



Development Advisory – 41 – Revised
Revised Development Advisory - 40 Single Family Lot Grading
June 1, 2018

Pursuant to the TBA meeting on March 29, 2018 and subsequent discussions, the City has reviewed and revised the documents listed below from the Development Advisory 40. These revisions are as follows:

1. Clarified Final Lot Grading Certification language on 3rd checkbox.
2. Corrected Lot Grading 5.8 E's reference to G.

Should you have any questions or comments contact Jay Tate at 757-382-6263 or at jtate@cityofchesapeake.net



Department of Development and Permits
306 Cedar Road, 3rd Floor
Chesapeake, VA 23322
Tel: (757) 382-6101

ROUGH LOT GRADING CERTIFICATION

(Required prior to plat recordation)

I certify that the lot grades for _____ are within 0.4' of
(Title on Plat)

the proposed grades and a minimum positive slope of 0.25% exist in the direction indicated on the approved plans dated _____.

This certification is based on an as-built grading survey performed by: _____.

Company Name

(SEAL)

P.E. or Surveyor Signature

Date

Note: Deviations from the above referenced plan must be identified and approved by field change request or plan revision, prior to submittal of this certification.



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FINAL LOT GRADING CERTIFICATION

Prior to the release of a Certificate of Occupancy, the City of Chesapeake requires either a Licensed Surveyor or the Builder/Owner to execute the following certification:

Certification of lot grading for building permit # _____

For Address _____

The signee below has conducted the appropriate survey to certify the following minimum standards have been met: (initial each box)

- The lot grading has been established to within 0.1' of the grades shown in the approved site plan and the lot grading provides a minimum positive slope of 1.0% for the lot.
- Minimum fall of six inches within the first 10 feet from the building for pervious surfaces (lawns, landscaping, etc.), in accordance with IRC R401.3.
- Minimum fall of 2% slope away from the building for all non-covered impervious surfaces within 10 feet of the building foundation (excluding landings at exit doors and covered porches) in accordance with the exception to IRC R401.3.
- The garage floor and building finished floor meet or exceed the individual single family site plan specified grades.

Deficiencies found within the first year of the C.O. issuance must be corrected by the builder within 60 days of notification. If upon investigation the City determines the new homeowner or adjacent homeowners have negatively affected drainage, then the builder shall not be responsible for remedial action.

By signing below, I acknowledge that if this certification is found to be inaccurate, the City may discontinue the allowance for Builder/Owner certification and impose the requirement that future certifications must be from a Licensed Surveyor.

 Signature of Land Surveyor

Licensed Surveyor
 or Notary Stamp:

 Signature, Builder/Owner (Notarize below)

State of Virginia
 City of _____, to wit:
 The foregoing instrument bearing date

_____, 20____
 was acknowledged before me this _____ day
 of _____, 20____
 By: _____

Notary Public

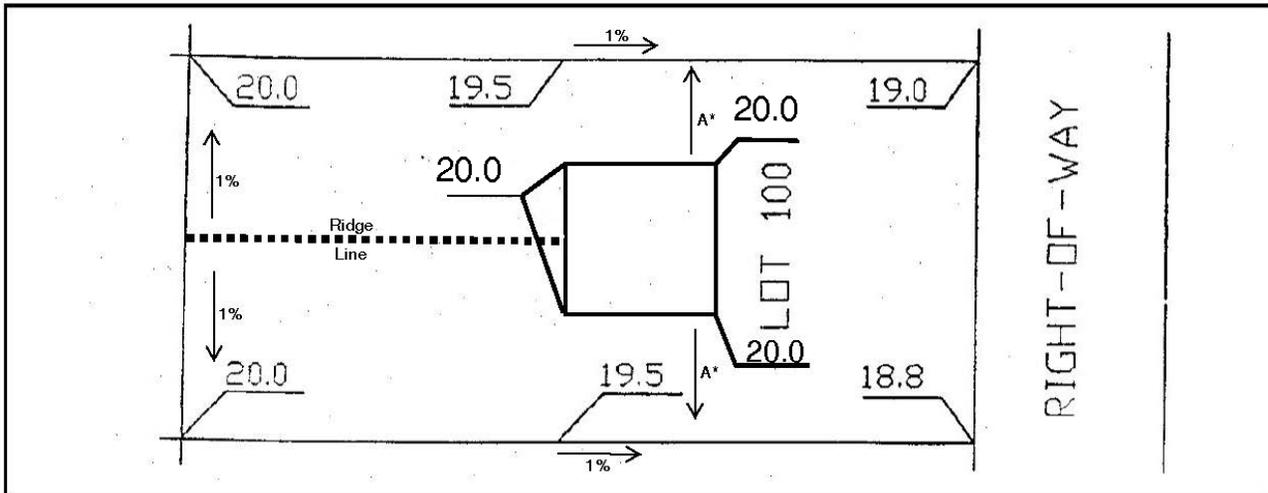
My commission expires: _____

Effective for all permits issued after June 1, 2018

5.8

LOT GRADING

- A. A subdivided lot must be self-sufficient with respect to drainage and not dependent on the maintenance of the adjoining property owner. Any drainage improvement that is required to drain more than one lot shall be constructed or bonded prior to the recordation of the corresponding subdivision plat.
- B. All interior lots within new subdivisions shall be TYPE A drainage (no rear yard drainage facilities) with a minimum acceptable slope of 1%. If the 1% minimum slope is proven to be impracticable for those proposed lots adjacent to an existing subdivision or adjacent to property that is not part of the subdivision, a minimum acceptable slope not less than 0.5% shall be provided.
- C. Private drainage swales can only be used to drain a single lot. Private drainage is defined as runoff from private property only and no public right of way runoff. Each lot shall drain directly into a public system or shall be designed to drain into a private piped system contained within a recorded private drainage easement. Maintenance of private systems shall be the responsibility of the adjacent property owners. The City will consider a variance for the use of paved private swales when conditions warrant. Said swales shall not be located on a common property line and private drainage easements will be required.
- D. Construction plans shall provide sufficient grades, ridge lines and directional arrows to define the proposed drainage pattern of the entire lot. A minimum of ten proposed lot grades shall be provided; four at the corners; two at the side yard midpoints; and four at the building envelope corners. (See 5.8 M.2 & M.3.) Note Type A, B, or AB lot drainage for each lot on the plans.
- E. Type B lot grading for R-15 and smaller lots will require enhanced grading design to ensure 1% minimum positive slope is provided from any point on the lot (most remote point) to the lot outfall or collection point. Driveways that drain away from the right-of-way will require a profile to ensure the garage is not subject to flooding. Lot grading for lots larger than R-15 shall adhere to subsection **5.8.G**
- F. The garage finished floor must be sufficiently elevated and sloped to drain liquids to the vehicle entry doorway per Section R309.1 of the IRC. The driveway (impervious surface), within ten feet of the building, must slope a minimum of 2% away from the building as per section R401.3 of the IRC. Other slopes must meet the requirements of the PFM volume I Chapter 5 as follows:
 - 1. Flow line to right-of-way – 6 inches plus ¼ inch per foot (Generally 8-1/2 inches total)
 - 2. First 10' from garage – ¼" per foot (exclusive of garage lip).
 - 3. Driveway slope – 1% minimum for portion of driveway not addressed in #1 & 2 above.



NOTES: 1. Typical type "A" lot grading shown

2. A* - requires 6" fall in 1st 10', 1% thereafter
3. "AB" Lot grading locates ridge line at the house
4. "B" Lot grading requires enhanced grading design

- G. Sufficient lot grading shall be provided for lots in the Rural Overlay District & estate type lots to ensure acceptable lot drainage 100' around the principle structure.
- H. The limits of lot grading which requires considerable fill (greater than 1.0 ft.) shall be clearly delineated (shaded, cross-hatched, etc.) on the subdivision development plan and is the responsibility of the developer. For sites with more than 1 foot of fill, certification by a professional engineer or duly qualified individual registered in Virginia shall be submitted to the Building Official to sufficiently indicate appropriate construction techniques, inspections and geotechnical testing occurred to assure the suitability of the soils and foundation designs for each lot to support the home in accordance with the Virginia Uniform Statewide Building Code. The certification shall be submitted with the building permit application along with the required construction documents prior to permit issuance.
- I. The potential for bank erosion shall be minimized by grading lot away from detention facilities. Significant runoff shall drain to the road or storm drainage collection systems. Lots shall generally highpoint at the lake top of the bank.
- J. Subdivision development plans that propose overland flow onto adjacent offsite property is generally unacceptable. Consideration will be given for existing grading conditions.
- K. Commercial/Industrial subdivision plans shall provide lot grading to facilitate drainage until final development of individual parcels.

L. Single Family Detached Lot Grading Policy

1. Construction plans for all new subdivisions will show proposed lot grades to the nearest 0.1'.
2. A Rough lot Grading Certification prepared by an engineer or land surveyor shall be submitted to the Department of Development & Permits prior to plat recordation certifying that lot grades are within 0.4' of proposed grades and a minimum positive slope of 0.25% exist in the direction indicated in the approved subdivision plan. Additional fill needed for the four building pad corner grades are not required for Rough Grading certification. Certification may be waived by the City in cases where approved drainage plans showing existing grades meet the criteria.
3. Individual single family site plan showing lot grading must be submitted with the building permit application. This plan must be in accordance with the drainage plan approved by the Development & Permits. In the event that previously approved drainage plan does not exist, plan shall be prepared in accordance with the lot grading standards established in the Public Facilities Manual Volume I. In the event the City determines a surveyor and/or company submits a site plan that erroneously indicates the lot grading is in accordance with the latest subdivision construction plan, the City will require the single family site plan be reviewed by the Engineering Division to ensure compliance.
4. Lots shall be graded to within 0.1' of the final grade prior to issuance of a Certificate of Occupancy (C.O.). In addition, a minimum grade of 1.0% minimum slope must be provided. A Final Lot Grading Certification is required from a Certified Land Surveyor (CLS) or the Builder confirming this lot grading prior to Issuance of a C.O. Temporary C.O.'s may be issued under extenuating circumstances. Certification from said Builder will be accepted only if there have not been previous inaccuracies in Lot Grading submittals, as determined by the Department of Development & Permits. If it is determined a builder has inaccurately certified lot grading, the City may require a licensed surveyor to provide the Final Lot Grading Certification for future applications for a time period to be determined by the Director. It is possible to improve the previously approved lot grading plan, but the revision must be approved by the Engineering Division.
5. Deficiencies found within the first year of the C.O. issuance must be corrected by the builder within 60 days of notification. The Department Director may grant exceptions or accept surety on a case by case basis under extenuating circumstances.
6. If upon investigation the City determines that the new homeowner or adjacent homeowners have negatively affected drainage shown on approved drainage plan(s), then the builder shall not be responsible for remedial action.

APPENDIX 27

SINGLE FAMILY DETACHED LOT GRADING POLICY

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3. An individual single family site plan showing lot grading must be submitted with the building permit application. This plan must be in accordance with the drainage plan approved by Development and Permits. In the event that previously approved drainage plans do not exist, plans shall be prepared in accordance with the lot grading standards established in the Public Facilities Manual, Volume I. In the event the City determines a surveyor and / or company submits a site plan that erroneously indicates the lot grading is in accordance with the latest subdivision construction plan; the City will require the individual single family site plan to be reviewed by the Engineering Division to ensure compliance.
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Effective June 1, 2018

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May 2018

Residential Site Plan General Notes

General Notes:

1. **Impervious Surfaces-** Patios, walk ways and driveways that are within 10 feet of the building foundation shall be sloped a minimum of 2% or ¼ inch per foot away from the building per Section R401.3 of the International Residential Code. Covered porches, landing and stoops may be reasonably level but must still provide enough of a slope to allow drainage and not exceed a 2% slope.
Exception- Impervious Surfaces for structures designed to be accessible may submit a request for a Code Modification with a design to show the drainage meets the intent of the code.
2. **Finish Grade Height-** Due to the high water table in this area, the height of the grade in the crawl space must be equal to or greater than the exterior grade elevation unless an *approved* drainage system is provided as per Section 408.6 of the International Residential Code.

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