



GRADING & DRAINAGE REQUIREMENTS

Marshall Fire Rebuilding Resources

OCTOBER 12, 2022
This document may be updated as necessary



GRADING & DRAINAGE REQUIREMENTS

DID YOU KNOW?

Before construction can begin, a site must be graded to guide the surface water runoff away from the building(s) on the site. Grading and drainage plans demonstrate how runoff will be captured, redirected, and removed from the site, and can also influence how building heights are calculated. It is important that this aspect of site design is factored into rebuilding during the initial design stages to address the unique conditions of each site.

This document outlines general requirements for grading and drainage, along with important distinctions in meeting these requirements for neighborhoods affected by the Marshall Fire. Please review the [Superior Municipal Code Chapter 16](#) for more complete information. For additional Marshall Fire-specific information, go to the Town of Superior’s [Marshall Fire Community Planning and Rebuilding Effort](#) page.




GENERAL REQUIREMENTS

A grading and drainage plan must be submitted with each building permit application. Demonstration of compliance is required for permit approval. Specific requirements and methodologies used to satisfy requirements will vary by neighborhood, as discussed below.

AREAS WITH PREVIOUSLY APPROVED GRADING AND DRAINAGE PLANS




Many of the neighborhoods affected by Marshall Fire have grading and drainage plans that were approved prior to original development. Applications will be reviewed against these plans.

TOWN OF SUPERIOR PLANNING DEPARTMENT

-  [Planning Department Website](#)
-  planning@superiorcolorado.gov
-  303-499-3675 ext. 131

NEIGHBORHOODS	DATUM	REQUIREMENT
Sagamore	NGVD 29	Re-establish grading in a manner consistent with the original approval in order to minimize the impact of drainage onto surrounding properties and to ensure water flows to the intended storm sewers and regional detention facilities.
Rock Creek Ranch	NGVD 29	
Downtown Superior	NAVD 88	
The Ridge	NAVD 88	
Coal Creek Crossing	NAVD 88	

PUBLIC WORKS

-  [Public Works Office](#)
-  pwu@superiorcolorado.gov
-  303-499-3675 ext. 110

It is understood that changes to grading may occur due to the debris removal and rebuilding processes. Effectively, pre-fire elevations above sea level are known for these areas, and the Town has data from the approved plans to review applications against. This is generally referred to in the plans as proposed grades. If the grading plans reflected grades of 5505.2', 5505.9', 5506.1', and 5504.9' prior to the Marshall Fire on its respective property corners, the expectation will be for these grades to be reestablished as part of the rebuilding process. This will ensure storm water flows continue to function as designed, flow to intended swales, streets, inlets, and detention ponds and do not risk negatively impacting private properties.



AREAS WITHOUT PREVIOUSLY APPROVED GRADING AND DRAINAGE PLANS

Because of its longer history, Original Town does not have previously approved grading and drainage plans. In fact, many historic homes in Original Town were sited below the adjacent roadways that were constructed more recently than the homes they served. Because of this circumstance, grading and drainage requirements for Original Town, and the methodology used to determine lot grades, differ from the neighborhoods noted above that have existing grading plans to follow.

NEIGHBORHOODS	DATUM	REQUIREMENT
Original Town	NAVD 88	Derive lot grades from adjacent streets and alleys, rather than original pre-fire grades on lots, which may sit below roadways. See the Original Town Grading Plan for direction on grading and drainage design requirements. Parcels that abut alleys may drain to both alleys and streets. Grading swales along shared lot lines is expected to be shared, with each property grading half of the swale when feasible.

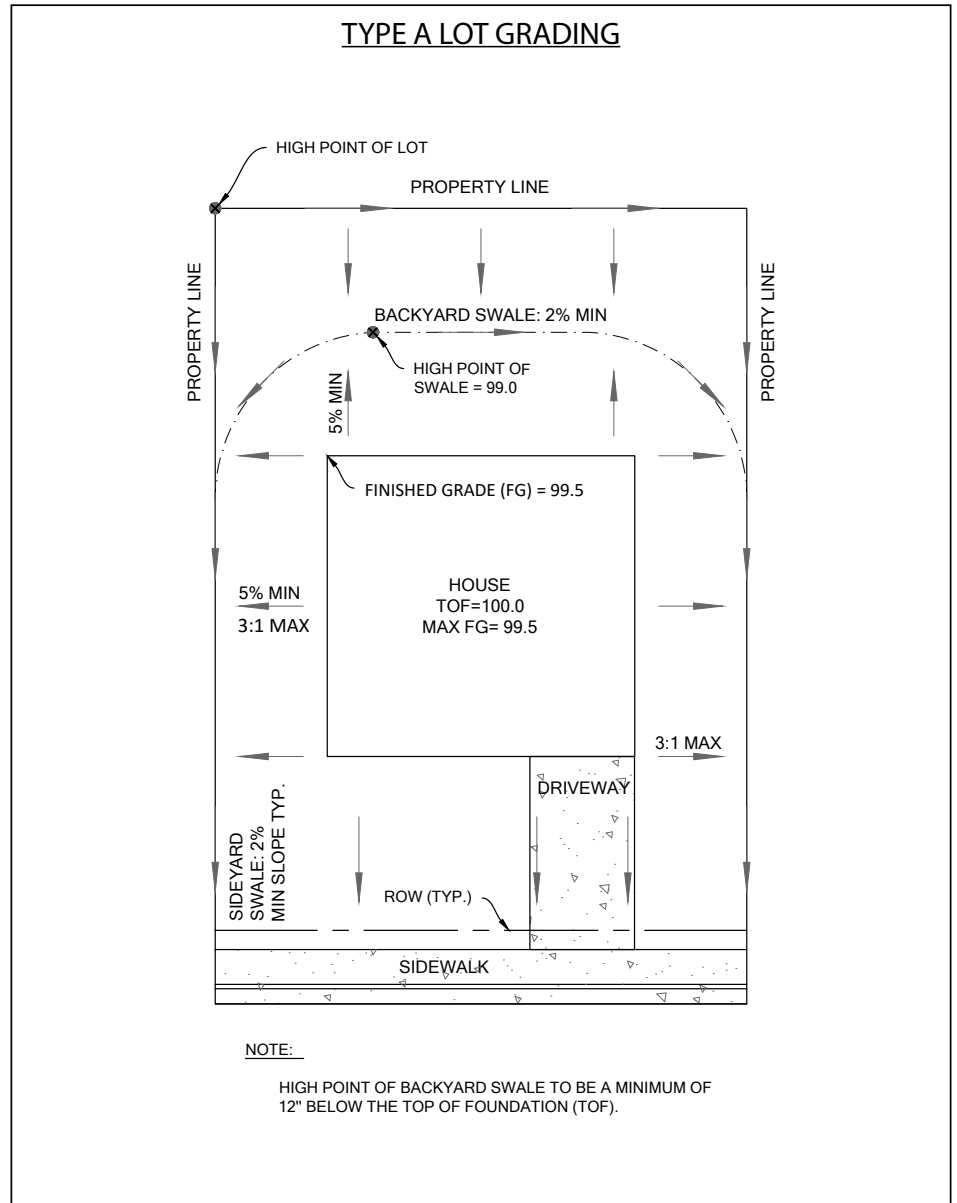
PLOT PLAN REQUIREMENTS

A site-specific plot plan for each rebuilt house is required. The plot plan must show the lot corner grades, high points, and swales as well as demonstrate compliance with previously approved drainage plans where applicable (such as Sagamore, Coal Creek Crossing, Rock Creek Ranch, the Ridge, and Downtown Superior). Illustrations on the following pages represent a range of grading types for different site conditions.

TYPE A LOT GRADING

(GRADING ALL DRAINAGE TO THE STREET)

Backyard swales convey surface water from the rear yard to the side yard swales (at a 2% minimum slope) which carry it to street for disposal through the street gutters and the public storm drainage system.

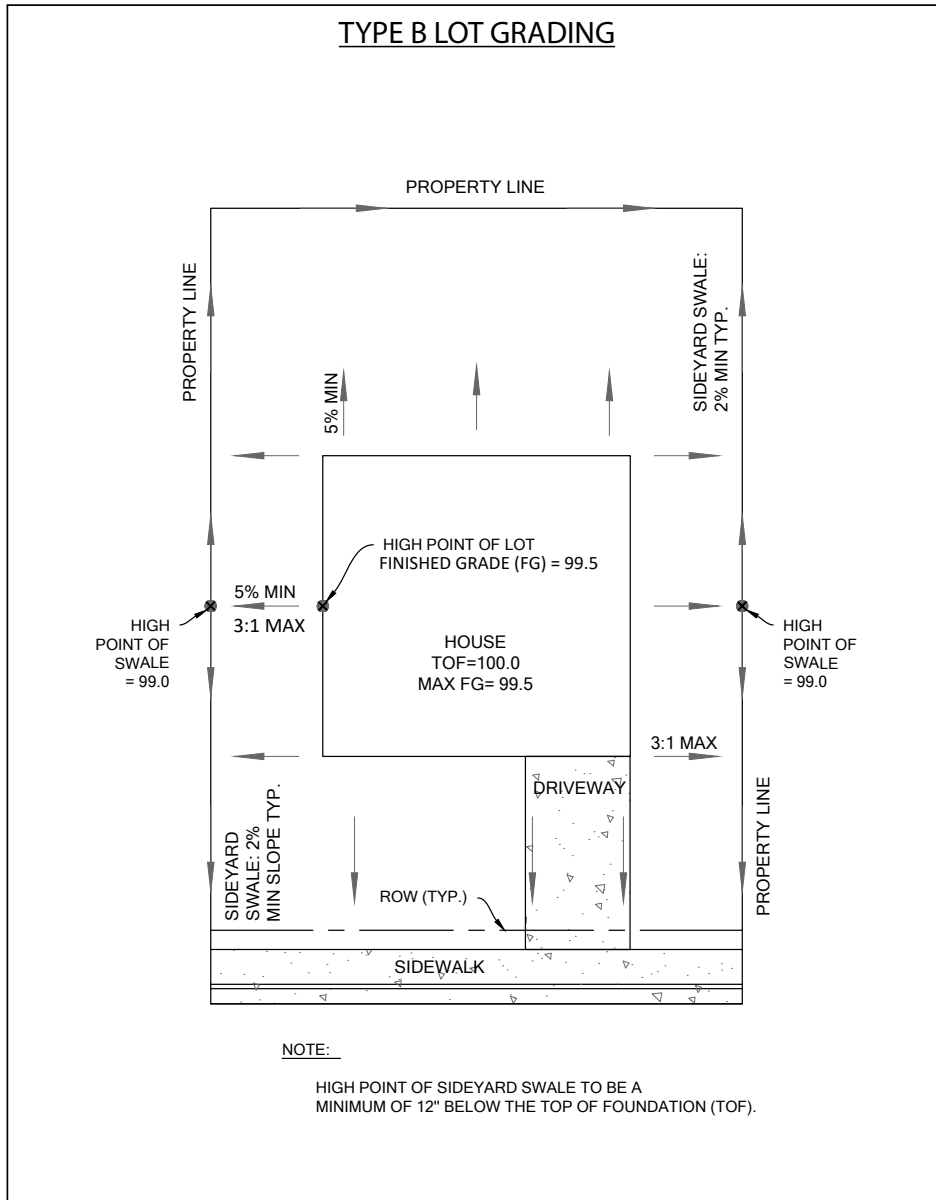


TYPE B LOT GRADING



(GRADING TO FRONT AND REAR OF PROPERTY)

Side yard swales (at a 2% minimum slope) with a high point along the side yard which conveys part of the lot drainage to the street and part of the lot drainage to the rear lot line.





TYPE G/W LOT GRADING

(GRADING TO FRONT AND REAR OF PROPERTY FOR GARDEN OR WALKOUT BASEMENT DESIGN)

Garden Level or Walkout Basement with side yard swales (at a 2% minimum, to a 33% maximum slope) and a high point near the side face of the house which conveys part of the lot drainage to the street and part of the lot drainage to the rear lot line.

