, PE

Date: December 12, 2025

1. Purpose

This technical narrative supports the grading proposed for the Southridge Preserve Parcels 4 & 5 and RidgeGate PA 20 – Rural Residential Preliminary Plans. This memorandum is to provide support for the proposed grading plan and provide information on how the plan meets the requirements and complies with both the **Southridge Preserve Planned Development** as well as the **RidgeGate Planned Development District – 7th Amendment**.

2. Planned Development Guidelines

Below are the guidelines identified within each Planned Development related to grading and land disturbance activities.

- **Southridge Preserve Planned Development District:** Sheet 3, I(c) – Grading and Drainage Guidelines

c. Grading/Drainage Guidelines

- i. Cut and fill areas and disturbance to native vegetation will be minimized.
- ii. Disturbance and impact to existing drainage pattern and natural systems will be minimized.

- **Southridge Preserve Planned Development District:** Sheet 3, II(a). Construction Practices

II. CONSTRUCTION PRACTICES

a. Minimize Disturbance Or Impacts To The Site During Construction

- i. Preserve natural features and vegetation by providing construction fencing or barricades.
- ii. Limit impact of construction and disturbance to areas immediately surrounding the primary structures or site improvements.
- iii. Maintain existing grade where possible, or restore it after construction is complete.

- **RidgeGate Planned Development District – 7th Amendment:** Sheet 6, Section I – Site Planning – Grading/ Drainage Standards will Incorporate:

Grading/ Drainage Standards will Incorporate:

- Cut and fill areas are minimized, but sculpting of knolls on mesa top allowed to enhance visual protection.
- Disturbance to native vegetation is minimized
- Disturbance or impact to natural drainage patterns or systems is minimized
- Berms planted with vegetation extend the character of the bluffs and may be added at mesa edges to further conceal views from below

- **RidgeGate Planned Development District – 7th Amendment:** Sheet 6, Section I – Construction Practices

II. Construction Practices

Minimize disturbance or impacts to the site during construction:

- Preserve natural features and vegetation by providing fencing or barricades, where possible.
- Limit the impact of construction to areas immediately surrounding the primary structures or site improvements.
- Maintain existing grade where possible, or restore it after construction is complete.

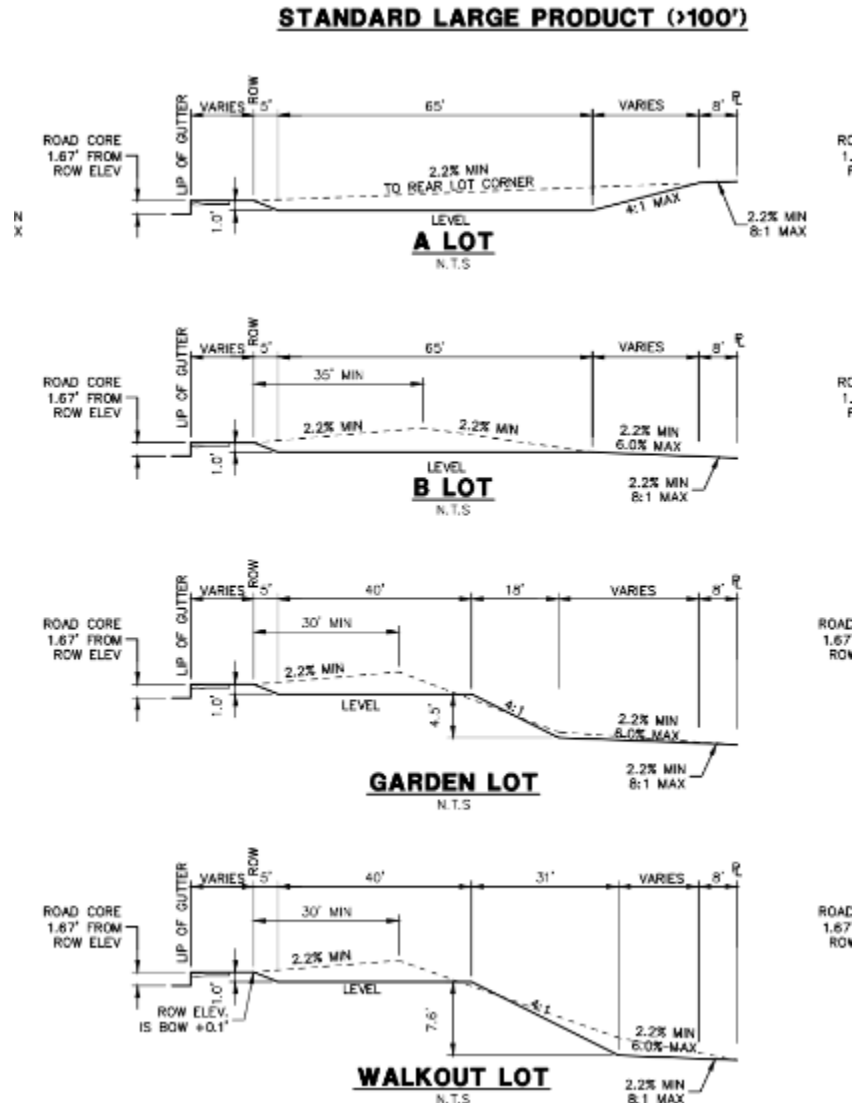
Drainage and Erosion:

- Control excess drainage, soil erosion and sedimentation during and after construction.
- Provide on-site detention to avoid storm water flows onto unprotected or unstable slopes.
- Include temporary drainage improvements as necessary.
- Establish adequate setbacks from existing drainage channels or other drainage structures.
- Re-vegetate disturbed areas with native or drought tolerant landscaping for erosion control purposes.
- Minimize impervious cover and excessive paved areas.

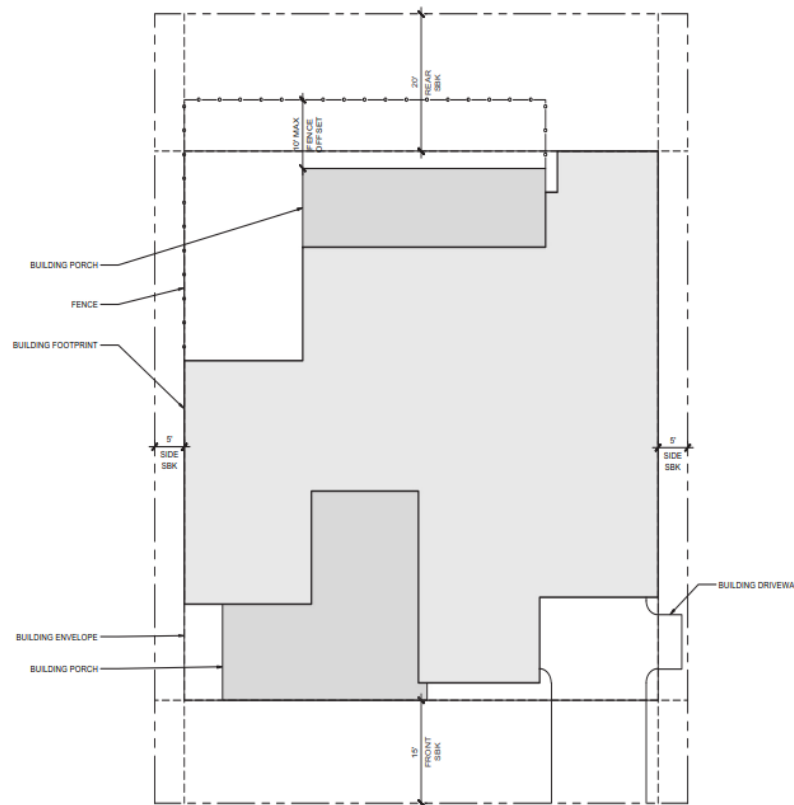
3. Proposed Grading Plan

The two (2) Preliminary Plans prepared for the project identify preliminary grading that is anticipated with the Project. The locations and extents of grading have taken into account both PDD documents. The grading proposed is consistent with that of other typical single family residential projects within the Front Range. This includes grading in the roadways and lots to provide a functioning drainage scheme for the Site. Drainage is a crucial element to this development and by identifying the locations and direction that each lot, or portions of each lot will drain, will allow the use of detention ponds to mitigate stormwater runoff from the Site and keep the Site in compliance with all jurisdictional regulations.

The Site will be graded with typical “A”, “B”, and Walkout” lots. These templates, as seen below from a similar project, will allow the lots to be graded as closely to natural grade as possible. A lots will convey storm water flows from the back of the lot to the front of the lot while B lots and walkout lots will convey flows to both the back and front of the lot.



There are numerous factors that went into the layout and site plan associated with the development. These include, but are not limited to open space requirements, wildlife corridors, fire mitigation, public park dedications, etc. From that the lot sizes have been finalized in such a manor that they are generally consistent with a larger housing footprint typical similar development. These houses will fit within the general setbacks as identified within the project's Sub-Area Plan, see image below. Given the anticipated footprints of the homes and the lot configuration the majority of each lot will need to be "disturbed" during the construction of the home. Therefore, in order to get each home site ready for development and to be functional from a drainage stand point the lot will be graded with a standard "lot template", see above.



Areas to be Graded:

A significant amount of planning has gone into the configuration of the site and the location of the lots. The lots will all be located on top of the mesa. See the attached exhibit for locations of significant site features and vegetation as well as limits of the proposed grading. The grading plan preserves the natural site features including the bluff cliffs and significant stands of scrub oak around the perimeter of the Site. The grading will be limited to the areas on top of the mesa where it has been cattle grazed, see photos below for examples, and there is a significant lack of meaningful vegetation. These photos demonstrate that in order for them to be "native" within the development, they will need to be stripped, and replanted with native grasses as they are currently grazed and full of obnoxious weeds, cactus, and other undesirable invasive plant material. On the Preliminary Plan, areas have been called out for "restored" native as they will need to be brought back to a desirable native condition.



3. Compliance with Planned Developments

The proposed grading within the Preliminary Plans is necessary to prepare the site for residential development and is in compliance with the PDD's associated with the Site. Below is a summary of the criteria and how the plan achieves these objectives.

- **Southridge Preserve Planned Development District:** Sheet 3, I(c) – Grading and Drainage Guidelines

c. Grading/Drainage Guidelines

- i. Cut and fill areas and disturbance to native vegetation will be minimized.
- ii. Disturbance and impact to existing drainage pattern and natural systems will be minimized.

The Site has been designed such that the roadways and lot follow the natural grades to maintain historic drainage patterns. These roadways and lots are located within the grazed agricultural lands, thus preserving the significant native vegetation located on the perimeter of the Site.

The drainage has been configured such that the ponds will convey flows into the natural drainageways and the site will follow historic drainage patterns.

- **Southridge Preserve Planned Development District:** Sheet 3, II(a). Construction Practices

II. CONSTRUCTION PRACTICES

a. Minimize Disturbance Or Impacts To The Site During Construction

- i. Preserve natural features and vegetation by providing construction fencing or barricades.
- ii. Limit impact of construction and disturbance to areas immediately surrounding the primary structures or site improvements.
- iii. Maintain existing grade where possible, or restore it after construction is complete.

During construction, fences or natural barriers will be provided to protect the natural features and vegetation which are located on the perimeter of the site, outside of the limits of grading. The grading and disturbance will be located within the footprint of the site improvements and primary structures. Areas adjacent to the site infrastructure and housing units will generally be restored to a native condition during the grading and revegetation process of the project. These areas will all be restored to a stable native or landscape condition as required by the City in their GESC process.

- **RidgeGate Planned Development District – 7th Amendment:** Sheet 6, Section I – Site Planning – Grading/ Drainage Standards will Incorporate:

Grading/ Drainage Standards will Incorporate:

- Cut and fill areas are minimized, but sculpting of knolls on mesa top allowed to enhance visual protection.
- Disturbance to native vegetation is minimized
- Disturbance or impact to natural drainage patterns or systems is minimized
- Berms planted with vegetation extend the character of the bluffs and may be added at mesa edges to further conceal views from below

The Site has been designed such that the roadways and lot follow the natural grades to maintain historic drainage patterns and cuts and fills have been minimized. These roadways and lots are located within the grazed agricultural lands, thus preserving the significant native vegetation located on the perimeter of the Site. Detailed berming and landscaping character will be determined during the Final Plat stage.

- **RidgeGate Planned Development District – 7th Amendment:** Sheet 6, Section I – Construction Practices

II. Construction Practices

Minimize disturbance or impacts to the site during construction:

- Preserve natural features and vegetation by providing fencing or barricades, where possible.
- Limit the impact of construction to areas immediately surrounding the primary structures or site improvements.
- Maintain existing grade where possible, or restore it after construction is complete.

Drainage and Erosion:

- Control excess drainage, soil erosion and sedimentation during and after construction.
- Provide on-site detention to avoid storm water flows onto unprotected or unstable slopes.
- Include temporary drainage improvements as necessary.
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4. Conclusion

The grading as proposed within the Preliminary Plans is reasonable and is limited to the areas of Site Infrastructure and lots as required in the Planned Developments. The Site will be graded such that it will operate and function from a drainage stand point. The areas of disturbance are limited to the mesa area where natural vegetation is limited and the site features of the cliff bluffs are protected along the perimeter of the Site.

Attachments:

Hillcamp Vegetation & Agricultural Land Percentages Map

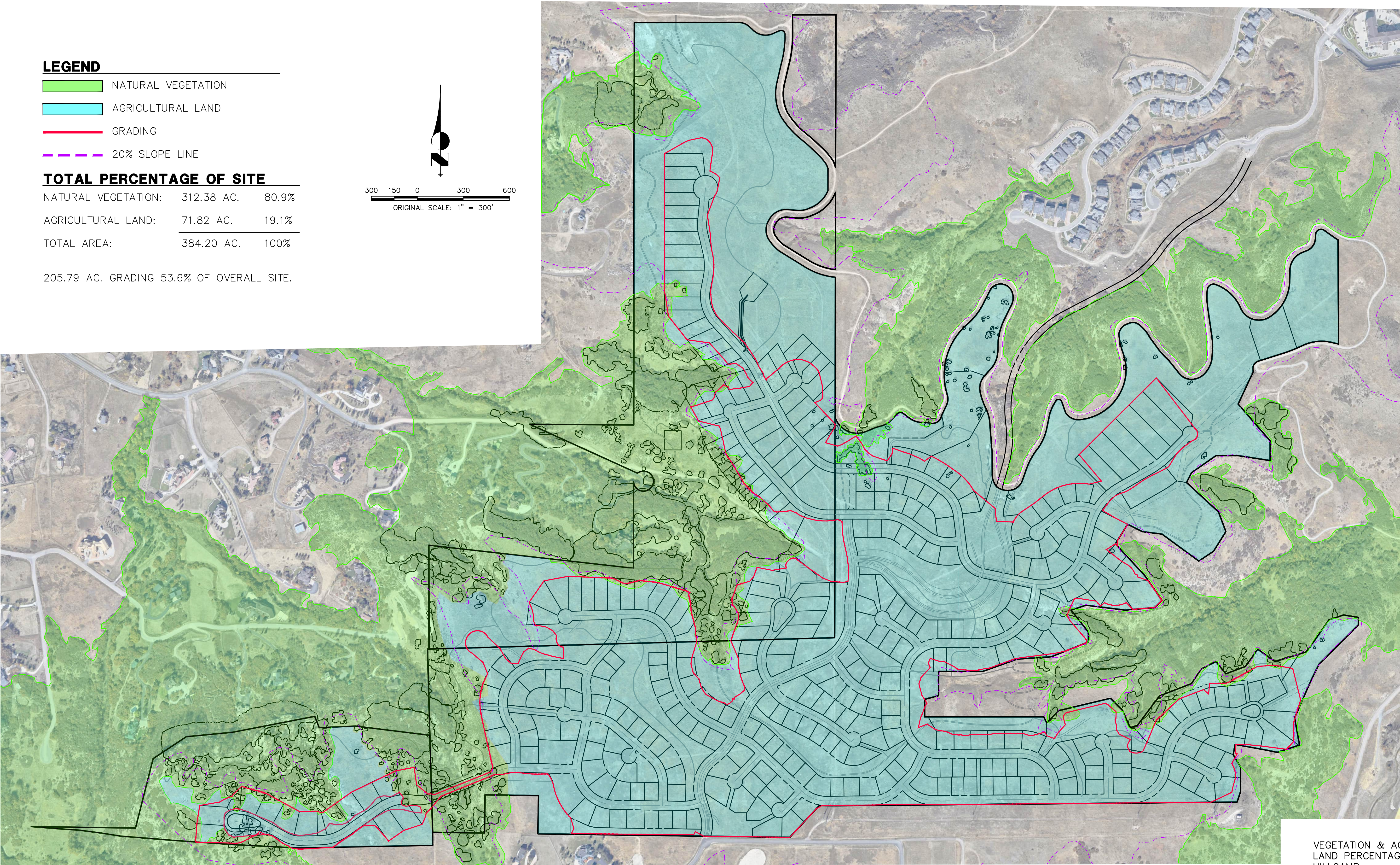
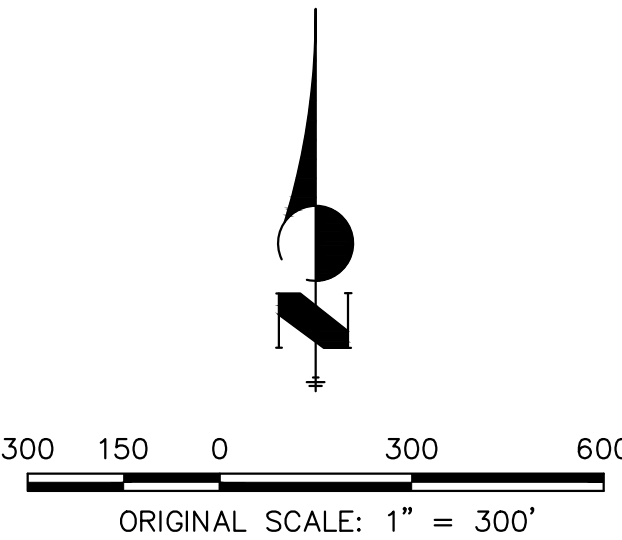
LEGEND

-  NATURAL VEGETATION
-  AGRICULTURAL LAND
-  GRADING
-  20% SLOPE LINE

TOTAL PERCENTAGE OF SITE

NATURAL VEGETATION:	312.38 AC.	80.9%
AGRICULTURAL LAND:	71.82 AC.	19.1%
TOTAL AREA:	384.20 AC.	100%

205.79 AC. GRADING 53.6% OF OVERALL SITE.



VEGETATION & AGRICULTURAL
LAND PERCENTAGES
HILLCAMP
JOB NO. 15950.12
DECEMBER 11, 2025
SHEET 1 OF 1