

SUBDIVISION REQUIREMENTS

SECTION 4 - ENGINEERING POLICIES AND PROCEDURES

INDEX

	<u>Page</u>
4.01 FOR APPROVAL OF SITE GRADING AND DRAINAGE PLANS FOR LANDS COVERED UNDER A SERVICING AGREEMENT	1
4.01.01 Submission Procedure	1
4.01.02 Standard Grading Certification and Letters	2
4.01.02.01 General	2
4.01.02.02 Sample Letters - General	2
4.01.02.03 Sample Letters A	3
4.01.02.04 Sample Letters B	4
4.01.02.05 Sample Letters C	5
4.01.02.06 Sample Letters D	6
4.01.02.07 Sample Letters E	7
4.01.02.08 Sample Letters F	8
4.01.02.09 Sample Letters G	9
4.01.02.10 Sample Letters H	10
4.01.02.11 Sample Letters I	11
4.02 POLICY STATEMENTS	12
4.02.01 Inspection - Consultants	12
4.02.02 Blasting or Tunnelling	13
4.02.03 Construction on Existing Roads	14
4.02.05 Standards and Maintenance	15
4.02.06 Trench Backfilling on Roads	16
4.02.07 Winterizing of Subdivisions	18
4.02.08 Storm Water Management	18
4.02.09 Geotechnical Engineering	19
4.02.10 Policy for Holiday Work by Contractors	21
4.03 PROCEDURES	22
4.03.01 Beginning of Construction	22
4.03.02 Lot Grading and Sodding	23
4.03.03 Block Grading	24
4.03.04 Applications for a Reduction in Letter of Credit:	25
4.03.05 Request for Reduction in Letters of Credit	26
4.03.05.01 Statutory Declaration	29
Surveyors Certificate	30
Frontage and Flankage Easements for Utilities Storm and Sanitary Sewers	
Watermains and Utility Lines	31
Easement for Traffic Signals and Detector Loops	32
Easement for Temporary Turning Circles and Cul De Sacs	33
Storm and Sanitary Sewers	34
Watermains on Walkways	35
Storm, Sanitary Sewers and Watermains	36
Catchbasins, Swales and Open Watercourses	37

4.01 FOR APPROVAL OF SITE GRADING AND DRAINAGE PLANS FOR LANDS COVERED UNDER A SERVICING AGREEMENT**4.01.01 Submission Procedure**

Four (4) certified copies of the proposed lot grading plan and one (1) certification letter required by the Transportation and Works Department if Schedule "C" of the Servicing Agreement indicates that the Transportation and Works Department approval is required prior to the issuance of building permits.

Two (2) certified copies of the proposed lot grading plan and one (1) certification letter required by the Transportation and Works Department if Schedule "C" of the Servicing Agreement does not indicate that the Transportation and Works Department approval is required prior to the issuance of building permits.

For a site covered by a Servicing Agreement, the proposed and final grading certificates and drawings are to be certified by the Engineering Consultant responsible for the original design of the Subdivision.

The submission to the Planning and Development Department and the Transportation and Works Department for preliminary lot grading certification will require the appropriate grading plan which is to contain the following wording: "I hereby certify that the proposed grading, building type and appurtenant drainage and storm water management works comply with sound engineering design and that the proposed grading is in conformity with those of the adjacent lands for drainage and relative elevations."

The wording is to be followed by the Professional Engineers stamp and signature.

Drawings are to be 210mm by 297mm or folded to that size with title blocks visible.

4.01.02 Standard Grading Certification and Letters

4.01.02.01 General

There are four sample letters for the certification of building and lot grading as required under the City of Mississauga Subdivision and Development agreements

4.01.02.02 Sample Letters

Sample Letter A - Preliminary lot (block) grading

Sample Letter B - Preliminary building and lot grading proposal which requires a variance from the overall grading plan.

Two (2) copies of the letter and plan showing the proposed variances are to be sent to the Commissioner of Transportation and Works.

Sample Letter C - final certification for conditions A or B.

Sample Letter D - Final building and lot grading

For circulation see Sample Letter B with one exception. If approved, a copy will be forwarded to the Planning and Building Department and a Photostat copy of the letter returned to you.

Sample Letter E - Engineered fill lots/blocks certification

This letter is to be sent to the Commissioner of Planning and Building.

Sample Letter F - Footing subgrade certification

This letter is to be sent to the Commissioner of Planning and Building.

Sample Letter G - Retaining wall certification

4.01.02.03 Sample Letter A

SAMPLE LOT (BLOCK) GRADING CERTIFICATION LETTER

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Gentlemen:

Re: (Name of Subdivision)
Lot or Block No.
R.P.
Certification of proposed building
and lot grading

I have checked the drawings and site plan for the proposed building to be constructed and I hereby certify that the proposed grading and appurtenant drainage works comply with sound engineering design. I also hereby certify that the proposed building, being a (type of building) will be compatible with the proposed lot grading, which grading is in conformity for drainage and relative elevations with the overall grading drainage plans for this subdivision.

Attached to this letter is a copy of the lot grading plan with the following certification clause signed and sealed in a similar fashion as this letter: "I hereby certify that the proposed grading building type and appurtenant drainage and storm water management works comply with sound engineering design and that the proposed grading is in conformity with those of the adjacent lands for drainage and relative elevations."

Yours very truly,

(Signature and stamp of Engineer)

for: (Name of Engineering Firm)

4.01.02.04 Sample Letter B

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Gentlemen:

Re: (Name of Subdivision)
Lot or Block No.
R.P.
Certification of Proposed Building and Lot Grading

I have checked the drawings and site plan for the proposed building to be constructed and the proposed grading on the above property and do hereby certify that the proposed building being a (type of house or building) is not suited to the grading as required by the overall grading plan, but may be satisfactorily sited on this lot with revisions to the approved grading plan as indicated on the attached drawing. I further certify that the variance in grading will not alter the overall drainage on the adjacent properties as specified on the overall grading plan.

Yours very truly,

(Signature and stamp of Engineer)

For: (Name of Engineering Firm)

Lot grading variance approved

Date:

Manager, Development Construction

4.01.02.05 Sample Letter C

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Re: (Name of Subdivision)
Lot or Block No.
R.P.
Certification of building and final lot grading

I have determined the field elevations with respect to final grading on the above lot and have viewed the finished building there on and the lot grading and do hereby certify:

1. Where manholes and catch basins are present on property, all have been raised to the final grade, are uncovered and in a clean condition.
 2. Where rainwater roof leader down spout discharge onto the surface, the locations and outlets are in accordance with the City of Mississauga By-Law and the approved site grading plan.
 3. Driveways have been constructed to the latest City Standard.
 4. The building construction and the grading of the lot is:
 - A. In conformity with the overall grading plan and the "Certification of Proposed Building and Lot Grading" previously submitted. Note: slight modifications to the actual grading may have been implemented but all modifications have been reviewed and accepted by the Transportation and Works Department.
- OR
- B. In conformity with the variance approved by the Commissioner of Transportation and Works on (date of approval) which is contained in the "Certification of Proposed Building and Lot Grading" previously submitted.

Yours very truly,
(Signature and stamp of Engineer)

For: (Name of Engineering Firm)

cc. Development Services, Planning and Building Department

4.01.02.06 Sample Letter D

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Gentlemen:

Re: (Name of Subdivision)
Lot or Block No.
R.P.
Certification of variance to
original plan

I have checked the field elevations with respect to the final grading on the above lot and have viewed the finished building there on and the lot grading and hereby state that the final grading is not in accordance with the approved grading plan. However, it is satisfactory with revisions to the official grading plan as indicated on the attached drawing. I hereby certify that a variance in grading will not alter the overall drainage on the adjacent properties as specified on the overall grading plan.

Yours very truly,

(Signature and stamp of Engineer)

For: (Name of Engineering Firm)

Lot grading variance approved

Date:

Manager, Development Construction

4.01.02.08 Sample Letter E

Company's Letterhead
(Engineering Firm)

Date:
File: (Registered Plan No.)

City of Mississauga
Planning and Building
300 City Centre Drive
Mississauga, Ontario
L5B 3C1

Attention: Manager, Plan Examination Services, Building Division

Dear Sir:

Re: (Name of Subdivision)
Lots/Blocks No.
Registered Plan No.

With reference to Schedule 'C', Clause (No), Item (No.) of the Servicing Agreement, this is to confirm that we have supervised the placement of "engineered" fill on the above-noted Lots/Blocks. We have also carried out sufficient tests to obtain a representative report as to the suitability and compaction of the "engineered" fill, and have found that the minimum bearing capacity is _____ kPa.

We hereby certify that the compacted fill is suitable for construction of footings designed for a maximum allowable soil bearing pressure of 150 kPa.

Sincerely,

Engineering Firm
Signature of Geotechnical Engineer
Stamp of Geotechnical Engineer

c: Developer
Consultant for the Subdivision
Transportation and Works Department

4.01.02.09 Sample Letter F

Company's Letterhead
(Engineering Firm)

Date:
File: (Registered Plan No.)

City of Mississauga
Planning and Building Department
300 City Centre Drive
Mississauga, Ontario
L5B 3C1

Attention: Manager, Inspection Services, Building Services

Dear Sir:

Re: (Name of Subdivision)
Lots/Blocks No.
Registered Plan No.

This is to confirm that we have inspected the footing subgrade on the above-noted Lots/Blocks.

We hereby certify that the subject Lots/Blocks footings are founded on sound soil of 150 kPa minimum bearing capacity, and the subgrade conditions are compatible with the design requirements for the above-captioned subdivision.

Sincerely,

Engineering Firm
Signature of Geotechnical Engineer
Stamp of Geotechnical Engineer

c: Developer
Consultant for the Subdivision
Transportation and Works Department

4.01.02.10 Sample Letter G

Company's Letterhead
(Engineering Firm)

Date:

File: (Registered Plan No.)

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Dear Sir:

Re: (Name of Subdivision)
Lots/Block No.
Registered Plan No.
Retaining Wall Constructed of
Maximum Height _____ m

this letter is to certify that the above-described retaining wall was adequately designed, and subsequently constructed, in accordance with the design to support the dead and live loads applied upon the structure.

This is also to certify that the above retaining wall has been designed and constructed in accordance with all the applicable standards and regulations.

Sincerely,

Company Name

Signature & Stamp of Engineer

c: Developer

4.01.02.11 Sample Letter H

SAMPLE PRELIMINARY LOT GRADING CERTIFICATION LETTER – INFILL DEVELOPMENT

COMPANY LETTERHEAD

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Re: Site Address:
Legal Description.....
Certification of Proposed Building and Grading

I have reviewed the plans for the construction of a building located at _____ and have prepared this plan to indicate the compatibility of the proposal to existing adjacent properties and municipal services. It is my belief that adherence to the proposed grades as shown will produce adequate surface drainage and proper facility of the municipal services without any detrimental effect to the existing drainage patterns or adjacent properties.

Signed.....P. Eng/ OLS

ORIGINAL STAMP OR SEAL

c. Development Services, Planning and Building Department

4.01.02.12 Sample Letter I

SAMPLE FINAL LOT GRADING CERTIFICATION LETTER – INFILL DEVELOPMENT

COMPANY LETTERHEAD

Date:

City of Mississauga
Transportation and Works Department
3185 Mavis Road
Mississauga, Ontario
L5C 1T7

Attention: Manager, Development Construction

Re: Site Address:
Legal Description.....
Certification of building and final lot grading

I have determined the field elevations with respect to final grading on the above subject lands and have viewed the finished lot grading and building thereon. I hereby certify that the building constructed with relationship to the elevations and the grading of the lands are in general conformity with the "Certification of Proposed Building and Grading" previously submitted.

Signed.....P. Eng/ OLS

ORIGINAL STAMP OR SEAL

d. Development Services, Planning and Building Department

4.02 POLICY STATEMENTS

4.02.01 Inspection - Consultants

At the preconstruction meeting, the General and Geotechnical Consultants are required to provide the City with a Schedule of the works, together with the names of all inspectors to be on site during the construction of the various phases of the works.

The General Consultant must have their own site representative on site during any grading and/or construction works.

The Geotechnical Consultant must ensure that OPSS 514.07.08 regarding backfilling and compaction within road allowances and lots where fill exceeds 1.0m in thickness is strictly adhered to. The Geo-technical Consultant's certification must make reference to this.

4.02.02 Blasting or Tunnelling

No blasting or tunnelling will take place without written approval of the Commissioner of Transportation and Works.

4.02.03 Construction on Existing Roads

Whenever it is necessary to cut through an existing City or Regional road, the contractor will be responsible for properly compacting the backfill material and replacing the original surface.

Road closure and open cut permits must be obtained prior to undertaking work on an existing road allowance.

After roads within a plan of subdivision have been paved with Top Course Asphalt, any service installations will require an open cut permit and road closure permit, even though the roadway remains the Developer's responsibility for maintenance.

Unshrinkable fill is to be utilized as the backfill material for service trench installation within all city road allowances. The unshrinkable fill is to be placed as per City Standard 2220.030.

Subdrains must remain intact and at grade during these restorations.

Top asphalt cold joint must be sealed with hot-poured rubberized asphalt joint sealing compound (OPSS 1212)

Where overlaying or constructing new road works, a diagonal joint must be utilized across the travelled portion of the roadway.

4.02.05 Standards and Maintenance

Work shall be to the satisfaction of the Commissioner of Transportation and Works, or his representatives.

Work shall be designed and constructed in accordance with the most recent requirements, standards, specifications and by-laws of the City of Mississauga.

Work constructed shall be guaranteed for such period of maintenance as required hereinafter.

4.02.06 Trench Backfilling on Roads

The use of excavated inorganic native subsoil is generally permissible for trench backfilling purposes by means of standard consolidation procedures subject to the following provisions:

- Backfilling operations are to be carried out in strict conformance with the requirements of OPSS 514.07.08 using earth compaction equipment of appropriate size and weight.
- The minimum compacted density within 1.0 metres of final subgrade is increased to 98% Standard Proctor Density with moisture content within 2% of the optimum value.
- Soil moisture content high of optimum value is better suited for trench backfilling below the 1.0 metre subgrade. The addition of water will be required particularly during dry summer conditions subject to the discretion of the Geotechnical Consultant and/or City inspector.

During construction, the owner is to retain the original geo-technical consultant to supervise the installation of bedding and the backfilling of all trenches within road allowances and easements. The Geotechnical Consultant shall be present during any trench backfilling and consolidation operations ensuring that OPSS 514.07.08 is strictly adhered to. The Geotechnical Consultant's is to certify that he or his designate has conducted a sufficient number of tests to obtain a comprehensive summary of the degree of compaction and has witnessed **all** backfill and compaction operations including lot service and that all works were constructed in accordance with OPSS 514.07.08.

Only experienced Geotechnical Consultant personnel who have demonstrated their competence to the satisfaction of the Commissioner of Transportation and Works are permitted to conduct field testing. All field technicians shall be CSA certified in concrete testing. All field technicians must have excellent oral and written communication skills. Geotechnical consultant=s personnel must be on site at all times with no more than two mainline or service construction crews under the direct supervision of one Geotechnical Consultants technician. Where there are more than two crews, additional personnel are required.

The City of Mississauga requires a compaction test on every layer and every 50m² for mainline work and a compaction test every layer on lateral service trenches as minimum. Plot field density test on plan and profile drawings.

The final subgrade certification is to confirm that the final subgrade conditions are equal to or better than those anticipated in the preparation of the pavement design. The above certification(s) are to display the Professional Engineer Stamp for the Geotechnical Consultant. The certification is to include the following wording:

"This certification has been made to the best of the Geotechnical Consultant's knowledge and information. This certification, however does not relieve the Contractor, the Owner or any other parties of their respective responsibilities pertaining to maintenance or otherwise."

The findings of the compaction reports and the aforementioned certification, in a form acceptable to the City, are to be forwarded to and acknowledged by the City prior to placement of the granular road material. The Geotechnical consultant shall also confirm that the final subgrade conditions are at least equal to those anticipated in his preparation of the pavement design. If these conditions are less than what was anticipated, the owner and the City are to be immediately advised with a new pavement design recommendation.

Adequate trench widths must be maintained to give compaction equipment being utilized sufficient space to adequately compact the material, i.e. the minimum width of the trench must

be at least the width of the compaction equipment plus 0.5m.

- Backfill with shale will be allowed provided a proper mix of shale and filler material, i.e. sand or clay is integrated into the backfill material to eliminate voids. The Geotechnical Consultant must carefully monitor the backfilling operation to ensure this mix is maintained and that OPSS 514.07.08 is complied with. Maximum dimension of any shale backfill is 150mm.
- Granular backfill will be used around the perimeter of all manholes and catch basins. Granular backfill is to extend 1.0m out from the outside edge of the manhole and is to be compacted using a vibratory means or approved alternatives. OPSS 514.07.08 and OPSS 516 must still apply
- Each service connection and trench must be monitored and certified to ensure that OPSS 514.07.08 is complied with.
- Trench widths for lateral connections must be sufficient to accommodate compaction equipment without bridging of the compactor drum, i.e. width of equipment plus 0.5m.
- Narrow trenches for water service connections may be prone to settlement. The Contractor must defer backfilling of the upper 1.0 metre subgrade zone until completion of all sewer and water service connections to promote uniformity of backfilling and compaction in the subgrade zone.

The Geotechnical Consultant must maintain a plan and profile drawing indicating the location of each compaction test to ensure compliance with OPSS 514.07.08. Both failed and satisfactory results are to be indicated along with consolidation layer thickness. A compaction test list or legend may be required to keep the drawing legible. These drawings and other pertinent data must be kept on site within the consultants trailer and available for City review at all times.

If, in the opinion of the City, excessive trench settlements have occurred at base course or top course asphalt levels, a road review will be required to determine the structural integrity of the road. The cost of this testing will be borne by the Developer. A review of the condition of the roads determine whether the maintenance period of the road should be extended or if **reconstruction is required**.

Road construction will not be permitted until trenches have been backfilled and compacted in accordance with the most recent City of Mississauga requirements and specifications. Proof rolling at the subgrade level must be completed and certified by the Geotechnical Consultant. Certificate must indicate structural integrity of the subgrade and the adequacy of the structural road design. Subgrade cross fall is to be 3%.

The following actions are required prior to the placement of granulars:

- A formal proof-rolling test by means of a loaded tandem truck or equipment of equivalent wheel loading must be carried out for approval of the completed subgrade and prior to placement of granular materials. The subgrade must exhibit a firm and stable behaviour without rutting and/or flexing under wheel travel.
- Additional granular depth may be required to compensate for subgrade which does not pass the proof rolling test and/or the removal and re-compaction of any soft-spots.

Placement of granulars prior to the City issuing approvals may result in complete removal of all granulars.

Special conditions such as winter construction or construction in wet conditions, etc. may require full depth granular backfill at the discretion of the City.

4.02.07 Winterizing of Subdivisions

In order to minimize repairs to new subdivision roads and snow ploughing equipment, the City requires the following works to be carried out prior to November 15 of each year:

- Manhole tops, catch basin frames and valves on roads with base asphalt shall be set at the level of the base course asphalt.
- Settlements in roadways shall be repaired, particularly adjacent to manhole tops and catch basin frames.
- Sidewalk bays which have settled and created a lip greater than 10mm shall be repaired.
- Asphalt roads shall be cleared of mud and debris and maintained in this manner throughout the maintenance period.
- Inlet manholes, catch basins, ditches or channel shall be cleared of debris to prevent blockages during winter and spring thaws.

4.02.08 Storm Water Management

- If the post development run-off could adversely affect downstream lands, on site storm water detention may be required.
- The City, in conjunction with the conservation authorities, may restrict some development of land in or near natural flood plain areas so as to maintain sufficient storage capacity to avert downstream flooding.

4.02.09 Geotechnical Engineering

In new developments, the owner shall engage a licensed geotechnical engineering consultant to prepare a report on the existing soil conditions which is to include:

- The identification, description and limits of the existing soil strata, including the extent of topsoil and its suitability for reuse.
- The suitability of native materials for trench backfill.
- The conditions under which the native material may be used as trench backfill.
- The procedures to be used for high moisture contents and water table levels which may affect the proposed servicing or structural works of the area as well as the surrounding lands.
- The extent of native material which is unsuitable for trench backfill. A procedure for dealing with the unsuitable native material should be provided in order that the structural stability of the proposed municipal services will not be compromised.
- The limit of areas where blasting may be required. Due consideration is to be given to the surrounding structures and services. The report should include sufficient information to determine blasting procedures.
- The road material depths and material types for pavement design.
- Recommendations for infrastructure placement and road construction.
- Potential chemical issues that may affect services or structures (e.g. high sulphates) and the method of resolving such issues.
- Recommendations in dealing with filling procedures within; the road allowances, building lands and berm construction.
- Identifying potential areas of slope instability as well as the extent of the unstable soil and/or conditions. The report shall also provide procedures to stabilize the slope.
- Any recommendations regarding the design and construction of building foundations.
- The engineering properties of the native material including frost susceptibility, natural moisture content, compaction characteristics, relative density and structural integrity.
- Recommendations for achieving proper compaction
- A sufficient number of environmental tests to determine the likelihood of any soil contamination. The Geotechnical Consultant must supply procedures to dispose of, or reclaim, any contaminated soil.
- Recommendations for dealing with deep excavation of trenches
- Recommendations in dealing with septic or well systems that may be affected by the proposed building and servicing works.
- Sufficient boreholes to establish definite requirements and recommendations for the servicing and building works. Maximum spacing between boreholes along the proposed roadway is to be 150m. The soils report must identify minimum bearing capacity of the native soil, preferably

on a hole by hole basis. Boreholes located in the area of proposed underground municipal services are to be taken to a depth of at least one (1) metre below the bottom of the deepest trench.

Requirements and recommendations contained within this report along with borehole logs and grain size analysis of the native soils are to be incorporated by the engineering consultant into his first submission to the Transportation and Works Department. Any such requirements and recommendations that are not so incorporated are to be drawn to the City's attention with specific reasons.

Where grading operations require the placement of "engineered fill" the Geotechnical Consultant must certify that the fill located at 1.0m below finished grade and deeper has been sufficiently compacted to assure a minimum bearing capacity of 75 MPa and a 98% Standard Proctor Density.

The material testing of any major structure, as determined by the City, is to be carried out by an independent testing firm retained by the owner. Such testing is to be carried out in accordance with the latest revision of the OPSS and CSA requirements. All test results are to be forwarded to the owner, the engineering consultant, and the City, with the appropriate comments and recommendations. Upon completion of the material testing, the testing firm is to certify to the owner and the City that the Engineering Agreement material requirements for the concerned structure have been achieved.

4.02.10 Policy for Holiday Work by Contractors

No work will be permitted in Mississauga on the following days: GOOD FRIDAY; VICTORIA DAY; CANADA DAY; CIVIC HOLIDAY; LABOUR DAY; THANKSGIVING DAY; CHRISTMAS DAY; NEW YEARS DAY.

Permission to work on the following days will be considered upon receipt of a written request from the contractor at least 2 business days (minimum 48 hours) in advance of the holiday: EASTER MONDAY; REMEMBRANCE DAY; BOXING DAY.

4.03 PROCEDURES**4.03.01 Beginning of Construction**

Construction of services shall not commence until the Developer has entered into the necessary agreements with the City of Mississauga and the Region of Peel. The Developer must also have obtained any required approvals from the Ministry of Transportation Ontario, the Ministry of Environment, or any other organization which may be affected by the plan of subdivision. Construction may not commence until the plan of subdivision has been registered in the Land Titles Office of the Region of Peel except as provided by the City of Mississauga's Subdivision pre-servicing policy.

The Transportation and Works Department of the City of Mississauga and the Public Works Department of the Region of Peel must be given forty-eight (48) hours written notice prior to the commencement of construction. Should there be a cessation of construction of more than a week, the Developer must again supply forty-eight (48) hours written notice before recommencing the work. A copy of the notification to commence work shall be sent to the Chief Inspector. Failure to comply with any portion of the requirement will lead the City to increase maintenance periods in addition to field investigation.

4.03.02 Lot Grading and Sodding

It is the Developer's responsibility to correct any drainage problems during the term of the Servicing Agreement. The Developer is also responsible for certification of each lot's grading and sodding as required by the City of Mississauga.

The Transportation and Works Department will not accept a Lot Grading Certificate from a Consulting Engineer without the following having taken place:

- The Consulting Engineer has advised this department, in writing that he has visited the site to assure himself that the lots which he proposes to certify have been graded and sodded in accordance with the grading plan and the preliminary Lot Grading Certificate.
- The Consulting Engineer will then arrange for he and/or his representative, the builder and/or his representative, and the Commissioner of Transportation and Works and/or his representative to visit the site and review each lot in the plan which is to be certified, and to agree on those lots which can be certified by a visual inspection. Further, this inspection is also to reveal those lots which require more surveying or more work to determine how they can be certified. The Consulting Engineer will immediately certify all lots where an agreement has been reached by the parties in the field.
- The Consulting Engineer will re-survey those lots which cannot be certified by a visual inspection, or, if necessary, require the builder to do further work in order that such lots can be made certifiable. It should be noted that if the builder will not correct the work as instructed by the Consulting Engineer, this responsibility will fall directly upon the developer.
- Lots which cannot be certified due to poor grading or due to changes in the type of house which was built on the lot, will be brought to the attention of the Commissioner of Transportation and Works, in writing by the Consulting Engineer. The Consulting Engineer, on behalf of the Developer, will prepare a new grading plan(s) for the lots which have not been built according to plan and will submit the revised plan to the City with the required fee.
- Prior to assumption, if a homeowner modifies the grades within his own lot, causing adverse effects to neighbouring lands, the Developer may be required to make necessary arrangement to rectify the grading infraction to the satisfaction of the Transportation and Works Department.

The site grading plans are to show underside of footing elevations and top of foundation wall elevations. Where multi-level footings and/or foundation walls are intended, all levels are to be shown.

4.03.03 Block Grading

The Developer is responsible for the correction of all drainage problems on the blocks during the term of the Engineering Agreement and for sodding/seeding undeveloped blocks prior to assumption.

4.03.04 Application for a Letter of Credit Reduction:

- If a Developer pre-services, 10% of the contract value of the completed pre-servicing works are to be included in the Letter of Credit provided at Final Submission.
- The Consultant must show completed/uncompleted quantities, in Schedule D of the Servicing Agreement, for each request for a reduction of the Letter of Credit.
- The City will reduce the Letter of Credit to the amount of the actual remaining works, plus 10% of the work already completed, plus the required schedule D holdbacks.
- The Consultant, with each request for a reduction in the Letter of Credit, shall include a Statutory Declaration in the form of Schedule "G" to the Servicing Agreement.
- After all work has been completed, the City shall hold 10% of the completed work (excluding storm sewer works), and until an assumption by-law has been passed by the City Council.
- 10% Storm sewer maintenance security may be released subject to the fulfilment of the following items:
 - The maintenance period of a minimum of one year after the City has issued its preliminary inspection approval has been fulfilled. Final Approval must be granted by the City.
 - The Developer is to submit a Statutory Declaration, particularly pertaining to the storm sewer works and all its appurtenances.
 - "As-constructed" drawings are to meet with City approval.

Prior to the release of securities for any noise wall, the City must receive certification from the Consultant that the walls are structurally sound and constructed in accordance with the approved engineering drawings. In addition to the structural certification, an OLS must certify that the locations of the noise walls are in accordance with the approved engineering drawings. The location of all fences adjacent to municipal lands shall be verified in accordance with the approved engineering drawings.

- The City will reduce the Letter of Credit for retaining walls once the City has received certification of the walls structural integrity and confirmation from an OLS that the wall is in the correct location.

f

4.03.05 Request for Reduction in Letters of Credit

Instructions For Use Of This Letter

This form shall be used in requesting reductions in Letters of Credit.

Please note the last line of this letter and be advised that all requests for these reductions must be accompanied with the Developer's affidavit with respect to outstanding accounts, or the request will be directly returned.

Sample Letter - Request For Reduction In Letter of Credit

Date:

City of Mississauga
 Transportation & Works Department
 3185 Mavis Road
 Mississauga, Ontario
 L5C 1T7

Attention: Manager, Development Construction
Transportation and Works Department

Gentlemen:

Re: (Name of Subdivision)
Plan.

On behalf of the owners of the above development, we would appreciate your consideration and approval of a reduction in the amount of the letter of credit held by the City as performance and maintenance security.

We are listing below the value of the work completed to date, based upon Schedule D of the Subdivision Agreement.

ITEM	DESCRIPTION	ORIGINAL VALUE OF WORK		% ORIGINAL VALUE
		SECURITY	10% COMPLETED	
		COMPLETED	100% UNCOMPLETED	REDUCED AMOUNT
<u>Region of Peel</u>				
1.	Sanitary Sewers	_____	_____	_____
2.	Watermains	_____	_____	_____
3.	City of Mississauga			
4.	Storm Sewers	_____	_____	_____
5.	Roads	_____	_____	_____
6.	Miscellaneous	_____	_____	_____
7.	Landscaping	_____	_____	_____
	TOTALS:	_____	_____	_____

Detailed Roads Breakdown

	ORIGINAL	VALUE OF	VALUE OF	10%
COMPLETED+	SECURITIES	COMPLETED	UNCOMPLETED	100%
UNCOMPLETED		WORK	WORK	
(1) Roads (up to base)	_____	_____	_____	
(2) Roads (Boulevard, Sidewalk & Top)	_____	_____	_____	
Original Value of Letter of Credit			\$ _____	
Less Total Reduced Amount			\$ _____	
New Amount			\$ _____	
Plus Lot Grading Security			\$ _____	
Plans Additional Holdbacks			\$ _____	
New Value of Letter of Credit			\$ _____	

We are attaching a Statutory Declaration that all outstanding accounts relative to work in this subdivision have been paid. Also enclosed is a marked up copy of Schedule D (D-1) indicating the altered value of the works by overstriking the original value and writing in the value of the works completed.

Yours very truly,

(Signature of Engineer)
Name of Engineering Firm

4.03.05.01 Statutory Declaration

(Security Reduction)

CANADA) IN THE MATTER OF FILE NUMBER P.N.
Province of Ontario) on REGISTERED PLAN NO. _____, CITY OF
) MISSISSAUGA in the REGIONAL MUNICIPALITY
) OF PEEL, being the subject of an agreement
) dated
) between
) and the City of Mississauga and The
) Regional Municipality of Peel

TO WIT:

I,
of the _____ of _____ in the

SOLEMNLY DECLARE THAT

1. I am (Position: Corporate Officer) of (Company)
and as such have knowledge of the matters herein deposed to.
2. That all outstanding accounts have been paid with respect to the work
completed as required under the above mentioned Agreement between the said
(Company) and the City of Mississauga and the
Regional Municipality of Peel.

AND I make this solemn Declaration conscientiously believing it to be true, and
knowing that it is of the same force and effect as if made under oath and by
virtue of the Canada Evidence Act.

DECLARED before me at the _____)
of _____)
in the _____)
this _____ day of _____ 20_____

A Commissioner, etc.

SURVEYORS CERTIFICATE:

Prior to the assumption by the City of the services constructed in a development, it is required that the Developer re-establish all Control Standard Iron Bars. Confirmation of re-establishing these iron bars must be made in writing to the City Transportation and Works Department by a Registered Ontario Land Surveyor.

- Where registered lots of both the subject land and an existing registered plan are abutting and where these lots have been occupied and fenced, it shall not be a requirement to have these S.I.B.'s replaced.
- Where the boundaries of the plan involve either sewer or watermain easements, City owned lands, Region owned lands, Public or Separate School Board lands, Hydro lands, etc., S.I.B.'s shall be required.
- If it is not possible along the road allowances within a development to place S.I.B.'s, because of above ground works, (i.e. paved driveways), it will be satisfactory to have the closest lot corner monumented with a S.I.B. when such a situation arises at the beginning or at the end of a curvilinear section, it is required that the closest lot corner on a straight street line portion be monumented.

The planting of Standard Iron Bars (S.I.B.'s) is to be done after the preliminary acceptance of roads and at least six months before final acceptance of the subdivision.

The Surveyor's certificate required prior to assumption of the subdivision shall confirm that the Surveyor has either found in its original position or replaced each S.I.B. shown on the registered plan. The Certificate shall also confirm that the limits of all sewer and watermain easements have been barred, and that the tops of all S.I.B.'s are within 150mm of final grade.

The Certification shall state the date of field verification which shall be no earlier than one month prior to the end of the above ground maintenance period.



SCHEDULE

FORM 5 - LAND REGISTRATION REFORM ACT, 1984

FRONTAGE AND FLANKAGE EASEMENTS FOR UTILITIES STORM AND SANITARY SEWERS, WATERMAINS AND UTILITY LINES

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

EASEMENT FOR TRAFFIC SIGNALS AND DETECTOR LOOPS (Basic Form)

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

EASEMENT FOR TEMPORARY TURNING CIRCLES AND CUL DE SACS (basic form)

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

STORM AND SANITARY SEWERS (basic form)

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

WATERMANS ON WALKWAYS - Region

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

STORM, SANITARY SEWERS AND WATERMAINS – (basic form)

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services



**SCHEDULE
FORM 5 - LAND REGISTRATION REFORM ACT, 1984**

CATCHBASINS SWALES AND OPEN WATERCOURSES – (basic form)

NOTE:

See Section 3 Page 3-35

To obtain these schedules from Legal Services