

THE CORPORATION OF THE TOWNSHIP OF TAY



LOT GRADING PROCEDURE

Approved: XXXXXXXX
Revised:

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Section 1.0 – Introduction

When a structure is constructed or altered, it is essential that the lot be graded properly to ensure that surface drainage is directed away from the structure such that it does not adversely affect the neighbouring properties including Private, Municipal, County or Provincial roadsides or their lands. It is also important that the structure elevation be such that there is no risk of hydrostatic pressure acting on any of the components.

Section 2.0 – Requirements

The Township of Tay requires that all lots for which a building permit application has been made to construct, raise or in some cases add to an existing structure have a Lot Grading/Drainage Plan if they meet the following requirements:

1. New dwellings that either:
 - a. Are within in a plan of subdivision, or
 - b. Are within 5 m of a property line.
2. Sheds, garages, additions, or similar that are either:
 - a. Greater than 50 m² within 5 metres of a property line; or
 - b. Are within 2 metres of a property line

A Zoning Certificate and/or building permit application will not be accepted without the Lot Grading/Drainage Plan and a completed Lot Grading/Drainage Plan Review Checklist (Appendix C). It is the responsibility of the owner/applicant seeking a zoning certificate and/or building permit to determine if this procedure applies to their specific proposed construction prior to submitting the zoning certificate and/or building permit application.

Section 3.0 – Preparation of the Lot Grading and Drainage Plan

With the submission of a zoning certificate and/or building permit applications, the Owner/Applicant shall submit two copies of the Proposed Lot Grading/Drainage Plan and one copy of the Lot Grading/Drainage Plan Review Checklist (Appendix C) to the Township for acceptance. In addition, a copy of the survey prepared by an Ontario Land Surveyor that was used to create the Lot Grading/Drainage Plan shall be provided.

An approved Lot Grading/Drainage Plan designer must meet one of the following qualifications: Certified Ontario Land Surveyor (OLS), Professional Engineer (P.Eng.), a Landscape Architect (OALA) or a Certified Engineering Technologist (C.E.T.) qualified in grading and drainage design. They shall design the Plan so that it conforms to all requirements of this Procedure.

It is the responsibility of the Lot Grading/Drainage Plan designer to notify the Township prior to finalizing the Lot Grading/Drainage Plan if drainage issues are a concern within a Township of Tay public right of way. If deemed necessary by the Director of Public Works or their designate, the applicant for a zoning certificate and/or building permit may be required to provide additional reports justifying unusual drainage conditions and or conditions in support of the zoning certificate and/or building permit applications prior to the issuance of the zoning approval and/or building permit. The report(s) shall be prepared by an individual qualified and experienced in the works required. Recommendations with the report(s) shall also make provision for any extra works required and as deemed necessary by the Director of Public Works.

Section 4.0 – Outside Agencies

If the subject property falls within a Ministry of Transportation Highway Corridor or a County of Simcoe Road Corridor then any necessary approval permits will be required from the Ministry of Transportation or County of Simcoe prior to the issuance of a building permit.

Section 5.0 – Design Criteria

All Lot Grading/Drainage Plans must include:

The signature and seal of an Ontario Land Surveyor, Professional Engineer, Landscape Architect or Certified Engineering Technologist (C.E.T.) qualified in grading and drainage design is required, indicating the means by which the Owner/Applicant will ensure that the subject lot is to be properly graded and drained, and does not adversely affect neighbouring properties including Private, Municipal, County or Provincial lands.

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

Each Lot Grading/Drainage Plan must include the following:

1. A north arrow shall be shown. All drawings received shall be to scale, Metric 1:200 or 1:250 and drawn in ink. **Freehand drawings will not be accepted.**
2. Name of street, lot number and registered plan, plus sufficient detail to describe the location.
3. The distances around the perimeter of the property are to be labeled.
4. The location of the buildings, existing and/or proposed, with distances to the property line including proposed setbacks.
5. The location of all sump pump and other drainage discharge points.
6. All elevations should be to Geodetic Datum where possible. If not possible then the point of reference (Temporary Benchmark), which is to be identified, shall be a fixed object in the immediate area.
7. Identification of 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.
8. The existing grade elevations at all lot corners and significant changes in grades along property lines shall be clearly indicated. Indicate the proposed grade elevations at all corners of the structure, property lines and particularly at each corner of the lot and include on proposed elevation in the centre of the sewage system envelope.
9. Provide a Structure Elevation Table, which specifies the following proposed elevations:
 - a) Top of Finished First Floor

- b) Top of Garage floor (if applicable)
- c) Top of Foundation Wall
- d) Top of Basement Slab (or any other slab-on-ground, shall be a minimum 400mm above “estimated seasonal high groundwater table elevation”)
- e) Underside of Footing
- f) The estimated seasonal high groundwater table elevation.

10. No structures(s) with habitable living area located adjacent to Georgian Bay shall be located closer than 15 metres of the 178.0 m G.S.C elevation and have any structure opening below the 178.5 m G.S.C. elevation.

11. When reasonably possible, the perimeter elevation of the proposed structure must be at least 300mm higher than the edge of adjacent municipal road.

12. Swales shall be located entirely within the limits of the lot and shall match existing grades at the lot lines, unless part of subdivision plan, then common swales between properties as indicated on the subdivision’s overall site grading plan.

13. 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 2% with a minimum depth of 150mm. A 1% minimum gradient will be considered where there are soil conditions that allow infiltration.

14. Drainage flows shall be directed away from all structures at a minimum grade of 2%.

15. Any sediment and erosion control measures deemed necessary to prevent migration of silt and sediment from the subject lot to any adjacent lot, including municipal and/or public right-of-ways shall be indicated on the Lot Grading/Drainage Plan and shall be implemented and maintained by the owner. 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.

16. Interim grading measures may be required during construction to ensure that drainage does not adversely affect the neighbouring properties. Rough grading of the property shall be completed such that drainage is contained on site or controlled to a positive outlet.

17. 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. In areas where positive storm drainage is not available within the Municipal road allowance the property Owner may be required to provide a soak away pit and/or grade the boulevard to a sufficient outlet to the satisfaction of the Director of Public Works in such a way that ponding does not occur on the paved surface of the road.

18. Where a retaining wall or other similar structures are proposed on the property, it shall be shown complete with top and bottom of wall elevations and material. Retaining walls are not to encroach onto Municipal property. Retaining walls along lot lines shall be constructed wholly within the subject lot. The Ministry of Natural Resources and the Department of Fisheries and Oceans must be contacted to determine if approval is required for construction of retaining walls adjacent to Georgian Bay.

19. Minimum driveway grade shall be 2% and shall not exceed a maximum grade of 8%, measured from the garage or dwelling face, to the edge of roadway pavement.

20. 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) property line to the edge of pavement/curb-line. Where sidewalks exist along the frontage of the property, driveway edgings must be flush with the driveway surface for a minimum of 600mm beyond the back of sidewalk.

Section 6.0 – Mandatory General Notes

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

1) “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 or public right-of-way. 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 applicable environmental agency”.

2) “Interim grading measures may be required during construction to ensure that drainage does not adversely affect the neighbouring 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”.

4) “The Owner/Builder/Applicant is responsible for obtaining utility and servicing locates prior to any works”.

5) “This Lot Grading/Drainage Plan has been designed/completed such that Municipal, County and Provincial lands adjacent to or in the vicinity of this lot are not affected”.

6) “A copy of the “Accepted for Municipal Purposes” Lot Grading/Drainage Plan is to be on site for reference at all times during construction”.

7) If there is an overall lot grading plan in existence for the lot (i.e. part of a registered subdivision) then the following clauses must be included:

“This Lot Grading/Drainage Plan is in conformance with the overall lot grading plan for this subdivision”

8) If there is not an overall lot grading plan in existence for the lot then the following clauses must be included:

“This Lot Grading/Drainage Plan has been designed/completed such that surface drainage (water) from the lot will not adversely affect neighbouring properties”.

9) “The structure elevations have been set such that there is no risk of hydrostatic pressure affecting the structure”

Section 7.0 – As-Built Lot Grading / Certification

The Township and their agents are provided with the authority/power of entry onto the lands for the purposes of lot grading review.

Upon completion of site grading and prior to landscaping, including fencing, the Owner/Builder/Applicant shall be required to submit the Lot Grading/Drainage Plan Certificate, which has been certified by the Lot Grading/Drainage Plan designer to the Public Works Department. The Lot Grading/Drainage Plan Certificate will confirm that the lot grading, drainage works and structure elevations have been completed in conformance with the design prepared by the Lot Grading/Drainage Plan designer.

Section 8.0 – Grading Deposit and Release

A Grading Deposit of one thousand five hundred dollars (\$1,500) per lot must be provided with all applications to ensure the Township receives a satisfactory Lot Grading/Drainage Plan Certificate indicating satisfactory completion of the grading and drainage works. Upon receipt of the Lot Grading/Drainage Plan Certificate by the Director of Public Works and provided all criteria of this Procedure have been met, the Owner/Applicant may apply in writing for the release of the Grading Deposit, without interest. The Grading Deposit will only be released to the person who paid/posted the deposit.

Section 9.0 - 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 structure at all times. Sump pump discharge shall be installed on all buildings related to the approved Lot Grading/Drainage 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 properties.

Section 10.0 – Exemptions

Under certain unusual circumstances, due to lot size, location or the nature of the proposed construction, the Director of Public Works or their designate may waive some or all of the requirements for a Lot Grading Plan. In order to apply for a lot grading exemption the applicant must provide a sealed letter from a qualified person stating why grading modifications are not required and that the grading will not adversely affect the neighbouring properties. See appendix E for the lot grading exemption application.

APPENDIX A
LOT GRADING/DRAINAGE PLAN CERTIFICATE

Consultants Letterhead to Be Used

Date:

The Township of Tay
Public Works
450 Park Street
P.O. Box 100
Victoria Harbour
Ontario, L0K 2A0

Attention: Director of Public Works

Dear Sir:

**RE: Municipal Address _____
 Lot or Block No. _____
 Registered Plan No. _____
 Certification of Final Lot Grading**

Based on an actual field survey completed on (date) it is my professional opinion that the grading on the above property is consistent with all the grading requirements indicated on the lot grading plan. I hereby certify that:

1. All adjacent properties are not negatively impacted
2. Where rainwater roof leader downspouts and sump pumps discharge onto concrete splash pads, the locations and outlets are in accordance with the approved lot grading plan.
3. The lot grading is in conformity with the submitted and approved grading plan.

Sincerely,

Name of Design Firm
Signature of Designer
Name of Designer

(Stamp and Seal by design professional)

APPENDIX B

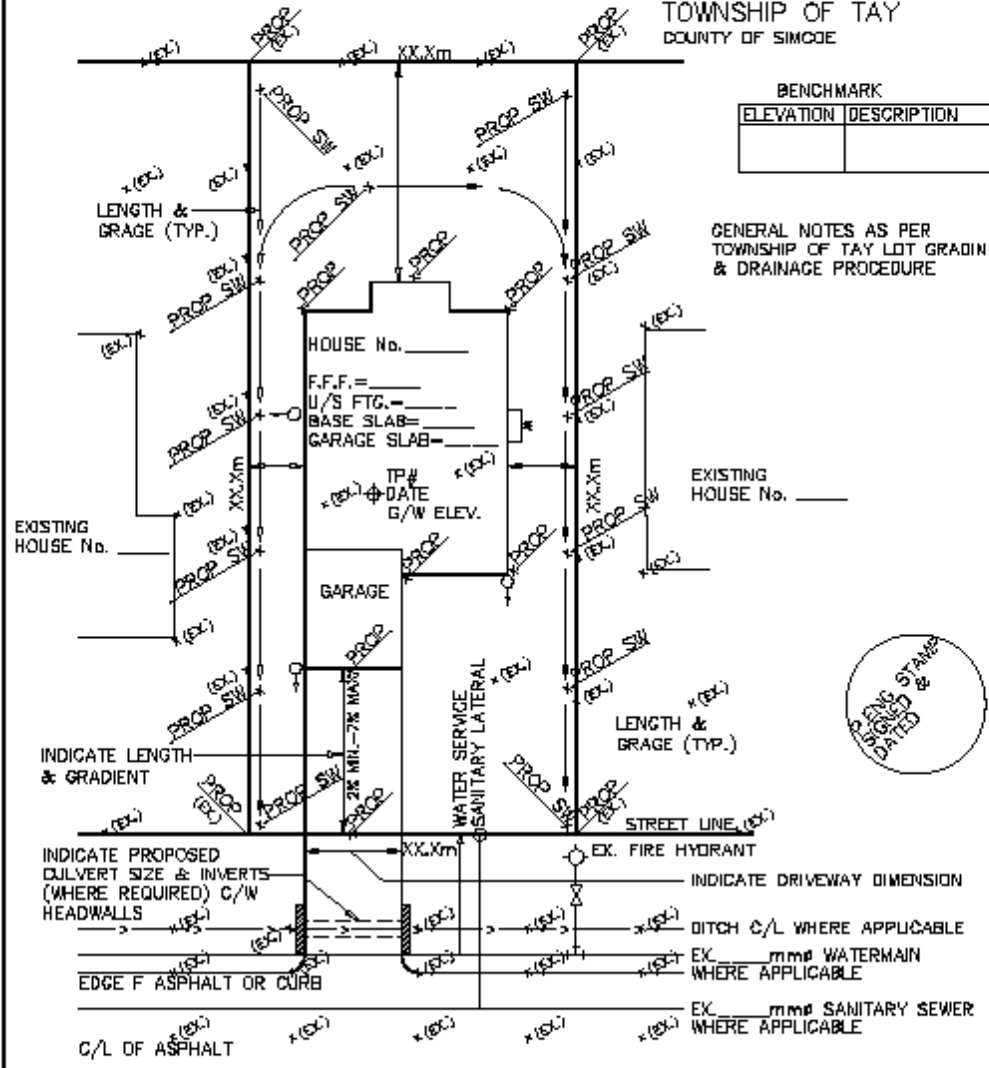
EXAMPLE LOT GRADING/DRAINAGE PLAN

PLAN OF
PART OF LOT _____
REGISTERED PLAN _____
TOWNSHIP OF TAY
COUNTY OF SIMCOE

BENCHMARK

ELEVATION	DESCRIPTION

GENERAL NOTES AS PER
TOWNSHIP OF TAY LOT GRADING
& DRAINAGE PROCEDURE



LEGEND

- W - WINDOW WELL
- - RAINWATER LEADER
- - SUMP PUMP DISCHARGE
- (EX.) - EXISTING ELEVATION REQUIRED
- PROCP./PROCP SW - PROPOSED ELEVATION REQUIRED
- F.F.F. - FINISHED FIRST FLOOR ELEVATION REQ'D
- U/S FTG. - UNDERSIDE OF FOOTING ELEVATION REQ'D
- BASE SLAB - BASEMENT SLAB ELEVATION REQ'D
- GARAGE SLAB - GARAGE SLAB ELEVATION REQ'D
- SW - SWALE

TOWNSHIP OF TAY		
LOT GRADING PLAN EXAMPLE		
DRAWN:	SCALE:	TITLE
DESIGN:	PLOT:	
CHECKED:	DATE:	

APPENDIX C

LOT GRADING/DRAINAGE PLAN REVIEW CHECKLIST



Township of Tay
Building Department
450 Park Street
Victoria Harbour, Ontario, L0K 2A0

Lot Grading/Lot Drainage Plan Review Checklist

Owners Name & Lot Location: _____
Company: _____ Phone Number: _____
Contact Person: _____ Email Address: _____

The following list of items is the minimum requirements for review and acceptance of the lot grading/drainage plan. Plans not meeting these requirements will be deemed incomplete and returned. This checklist must be completed and submitted by the Lot Grading/Drainage Plan designer as part of the plan submittal package. Any items which do not apply to the project must be marked N/A (Not Applicable).

- | | |
|---|---|
| <input type="checkbox"/> Plan Size: Ledger or Standard A1 | <input type="checkbox"/> Proposed elevations at all corners of house, Property line and centre of the sewage system envelope. |
| <input type="checkbox"/> A Copy of survey prepared by an OLS | <input type="checkbox"/> Minimum 2% grade away from structures |
| <input type="checkbox"/> Plan Scale: Metric 1:200 or 1:250 | <input type="checkbox"/> Review available storm drainage of the road |
| <input type="checkbox"/> North arrow | <input type="checkbox"/> Swales minimum 2% grade and 150mm deep |
| <input type="checkbox"/> Lot location information including Street Name and Legal Description | <input type="checkbox"/> Reduce surface run-off where appropriate |
| <input type="checkbox"/> Location of existing and proposed buildings, including existing site features such as fence etc. | <input type="checkbox"/> Driveway culvert shown and labeled with material, size, length and inverts |
| <input type="checkbox"/> Location of all sump pump and other drainage discharge points | <input type="checkbox"/> Driveway grade to be between 2% and 8% |
| <input type="checkbox"/> Swales located within limits of lot | <input type="checkbox"/> Driveway to conform with any applicable Township of Tay requirements |
| <input type="checkbox"/> Geodetic elevations or temporary benchmark | <input type="checkbox"/> Driveway to be a minimum of 1m from side lot line |
| <input type="checkbox"/> Existing elevations of road, ditch, boulevards, curbs and adjacent properties | <input type="checkbox"/> Driveway edging flush from EOP/ curb to P/L |
| <input type="checkbox"/> Existing elevations of all lot corners and significant changes in grade along property line | <input type="checkbox"/> General Notes as per section 6.0 of the Infill Lot Grading/Drainage Procedure |
| <input type="checkbox"/> Structure Elevation Table to include <ul style="list-style-type: none"><input type="checkbox"/> Finished first floor<input type="checkbox"/> Garage floor<input type="checkbox"/> Top of foundation wall<input type="checkbox"/> Top of slabs on grade<input type="checkbox"/> Underside of footing<input type="checkbox"/> The estimated seasonal high groundwater table elevation | <input type="checkbox"/> Grading along property lines matches any previously submitted plans for adjacent properties or approved subdivision lot grading plan |
| <input type="checkbox"/> Proposed lot coverage | <input type="checkbox"/> Test pit includes HGWL ESHGWL and date measured |
| <input type="checkbox"/> Engineer, if required, has sealed the plans (See section 7.0) | <input type="checkbox"/> Setbacks of all proposed and existing structures to property lines |
| | <input type="checkbox"/> Slab on grade minimum 400mm above ESHGWL |
| | <input type="checkbox"/> Environmental controls shown |

APPENDIX D

LOT GRADING/DRAINAGE CERTIFICATION CHECK LIST



Township of Tay
Building Department
450 Park Street
Victoria Harbour, Ontario, L0K 2A0

Lot Grading/Lot Drainage Certification Checklist

Owners Name & Lot Location:

Company: _____ Phone Number: _____
 Contact Person: _____ Email Address: _____

The following list of items is the requirements for review and acceptance of the lot grading/drainage. Plans not meeting these requirements will be deemed incomplete and returned. This checklist must be completed and submitted by the Lot Grading/Drainage Plan designer as part of the plan submittal package. Any items which do not apply to the project must be marked N/A (Not Applicable).

	YES	NO	N/A
1. Lot grading plan attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Pre-sod grade check was determined to be satisfactory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Sod or alternative ground cover has been placed and sufficiently established.			
• Front yard and boulevard (sod only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Side yards (Sod or approved alternative ground cover)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Rear yard (Sod or approved alternative ground cover)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Final grades have been verified and comply with lot grading plan			
• Apron/garage floor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Lot corners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Side yards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Grade breaks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Top of foundation wall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Underside of footing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. All swales are well defined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Splash pads have been placed at all roof leaders and sump pump Discharges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Finished grades are minimum 150mm (6") below cladding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. No settlements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. The drainage has not adversely affected surrounding properties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. The as built lot grading conforms to the approved design	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
○ If grading does not conform to approved design, as-built drawing is attached for review.			

APPENDIX E

LOT GRADING EXEMPTION APPLICATION FORM



**The Corporation of the Township of Tay
Public Works Department**

450 Park Street
Victoria Harbour, ON
L0K 2A0
Tel: 705-534-7248
Fax: 705-534-4493

Lot Grading Exemption

Name of Owner: _____ Permit Number: _____

Address: _____ Email: _____

_____ Phone: _____

Description of Work: _____

Supporting documentation attached? **Y / N**

Sketch or Plan (or attached)

Municipal Drain on Property? **Y / N**

On the approval of this exemption, you are hereby advised that you will be responsible for any flooding or drainage disputes which may arise as a result of this construction.

Applicant Signature

Date

Comments: _____

Approved

Not Approved

Steve Farquharson

General Manager, Protective and Development Services

Date