

THE CORPORATION OF THE TOWN OF WASAGA BEACH POLICY MANUAL

SECTION NAME:	POLICY NUMBER:
Building and Development Services	8-4
POLICY:	REVIEW DATE:
Infill Lot Grading and Drainage Policy	March 2027
EFFECTIVE DATE:	REVISIONS:
February 2020	Revision 9 – April 2025
	ADMINISTERED BY:
	Building and Development Services

TABLE OF CONTENTS

Section 1.0 – Introduction	. 2
Section 2.0 – Definitions	. 2
Section 3.0 – Policy	. 4
Section 4.0 – Preparation of the Lot Grading and Drainage Plan	. 5
Section 5.0 – Outside Agencies	. 6
Section 6.0 – Road Occupation Permit	. 6
Section 7.0 – Design Criteria	. 6
Section 8.0 – Construction of 4 to 10 Dwelling Units	11
Section 9.0 – Mandatory General Notes	12
Section 10.0 – Geotechnical Investigation	13
Section 11.0 – As-Built Lot Grading / Certification	14
Section 12.0 – Grading Fee, Deposit and Release	15
Section 13.0 - Maintenance	16
APPENDIX A LOT GRADING AND DRAINAGE PLAN REVIEW CHECKLIST	18
APPENDIX B EXAMPLE LOT GRADING AND DRAINAGE PLAN	19
APPENDIX C SANITARY SEWER SERVICE CONNECTION DETAIL	20
APPENDIX D ROOF LEADER SOAKAWAY PIT DETAIL	21
APPENDIX E FOOTINGS AND SEASONAL HIGH GROUNDWATER TABLE	22
APPENDIX F SUMP PUMP DISCHARGE DETAIL	23
APPENDIX G OFF-ROAD CATCHBASIN AND BOULEVARD GRADING	24
APPENDIX H LOT GRADING CHECKLIST AND CERTIFICATE	25
APPENDIX I ROAD OCCUPATION PERMIT APPLICATION	29

Section 1.0 – Introduction

When a new dwelling or building is constructed, it is essential that the lot be graded properly to ensure that surface drainage is directed away from the building such that it does not adversely affect the neighbouring properties including the Municipal roadside. In order to ensure that such lot grading is completed, the Town of Wasaga Beach has implemented this Infill Lot Grading and Drainage Policy to establish guidelines for the design, construction and certification of individual lot grading. This Policy is enforced in relation to applicable Building Permit applications, and its requirements are incorporated into the Building Permit.

In some cases, additions and/or major structural renovations to an existing dwelling may also create potential adverse effects to surface drainage and therefore, such Building Permits may also require a Partial Lot Grading Plan in conformance with this Policy. Examples include reduced side yard setbacks from property line that reduce the potential for proper surface drainage grading (swales) etc. The Town's Building Department staff will review such Building Permit applications and determine if a Partial Lot Grading Plan is required.

Section 2.0 – Definitions

"Adjacent": beside, abutting or contiguous to.

"**Developer**" the registered Developer of the Lands for which a Development Agreement has been registered.

"Development": as defined within the Conservation Authorities Act:

- The construction, reconstruction, erection or placing of a building or structure of any kind;
- Any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure;
- Site grading; or,
- The temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

"**Development Agreement**": the agreement between the Town and the Developer relating to the development of the land in accordance with the Planning Act.

"**Drainage**": the natural or artificial removal of surface and sub-surface water from an area to a preferred receiving area.

"Erosion": the detachment and movement of soil, sediment or rock fragments by water, wind, ice or gravity.

"Estimated seasonal high groundwater table elevation": the estimated elevation of groundwater at the subject lot based on the water table elevation observed / measured in

the test pit of the subject site with adjustment to account for seasonal fluctuation based on the Town's groundwater monitoring data.

"Fill": any type of imported or relocated material deposited or placed on the Site.

"Finished Grade": the approved elevation of ground surface of the Site upon which Fill has been placed or grade of land that has been altered.

"Foundation Drain": (also known as weeper or weeping tile) is a perforated pipe installed at the base of a building foundation in order to drain away excess groundwater; Used to prevent groundwater from building up against a foundation, thus protecting the foundation from leaking or shifting.

"Groundwater": is water located beneath the ground surface in soil pore spaces and in the fractures of rock formations. Groundwater is recharged from, and eventually flows to, the surface naturally; natural discharge often occurs at watercourses, seeps and wetlands.

"Hazard Limit": the outer extends of land that could be unsafe for development because of naturally-occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock.

"Infill lot": any existing vacant / undeveloped residential lot of record.

"Institutional": land or buildings for nonprofit or public purposes including but not limited to, hospitals, government buildings, religious institutions, churches, public schools, colleges, cultural centers, libraries and public recreational and park buildings.

"Limit of Tree Preservation": is defined by the plan(s) approved by the Town for preservation of trees on the subject lands or within the vicinity of the proposed development in accordance with the requirements of the Town's Tree Preservation Bylaw

"Lot Grading and Drainage Plan": a plan that details and specifies the design elevations, surface gradients, swale locations and other drainage information that are required for lot grading, designed by a Certified Engineering Technologist (C.E.T.), or Professional Engineer (P.Eng.).

"**Parkland**": is generally understood to be comprised of open space or environmentally protected land.

"Partial Lot Grading and Drainage Plan" a plan that details and specified the design elevations, surface gradients, swale locations and other drainage information, but only for the areas affected by the proposed construction or site alteration and designed by a C.E.T., OLS, P.Eng., Architect or designer with experience in grading and drainage.

"Partial Lot Grading Exemption Form": A document available upon request to exempt a Partial Lot Grading and Drainage Plan, provided it is demonstrated that the proposed construction will not adversely affect neighbouring properties.

"**Provincial Planning Act**": sets out the ground rules for land use planning in Ontario and describes how land uses may be controlled, and who may control them.

"**Regional Flood Plain**": the area flooded during the regional storm event (Hurricane Hazel); Regulated by the respective Conservation Authority for the development.

"**Residential**": developments of homes ranging from single family homes to apartments and condominiums.

"**Residential Subdivision**": developments with the division of lands for the purpose of constructing homes.

"**Retaining Wall**": a structure that has been designed and constructed to resist the lateral pressure of soil where there is a change in ground elevation.

"**Sub-Structure**": the following building components; foundation wall, footings, floor slab, garage floor/slab.

"Swale": a depression in the ground surface, utilized for the purpose of infiltrating and/or conveying surface drainage.

"Topsoil": means the upper portion of soil, usually dark coloured and rich in organic material.

"Town": the Corporation of the Town of Wasaga Beach and any person assigned to a project by the Town to carry out work on their behalf.

"Watercourse": means a natural or man-made channel or swale in which water flows, either continuously or intermittently with some degree of regularity.

Section 3.0 – Policy

The Town of Wasaga Beach requires that all new lots created by severance, infill lots, or lots in which a Building Permit application is made to construct a new dwelling, shall be accompanied by a Lot Grading and Drainage Plan. Where Building Permit applications propose to add to an existing dwelling, raise a dwelling, add an accessory building (i.e. detached garage), and/or replace a structure that had to be demolished due to fire, a Partial Lot Grading and Drainage Plan shall be required. The Chief Building Official may waive the requirement for a Partial Lot Grading Plan if it is demonstrated that the construction will not negatively impact neighboring properties, in which case a Partial Lot Grading Exemption form must be submitted. A Lot Grading and Drainage Plan shall be required for the following:

• All properties defined as Infill Lots;

A Partial Lot Grading and Drainage Plan shall be required for the following:

- Additions having a ground floor area in excess of 37.5m2 (400 sq. ft.);
- Accessory structures in excess of 37.5m2 (400 sq. ft.);
- Construction of footings and/or foundations closer than 3.0m (10 feet) to the property line where the structure extends more than 4.5m (15 feet) in length, other than pier type footings; and/or
- Raising a dwelling/cottage to add a basement or crawlspace;

This Policy shall also ensure maintenance of, or acceptable revisions to, the grading and drainage design established on lands developed through the Building Permit applications for future works, which require excavation (i.e. footings, foundation walls, etc.).

This Policy is consistent with Division A-Part 3, Table 3.2.1.1,of the Ontario Building Code. (OBC) Specifically functional statements F60, F61, F62, & F63.

The OBC also sets out requirements for lot grading and drainage, as stipulated in the following articles:

- Article 9.14.6.1 "The building shall be located or the building site graded so that water will not accumulate at or near the building and will not adversely affect adjacent property"
- Article 9.15.4.6 "Exterior foundation walls shall not extend less than 150 mm (5 7/8") above finished ground level"

Section 4.0 – Preparation of the Lot Grading and Drainage Plan

Prior to the issuance of the building permit, the Owner/Builder/Applicant shall submit a digital copy of the Proposed Lot Grading Plan to the Town for review and acceptance.

The Lot Grading Plan shall be prepared by a Professional Engineer (P.Eng.) or Certified Engineering Technologist (C.E.T.) experienced in grading and drainage design and the plan shall conform to the requirements in Section 6.0 of this policy.

The Lot Grading Plan shall be prepared to a standard metric scale on a ledger sized sheet or Standard A1 Sheet, as may be required by the Town.

In the event that an Owner is applying to the Town for Consent to Sever a property, a Condition of Consent will be that the Owner shall provide an Overall Lot Grading and

Drainage Plan to demonstrate that positive drainage will be achieved for all created lots that are subject to the Application. In cases where severances will create a total of three (3) or more lots, a Site Development Agreement may be required at the discretion of the Town Engineering and Planning Departments. Following the severance, individual lot grading plans shall be required for Building Permits on each lot. The individual plans must be consistent with the accepted overall lot grading plan.

Section 5.0 – Outside Agencies

If the subject property falls within the regulatory area of the Nottawasaga Valley Conservation Authority, then it will require their approval prior to the issuance of a Building Permit.

If the subject property falls within 400m of a Ministry of Transportation Highway Corridor, then a permit may be required from the Ministry of Transportation prior to the issuance of a Building Permit. MTO permit requirements are to be confirmed by the applicant directly with the MTO.

If the subject property falls within a County of Simcoe Road Corridor then a permit will be required from the County of Simcoe prior to the issuance of a building permit.

If the subject property is adjacent to a Provincial Park, then a Letter of Authorization may be required from Ontario Parks.

Section 6.0 – Road Occupation Permit

The property Owner must apply for a Road Occupation Permit and provide the permit fees and deposits prior to the Lot Grading and Drainage Plan being "Accepted for Construction" by the Town. Once the Lot Grading and Drainage Plan is found to be acceptable by the Town, the plan will be "Accepted for Construction" and the Road Occupation Permit will be issued. A copy of the Road Occupation Permit Application is included in Appendix F.

Section 7.0 – Design Criteria

A Lot Grading Plan, bearing the signature and seal of a competent professional experienced in grading and drainage design, is required, indicating the means by which the Owner/Builder/Applicant will ensure that each lot is to be properly graded and drained, and does not adversely affect neighboring properties.

The grading design shall have regard for existing vegetation, which is to be preserved as much as possible.

The Lot Grading and Drainage Plan Review Checklist (Appendix E) is to be completed by the Owner's Engineer/Technologist and a copy of the checklist is to be included in the plan submittal package.

Each Lot Grading and Drainage Plan must include the following:

- 1. A north arrow shall be shown.
- 2. All plans received shall be to scale, to a Metric 1:200 or 1:250. Freehand drawings will not be accepted.
- 3. Name of street, municipal address (if available), lot number and plan or concession number, plus sufficient detail to describe the location.
- 4. A clear key plan, detailing the general location of the subject property, shall be included on the plan.
- 5. The legal survey distances around the perimeter of the property shall be labeled.
- 6. Existing roadway boulevard / ditch elevations are to be provided from beyond the frontage of the lot for at minimum one additional lot width (15 metres minimum) in both direction to confirm direction of roadway drainage flow in order to confirm invert elevation and direction of driveway culvert etc.
- 7. The location of buildings and structures, existing and/or proposed, including those on adjacent lands.
- 8. A test pit location is to be shown on the plan within the proposed construction's footprint or in close proximity to the proposed construction, complete with the date of the test pit and the observed groundwater table elevation. Based on the observed groundwater table elevation, the plan shall provide an "estimated seasonal high groundwater table elevation". If groundwater is not encountered, then the test pit must extend down to a minimum of 1.0 metre below the proposed underside of footing elevations, to account for possible seasonal fluctuations. If the Test pit is completed outside of the months of March / April, then an Estimated Seasonal High Groundwater Table Elevation is required to be established. The designer is encouraged to review groundwater monitoring data on the Town's website to determine applicable seasonal fluctuations in order to estimate the seasonal high elevation.
- 9. The location of all downspouts, sump pump and other drainage discharge points. All points shall discharge to splash pads and the location and orientation of splash pads shall be directed away from adjacent properties. The piping and direct discharge of sump pump flows over sidewalks and curbs is unacceptable. Downspouts connected to a soak away pit must have an overland discharge point, in accordance with Town of Wasaga Beach Std.Dwg.No.11. Further, pipe from downspouts to soak away pits must be shown and labeled with material. Downspouts shall not discharge onto impervious areas, or be directly connected to the storm sewer.
- 10. The locations of all municipal watermain, storm and sanitary sewers as well as utilities within the adjacent municipal right-of-way shall be shown and labeled accordingly.

- 11. The locations of all municipal and utility services to the subject property are to be shown and labeled accordingly.
- 12. All proposed sanitary sewer service connections shall be in accordance with Town of Wasaga Beach Standards and Std.Dwg.No.12A. The designer shall try and avoid locating sanitary service cleanouts within the driveway. All proposed sanitary service laterals shall be offset a minimum 1.5 metres from side property line.
- 13. All proposed sanitary sewer service connections shall be equipped with a 200mm diameter cleanout chamber at property line in accordance with Town of Wasaga Beach Std.Dwg.No.12A.
- 14. Any existing sanitary sewer services being connected to within the minimum frontage setback of the lot per the Town's Zoning By-law will require to be equipped with a 200mm diameter cleanout chamber at property line in accordance with Town of Wasaga Beach Std.Dwg.No.12A.
- 15. All proposed water services shall be in accordance with the Town of Wasaga Beach Engineering Standards and Std.Dwg.No.12B. The designer shall try and avoid locating water service curbstops within the driveway. All proposed water services shall be offset a minimum 1.5 metres from side property line.
- 16. If unavoidable to locate a sanitary cleanout in the driveway, it shall be equipped with a cast iron lid as per Town Standard Drawing STD.DWG.No.12A. Although gravel driveways are discouraged, if it is within a gravel driveway, the lid shall be installed 150mm below finished grade.
- 17. All elevations should be to Geodetic Datum (NAD83 / UTM Zone 17N, CGVD28), with the Geodetic Coordinate System noted in the title block. A Temporary Benchmark in the immediate area shall be identified / shown on the plan
- 18. Existing elevations on the road, ditch, boulevards, curbs, subject lot and adjoining lands. Sufficient existing grades on adjacent properties must be shown to indicate the drainage pattern.
- 19. The existing grade elevations at all lot corners and significant changes in grades along property lines shall be clearly indicated.
- 20. The existing vegetation (trees), including size and type of trees are to be clearly indicated. All trees that are to be removed or retained shall be shown on the plan. Tree preservation is encouraged.
- 21. Provide a Building Elevation Table, which specifies the following proposed elevations:
 - a) Apron Elevations
 - b) Top of Garage floor
 - b) Top of Finished First Floor

- c) Top of Foundation Wall
- d) Top of Basement Slab (minimum 500mm above "estimated seasonal high groundwater table elevation")
- e) Weeping tile invert elevation (minimum 300mm above "estimated seasonal high groundwater table elevation")
- f) Underside of Footing
- 22. Following installation, the weeping tile sleeve invert elevation shall be surveyed and confirmed in writing by the Contractor/Builder to the Town Building Inspector prior to the backfill inspection. A note shall be added to all lot grading plans regarding this.
- 23. Indicate the proposed grade elevations at all corners of the house, property lines and particularly at each corner of the lot.
- 24. Should the building be adjacent to an underground pipe such as a storm sewer rear lot catch basin lead within an easement, the underside of footing must be at or lower than the invert elevation of the adjacent pipe. This is to ensure that the structural bearing pressure does not extend to the pipe.
- 25. When reasonably possible, the apron elevation of the proposed dwelling must be at least 300mm higher than the edge of adjacent municipal road.
- 26. Swales shall be located entirely within the limits of the lot and shall match existing grade on the lot lines. Written permission from the neighbouring property owners will be required if it is determined that construction will disturb their property or if grading is to be undertaken on the adjacent lands.
- 27. All Lot Grading Plans shall include typical cross-sections for swales.
- 28. Swales and slopes must be detailed with sufficient information to show the direction of drainage and the amount of slope. The minimum gradient for all rear and side yard swales shall be 1% with a minimum depth of 150mm. The maximum slope for any grading on the lot is 3:1.
- 29. Drainage flows shall be directed away from all buildings at a minimum grade of 2%. Ponding of surface water adjacent to foundation walls is unacceptable.
- 30.150mm diameter subdrains shall be provided under all swales with gradients of less than 1.0%. For common lot line swales, the subdrain shall be offset from property line by minimum 0.3m. Subdrains shall be perforated, corrugated plastic pipe with geotextile. Subdrains shall be bedded in a 300mm x 300mm clear stone trench and wrapped with filter fabric.
- 31. Lot must provide a minimum width of 0.9m with maximum grade of 5% on at least one side of the house to allow near flat access around the side of the house.

- 32. The maximum lot surface grade at any location shall be 5% and a slope of 3 parts horizontal to 1 part vertical shall be used to take up the grade differentials in excess of this 5% slope. Slopes greater than 5% shall incorporate other methods to prevent erosion and shall be specified by the Designer.
- 33. Sediment and erosion control measures shall be implemented to prevent migration of silt and sediment from the subject lot to any adjacent lot, including municipal right-ofway. Special care shall be taken to ensure that silt and sediment laden surface water does not enter any watercourses or environmentally sensitive areas, either overland or through the storm drainage system. The Owner/Builder/Applicant shall comply with all directives issued by any of the environmental agencies.
- 34. Interim grading measures may be required during building construction to ensure that drainage does not adversely affect the neighboring properties. Rough grading of the property shall be completed such that drainage is contained on site or controlled to a positive outlet.
- 35. In many areas within the Municipality, the municipal drainage systems are limited or non-existent. As such the lot grading design must consider ways and means to keep any increase in surface water run-off from the subject site to a minimum, utilizing acceptable surface water retention techniques including low impact development (LID) within the lot and/or stormwater retention for irrigation purposes such as rain barrels or holding tanks. In areas where positive storm drainage is not available within the Municipal road allowance, the property Owner will be required to grade the boulevard in such a way that ponding does not occur on the surface of the road or sidewalks. The property Owner may be required to provide a soak away pit system with catch basin.
- 36. Soak away pits are to be sized and constructed in accordance with the most current version of the Ministry of Environment Stormwater Management Planning and Design Manual and Town of Wasaga Beach Std.Dwg.No.11. The minimum size of the soak away pit shall be 1.0m x 1.5m x 1.0m deep.
- 37. Surface water infiltration galleries / soak away pits shall have a surface depression with a minimum depth of 150 mm lower than adjacent grade. Further, they must be offset a minimum of 1.0m from any property line and 4.0m from any proposed or existing dwelling foundation, as per Town Engineering Standards.
- 38. Where a retaining wall or other similar structure is proposed on the property, it shall be shown complete with top and bottom of wall elevations at the ends and along the length of the wall, and material. Retaining walls are to be constructed of acceptable treated lumber, architectural block or approved equivalent. Filter cloth shall be placed behind all retaining walls to prevent the migration of fines. If any retaining wall meets or exceeds 1.0 meter in height, a minimum 1.2 meter high safety fence will be required on top of the wall. Proof of engineering design will be required including engineering

stamped drawing for retaining walls meeting or exceeding 1.0 metre in height. Retaining walls are not to encroach into the Municipal road allowance. Retaining walls along lot lines shall be constructed wholly within the Applicant's lot. The Town strongly discourages the use of retaining walls and promotes coordinating with adjacent land owners. Grading on neighbouring lots is acceptable to the Town, with written permission from the property owners.

- 39. Headwalls must be provided for all driveway entrance culverts. Headwalls shall be constructed of cast in place concrete, or RisiStone (SienaStone) architectural block, or Town approved equivalent, complete with filter cloth to prevent the migration of fines. Timber headwalls are not acceptable. When the roadway ditch depth is equal to or less than 1.0m, headwalls are not required and driveway culverts may have end treatments such as stone, hot mix asphalt paving, or sod to satisfaction of the Town.
- 40. Minimum driveway grade shall be 2% and shall not exceed a maximum grade of 6%, measured from the garage or dwelling face, to the edge of roadway pavement.
- 41. In rural areas / roadways without curb and gutter, the boulevard area of the driveway must be graded consistent with the topography of the adjacent shouldering. A downward gradient of -2% minimum is to be provided behind the roadway edge of pavement for a minimum distance of 1.5m; also refer to OPSD 301.02 for rural entrances.
- 42. In addition to the above, any disturbance along the edge of pavement in a rural road setting is to be reinstated with minimum 150mm thick granular 'A' for a minimum width of 0.5m (or match existing shoulder width) graded at -2.0%.
- 43. Where landscaping improvements are proposed adjacent to the driveway (i.e. driveway edging), driveway edging must be flush with the driveway surface (and back of curb, if applicable) to a minimum of 1.5 meters beyond the edge of pavement/curbline. Where sidewalks exist along the frontage of the proposed dwelling, driveway edging must be flush with the driveway surface for a minimum of 500mm beyond the back of sidewalk.
- 44. Spill piles resulting from the displacement of excavation materials shall be kept a minimum of 2.0 metres from all property boundaries and be surrounded by adequate erosion control measures, or removed from site.
- 45. In all circumstances, the top of any slab-on-grade shall not be less than 500 mm above the estimated seasonal high groundwater table elevation.
- 46. Well and septic locations (if applicable), including dimensions for septic locations.

Section 8.0 – Construction of 4 to 10 Dwelling Units

As of July 1, 2023, applications for construction of 10 or less dwelling units no longer require Site Plan Control. The introduction of up to 10 dwelling units would yield increased hard surface on the property (i.e. increase percent imperviousness) and consequently, increased stormwater surface runoff generated on the site. The increase to runoff may not be fully addressed with a standard Infill Lot Grading and Drainage Plan associated with the Building Permit. In these cases, where there is an application of four (4) to ten (10) dwelling units, the Town will require a Stormwater Management (SWM) Design Brief prepared by a licensed P.Eng. or C.E.T. with related SWM design experience. The SWM Brief shall provide calculations for the increased stormwater runoff generated by construction for the 1 in 100 year design storm event. The SWM Brief must demonstrate how the increased runoff will be handled on the site such that the amount of stormwater discharging to the municipal right-ofway does not exceed the runoff for the same storm event prior to issuance of the Building Permit. The designer shall refer to the Town's Engineering Standards for design storm criteria.

Section 9.0 – Mandatory General Notes

The following general notes are to be included on every drawing:

- Sediment and erosion control measures shall be implemented to prevent migration of silt and sediment from the subject lot to any adjacent lot, including municipal right-ofway. Special care shall be taken to ensure that silt and sediment laden surface water does not enter any watercourses or environmentally sensitive areas, either overland or through the storm drainage system. The Owner/Builder/Applicant shall comply with all directives issued by any of the environmental agencies.
- Interim grading measures may be required during building construction to ensure that drainage does not adversely affect the neighboring properties. Rough grading of the property shall be completed such that drainage is contained on site or controlled to a positive outlet.
- 3. All downspouts, sump pump and other drainage discharge points shall discharge on to a splash pad or approved equivalent, and the location and orientation of splash pads shall be directed away from adjacent properties.
- 4. The Owner/Builder/Applicant is responsible for obtaining utility and servicing locates prior to any works.
- 5. All disturbed areas are to be sodded over a minimum of 150mm of topsoil or approved alternative ground cover. Sod is to be used in lieu of hydro-seeding within swales or any other focus points of runoff that will be prone to erosion. Furthermore, any areas that have been hydro-seed rather than sodded cannot be accepted until the seeding has established sufficient growth for ground cover to the satisfaction of the Town. Additionally, sod must be rooted into the soil, to be accepted by the Town.

- 6. The Owner/Builder/Applicant must obtain a Road Occupancy Permit from Public Works prior to the commencement of any construction works.
- 7. A copy of the "Accepted for Construction" lot grading and drainage plan is to be on site for reference at all times during construction.
- 8. The foundation weeping tile elevation is to be confirmed in writing by the Builder to the Building Inspector prior to the backfill inspection.
- 9. Town staff and their agents are provided with the authority/power of entry onto the lands for the purposes of Lot Grading Plan Certification and Review.

The following general notes are to be included on the drawing as required:

- 10. Soak away pits shall be constructed in accordance with Town of Wasaga Beach Std.Dwg.No.11 and the MOE Stormwater Management Planning and Design Manual. Construction of soakaway pits are to be confirmed by the designer that is to sign the Lot Grading Certificate. (To be reviewed on site by the designer prior to backfill or submission of photographs from the Contractor may be sufficient).
- 11. Headwalls shall be constructed of concrete, RisiStone (SienaStone) architectural block, or approved equivalent, complete with filter cloth to prevent migration of fine granular / soil.
- 12. Retaining / landscaping walls are to be constructed of acceptable treated lumber, architectural block or approved equivalent. Filter cloth shall be placed behind all retaining walls to prevent the migration of fines. Retaining walls are not to encroach into the Municipal road allowance or adjacent properties. Any retaining walls equal to or greater than 1.0m in height must be designed and stamped by a qualified Professional Engineer.
- 13. Any disturbance along the edge of pavement in a rural road setting is to be reinstated with minimum 150mm thick granular 'A' for a minimum width of 0.5m (or match existing shoulder width) graded at -2.0%.

Section 10.0 – Geotechnical Investigation

All lot grading designs must have regard for and take into consideration the presence of the natural ground water table and its seasonal fluctuations.

As a minimum, the Owner must coordinate the undertaking of a test pit within the proposed construction's footprint, or in close proximity to the proposed construction, to determine the groundwater table elevation. The location, groundwater table elevation and date are to be shown on the lot grading and drainage plan. The test pit shall extend deep enough until the ground water table is encountered. If groundwater is not encountered, then the test pit must

extend down to a minimum of 1.0 metre below the proposed underside of footing elevations to account for possible seasonal fluctuations.

If deemed necessary by the Town, the applicant may be requested to provide a Geotechnical Report in support of the building permit application. The Geotechnical Report shall be prepared by a qualified Geotechnical Consultant identifying site soil conditions and existing groundwater table elevation. Recommendations within the Report shall also make provision for backfill materials, foundations, retaining walls and slope stabilization, as deemed necessary by the Manager of Engineering Services.

The Geotechnical Report shall make reference to the seasonal fluctuations of the groundwater table and provide an "estimated seasonal high groundwater table elevation". The underside of footing elevation shall be a minimum of 300mm above the estimated seasonal high groundwater table elevation. In the event that the footings must be lower than the groundwater table elevation, the qualified designer shall review the proposed footing and foundation design and take into consideration the soil conditions and ensure the proposed structural components are designed adequately. The top of basement floor elevation shall be 500mm above the estimated seasonal high groundwater table elevation, and the underside of the weeping tile shall be a minimum 300mm above the estimated seasonal high groundwater table elevation, as shown in Appendix G.

In areas where the soil conditions and the underlying groundwater table permit, roof leaders may be discharged to soakaway pits per municipal standards, as shown in Appendix B. Similarly, where no existing or natural outlets exist, surface drainage shall be directed and collected utilizing designed infiltration methods acceptable to the Town.

Section 11.0 – As-Built Lot Grading / Certification

Town Staff involved with site reviews for Lot Grading Certification are provided with the authority / power of entry onto the lands for the purposes of Lot Grading Certification and review of associated deficiency corrections. This shall include the Manager of Engineering Services and/or designate.

Upon completion of site grading and prior to landscaping, including fencing, the Owner/Builder/Applicant shall be required to submit two (2) copies of the Lot Grading Certificate, which has been certified by a Professional Engineer or Certified Engineering Technologist to the Building Department. The Certificate is to be confirmed/accepted by Town Engineering Staff. The Engineer/Technologist that will be preparing the Certificate shall coordinate with Town Engineering Staff to attend a site review to confirm acceptance prior to issuing the Certificate. The Lot Grading Certificate will confirm that the lot grading and drainage works have been completed in conformance with the design accepted by the Town and with reference to the Checklist attached as Appendix A.

For lots with a proposed driveway culvert, the as-constructed invert elevations shall be provided on the checklist to confirm conformance with the approved grading plan. The culvert

inverts are to be confirmed by the Design Engineer/Technologist prior to the building owner paving the driveway.

The weeping tile invert and top of foundation elevation must be confirmed before Building Inspectors will provide backfill or further inspections. Written confirmation is required from the Builder that the invert elevation is per the Accepted for Construction Lot Grading and Drainage Plan.

It is strongly recommended that a pre-sod inspection be coordinated by the Owner with their Engineer/Technologist. Town Engineering Staff should be contacted by the Engineer/Technologist to attend the pre-sod inspection.

Final inspection, relative to the Building Permit, will not be undertaken until the Lot Grading Certificate, complete with Checklist has been accepted by the Town. This includes that prior to acceptance of the Certificate by the Town, the sufficient establishment of ground cover shall be required.

Minor adjustments to grading may be accepted on the condition that the Owner's Engineer/Technologist certifies that the resultant change will not adversely impact the drainage of the individual lot, the adjoining properties, or the Municipal roadway.

Section 12.0 – Grading Fee, Deposit and Release

A lot grading administration and review fee will be required for each lot as per the Fees and Charges By-Law, as amended will be required with all Building Permit applications. The fee includes the review of two (2) submissions of the lot grading and drainage plan, one (1) presod site review and one (1) final site review in support of the Lot Grading Certification. Any additional drawing and/or site reviews will be billed at Fifty Dollars (\$50) per instance and taken from the Grading Deposit.

In addition, a Grading Deposit as outlined in our Fees and Charges By-Law must be provided with all Building Permit applications to ensure the satisfactory completion of the grading and drainage works. The Owner/Builder/Applicant shall have twenty-four (24) months to complete the site works including site grading and obtaining the Lot Grading Certificate as required for the Town to release the Lot Grading and Road Occupation Deposits. Should the works not be completed within twenty-four months, following written notice from the Town to the Owner, the Owner shall forfeit the Deposits to the Town.

It is noted that the Owner/Builder/Applicant will be required to obtain a Road Occupation Permit from the Wasaga Beach Public Works Department as necessary for any and all works undertaken within the adjacent municipal road allowance. There is also a Road Occupation Permit deposit for works on and adjacent to roads, as per the Town's Road Occupation Policy, as outlined in the Town's Rates and Fees By-Law, as amended. The Town will not release the Lot Grading deposit until all grading works are satisfactorily completed, including works within the Town road allowance. Likewise, the Road Occupation Permit deposit will not be released until the Lot Grading works are found satisfactory. (i.e. both deposits will be withheld until both works are signed off by the Town.)

Should drainage problems arise, resulting from non-compliance to this Policy, the Town shall provide the Owner/Builder/Applicant with 48 hours' notice to correct the problem(s). Upon failure of the Owner/Builder/Applicant to rectify the problem(s), the Town may use the Owner/Builder/Applicant's Grading Deposit to cover the costs of any remedial works deemed necessary. Any costs of these remedial works in excess of the amount of the Owner/Builder/Applicant's Grading Deposit shall be the responsibility of the Owner/Builder/Applicant.

Upon acceptance of the Lot Grading Certificate by the Town, the Owner/Builder/Applicant may apply in writing for the release of the Lot Grading Deposit, without interest, less any cost, if any, for additional review and/or remedial works performed resulting from non-compliance. The Grading Deposit will only be released to the person who paid/posted the deposit.

Section 13.0 - Maintenance

It is anticipated that some backfill settlements may occur over several years after construction, and as such, it is the responsibility of the Owner to repair any settlements in order to maintain positive drainage away from the building at all times.

Eavestrough and downspouts and sump pump discharge shall be installed on all buildings related to the approved grading plan. It is also the responsibility of the Owner to maintain all downspouts and to ensure that no subsequent modifications to the grading of the lot are made which will adversely affect the drainage of adjacent lots and/or the municipal right of way.

APPENDIX A

LOT GRADING AND DRAINAGE PLAN REVIEW CHECKLIST



Town of Wasaga Beach Building Department

30 Lewis Street

Wasaga Beach, Ontario, L9Z 1A1

Lot Grading and Drainage Plan Review Checklist (2020 Update)

Owners Name & Lot Location:	· · · · ·
Engineering Firm:	Phone Number:
Contact Person:	E-mail Address:
Drawing: ACAD Plan: Ledger or Standard A1 and 1:200 or 1:250	Grading: Grading at property lines matches any previously submitted plans for adjacent properties
 Key Plan North arrow (pointing in correct direct) Lot line survey distances labelled Location of ex & prop buildings including adjacent properties including ex features such as fences 	Apron elevation min 300mm higher than EOP Apron elevation min 150mm below top of foundation Min 2.0% grade away from house Max 5.0% grade on lot with 3:1 slopes
Geodetic elevations c/w temporary benchmark	All disturbed areas require a minimum 150mm of topsoil to be sodded over or approved alternative ground cover.
Test pit including HGWL and date measured	Prop elevations at all corners of house & P/L
Exist. vegetation including size and type of trees	Ex elevations on road, ditch, boulevards, curbs and adjacent properties (roadway ditch & ex culvert elevs to extend one lot / min 15m both sides lot frontage)
Drainage: Review requirement for drainage easement	Ex elevations at all lot corners and significant changes in grade along property line
Review available storm drainage on the road Reduce surface run-off where appropriate Swales located within limits of lot or written permission	Retaining walls to be constructed of acceptable treated lumber, arch block or approved equivalent. Filter cloth shall be placed behind all retaining walls to prevent the migration of fines. Retaining walls not to encroach on ROW.
 from adjacent landowner Swales min 1.0% grade and 150mm deep. 150mm subdrains required for less than 1.0% Location of all downspouts, sump pump and other designers discharge points. 	 Retaining walls to be constructed wholly on lot including footings and backfill. If retaining wall exceeds 1.0m, to be designed by P.Eng and a safety fence may be required
 Grainage discnarge points Soak away pit min 1.0m from P/L and 150mm below adjacent grade at P/L & sized accordingly Soak away pit min 0.3m clearance to water table from bottom of pit 	Building Elevations:Garage floorFinished first floorTop of foundation wallTop of basement floor (min 500mm above HGWL)Underside of footingMin weeping tile (sleeve) invert elev.



Town of Wasaga Beach Building Department

30 Lewis Street

Wasaga Beach, Ontario, L9Z 1A1

Lot Grading and Drainage Plan Review Checklist (2020 Update)

Owners Name & Lot Location:	
Engineering Firm:	_ Phone Number:
Contact Person:	E-mail Address:
Mandatory Notes:	Services:
 (General Notes as applicable per Section 6.0 of the Infill Lot Grading and Drainage Policy) Sediment and erosion control note (Section 6.0 #31 from Policy Interim grading measures note (Section 6.0 #32 from Policy Soak away pits to be constructed in accordance with Std.Dwg.No.11 located in the Infill Lot Grading and Drainage Policy All downspouts, sump pump and other drainage discharge points shall discharge to splash pads. A copy of the "Accepted for Construction" Lot Grading Plan is to be on site for reference at all times during construction. Contractor/Owner responsible for utility locates. 	 Decommission ex wells and/or septic systems Location of all municipal and utility services Water and sanitary services shown and labeled. Sanitary service cleanout shown and labelled Driveway: Driveway edging flush for min 1.5m from EOP/curb or 500mm from back of sidewalk if applicable Driveway to be a min of 1.0m from side lot line Driveway grade to be between 2.0% and 6.0% Driveway width min 3.0m wide and max 6.0m (No garage), 7.6m (Double Garage) & 9.0m (Triple Garage) Driveway culvert shown and labelled with material, size, length and inverts
Confirm NVCA review required and undertaken	treatments (for ditches \leq 1.0m) at both ends of driveway culverts and label accordingly
ROP has been applied for.	Headwalls shall be concrete or RisiStone (SienaStone) / approved architectural block c/w filter cloth to prevent migration of fines
	Rural road driveway follows shoulder contour (with negative slope) from EOP for min. 1.0m

APPENDIX B

EXAMPLE LOT GRADING PLAN



APPENDIX C

SANITARY SEWER SERVICE CONNECTION DETAIL (TOWN STD DWG NO. 12)



APPENDIX D

ROOF LEADER SOAKAWAY PIT DETAIL (TOWN STD DWG NO. 11)



APPENDIX E

FOOTINGS AND SEASONAL HIGH GROUNDWATER TABLE DETAIL



APPENDIX F

SUMP PUMP DISCHARGE DETAIL (TOWN STD DWG NO. 21)



APPENDIX G

OFF-ROAD CATCHBASIN AND BOULEVARD GRADING



APPENDIX H

LOT GRADING CHECKLIST AND CERTIFICATE

TOWN OF WASAGA BEACH LOT GRADING CERTIFICATION CHECK LIST

		YES	NO
1.	Lot grading plan is attached.		
2.	Grading design amendments have received prior Municipal approval.		
3.	A pre-sod grade check was determined to be satisfactory		
4.	 Sod or alternative ground cover has been placed and is sufficiently established. Front yard and boulevard (Sod Only) Side Yards (Sod or approved alternative ground cover) Rear Yard (Sod or approved alternative ground cover) 		
5.	Final grades have been checked and are in general compliance with lot grading plan. - Apron/Garage Floor - Lot Corners - Side yards - Top of Foundation Wall - Underside of Footing Side yard Swales are well defined.		
7.	Rear yard Swale is well defined.		
8.	Splash pads have been placed at all downspouts.		
9.	Finish grades are a min 150 mm below brick/siding.		
10.	There are no areas of settlement at or adjacent to foundation walls.		
11.	Grading encroachment on adjacent lots has been reinstated to the satisfaction of the adjacent lot Owner(s).		
12.	Water service curb stop flush with final grade and accessible.		
13.	Sanitary service cleanout flush with final grade, or max. 150mm below final grade and accessible.		
14.	Weeping tile sleeve elevation confirmed (where applicable).		
15.	Soakaway pits installed per the accepted grading plan.		
16.	As-Constructed driveway culvert inverts (where applicable).	<u></u>	
To be tested by Town of Wasaga Beach Public Works Department:			
17.	Water service curb stop operational.		
If <u>NO</u> to any item explain and describe graphically on the attached lot grading plan.			

TOWN OF WASAGA BEACH

CERTIFICATE OF LOT GRADING

 SUBDIVISION NAME:

 REGISTERED PLAN NO.:

 LOT NO.:
 HOUSE NO/STREET

This is to confirm that I/we have inspected the above noted lot (s) and certify that lot grading and associated grading requirements are in general compliance with the overall grading design, which was "Accepted for Construction" for this lot together with the grading check list, copies of which are attached.

CERTIFIER:

DATE: _____

COMPANY: _____

STAMP:

NOTES:

APPENDIX I

ROAD OCCUPATION PERMIT APPLICATION



ROAD OCCUPATION PERMIT

WASAGA BEACH PUBLIC WORKS DEPARTMENT

Revision Date: April 1, 2019

Permit and proof of Fee & Deposit Payment can be submitted by email to pwcs@wasagabeach.com or dropped off to Public Works at 150 Westbury Road.

Inquiries or Final Inspections Please Call 705-429-2540 Page 1 of 3

APPLICANT INFORMATION (PROPERTY OWNE	ER/UTILITY COMPANY)	
Name/Contact:	Phone Number:	
Mailing Address:	Mobile Number:	
City/Town:	Postal Code:	
E-mail:		
CONTRACTOR INFORMATION		
Company Name:	Office Number:	
Contact Person:	Mobile Number:	
Mailing Address:		
City/Town:	Postal Code:	
Email:		
APPLICATION IS MADE FOR A PERMIT TO:		
Construct a Permanent Entrance	□ Install/Replace/Extend Culvert	
Construct a Temporary Entrance	□ Install/Replace Headwall(s)	
Reconstruct an Existing Entrance incl. Edgin	g Ditch Infill	
Install/Repair Municipal Services (TCP Requ	Ired) Landscaping and Lot Grading	
□ I emporary Storage of Equipment and/or Ma		
PROPOSED WORKS		
Address/Location of Proposed Works:		
Date of Occupancy:		
Ministry of the Environment Certificate of Approva		
Traffic Control Plan (TCP) Required:	$\Box \text{ Yes (Attached)} \Box \text{ No. (Note: #10 & 11)}$	
\Box Certificate of Insurance Provided in Accorda		
ACKNOWI EDGEMENT: (To Be Completed by th	e Applicant and Contractor)	
I have read the Agreement on Page 2 and agree t	o ensure all works are constructed in accordance	
with the attached drawing, Town of Wasaga Beac	h Standards, Policies, By-Laws, and any	
requirements of this permit.		
Applicant's Signature / Date	Contractor's Signature / Date	
PERMIT FEES	DEPOSITS	
□ All Works Other Than Ditch Infill (\$100)	Works on Minor Roads (\$1,000)	
□ Ditch Infill (\$200)	Works on Major Roads (\$2,000)	
☐ Servicing Penalty (\$25,000)	(List of Major Roads See Note #5)	
TOWN APPROVAL		
Reviewed and Permission granted By:	Date:	
Issued By Sign		
Date Purpose of Site Review	Conducted By	
Municipal Services: Final Operation Inspection		
FINAL INSPECTION/APPROVAL		

Page 2 of 3

- 1. It is understood that all works will be constructed, altered, maintained or operated at the expense of the Applicant, and that work must not begin before approval has been issued by the Town. The approval of the Town does not relieve the holder of the responsibility of complying with relevant Municipal By-Laws and Town Engineering Standards. This approval is issued under the authority vested in the Director of Public Works by the Town of Wasaga Beach, the most current Road Occupation By-Law and regulations pursuant thereto and is subject to the conditions attached hereto.
- I/We hereby make application to occupy the road right-of-way and agree to abide by the terms 2. and regulations of the most current Road Occupation Policy and By-Law.
- I/we agree to assume all liability and/or cost incurred by the Corporation of the Town of Wasaga 3. Beach as a result of the road occupancy, maintain the work area and to indemnify and save harmless The Town until final completion.
- I/we submit payment to the Town of Wasaga Beach, to be retained by the municipality as the 4. Road Occupancy Permit fee.
- 5. I/we submit payment to the Town of Wasaga Beach, in the amount of \$2,000.00 as deposit for work performed within the road allowance of roads categorized as major roads* and/or \$1,000.00 as deposit for work performed within the road allowance of roads categorized as local streets. The deposit is refundable thirty (30) days after a satisfactory final inspection by the municipality.

* River Road West *Roads designated as Major Roads are:

* 45th Street South * Main Street * River Road East * Mosley Street

- * Sunnidale Road
- The Applicant's Contractor shall furnish public liability insurance in the amount of \$2,000,000 6. General Liability Insurance, satisfactory to the Town of Wasaga Beach, to indemnify and save harmless the Town for the duration of the work as described in the permit.
- Any persons associated with the works for which this permit is issued shall comply with the most 7. current Occupation Health and Safety Act and its regulations, and shall wear safety equipment AT ALL TIMES including, but not limited to, hard hats, reflective vests and safety boots while working within The Town's Right Of Way.
- The permit must be in the name of the Property Owner or Utility Company and must identify the 8. name of the person or firm performing the intended work.
- 9. At the request of the Applicant, the completion date may be extended by the Director of Public Works due to unforeseen conditions.
- Traffic control shall be provided in accordance with the current MTO Ontario Traffic Manual, Book 10. 7, to the satisfaction of the Town including all barricades, signage, flag persons, detour signs etc. In addition, a Traffic Control Plan may be required as part of the application.
- Access shall be maintained to all public and private properties during the duration of the work. 11. Road closures are not permitted unless approved by the Director of Public Works.
- 12. Owner/Contractor must confirm operation of municipal services located in driveway a min. 48hrs prior to commencing work as well as following completion of work. Any cost associated with adjustment or repair of damaged services during work is the responsibility of the applicant.
- All utility locates shall be the sole responsibility of the Contractor. Locate requests can be made 13. by calling Ontario One Call at 1-800-400-2255.
- The Applicant shall be responsible for the performance of the work and restoration in accordance 14. with Ontario Provincial Standards & Specifications and the Town of Wasaga Beach Engineering Standards, which are available on the Town website.
- All excess excavated material shall be disposed of at an approved landfill site. 15.
- Driveway locations, widths, and construction complete with culverts and headwalls (where 16 applicable) shall be in conformance with the Town of Wasaga Beach Zoning By-law and Engineering Standards.
- Should the work have not commenced within two years from the date of issuance and completed 17. by the date of completion indicated in the application, the Road Occupation Permit shall become null and void.
- 18. The Applicant shall at all times remain responsible for the actions and/or omissions of the Contractor for compliance with the Town's Road Occupation By-Law and Policy and Permit.
- 19. The Applicant must obtain a copy of the approved permit and notify all parties involved of the requirements. The Permit must be available on site for the duration of the open permit and provided upon Town staff request.
- A detailed municipal servicing drawing and traffic control plan is required when applying to 20. complete municipal services work.
- 21. The Applicant/Contractor must contact Public Works a min. 48hrs prior to municipal service connections.
- 22. DENSO Reinstatement Tape must be used at vertical saw cut joints of surface asphalt.
- Entrances within the Town's ROW shall have a min. 150mm compacted granular base. 23.
- 24. This permit will ONLY be for the work requested/described on Page 1 of this permit. A request for any further works must be submitted to The Town for approval.

