APPLICATION FOR SITE PLAN APPROVAL

It is the responsibility of the owner or authorized agent to provide complete and accurate information at all times. **This form will not be accepted as an application until such time as all questions have been answered and all requirements have been met in the manner requested herein. Please read the following carefully:**

APPLICATION: It is the responsibility of the Owner or Authorized Agent to provide complete and accurate information at all times. This Form will not be accepted as a complete electronic ePLAN application until such time as all questions have been answered and all requirements have been met in the manner requested herein. The approved Pre-Consultation meeting checklist must accompany thiscompleted application form. Please read the following carefully.

FEE:

Please refer to Fee By-law 211-83, as amended. Payment can be made by credit card payment online (Maximum $60,000) via EPLAN or by cheque payable to City of Markham

PLANS: **Upload vector-based plans via ePLAN**

If you have any questions regarding your application please contact The Development Client Services Counter at 905.475.4861.

Revised 2021

City of Markham, Development Services, 101 Town Centre Boulevard, Markham, Ontario L3R 9W3 CANADA
Telephone: 905.475.4861 Fax: 905.479.7768 Email: dsc@markham.ca

SITE PLAN CONTROL APPLICATION

For applying for approval under Section 41(4) of the Planning Act
For applying for approval under Section 33 of the Ontario Heritage Act (individually designated property) or Section 42 of the Act (properties within a heritage conservation district), where applicable.

Applicants are required to consult with the planning and urban design department prior to removal or modification of any trees or vegetation on the site.
Have you considered development charges?

Please complete all applicable sections of the application form. An incomplete application will be returned to you. The Detailed Application Information Table must be completed and attached to the application.

APPLICATION TYPE (Check one)

☐ New/Addition to Industrial, Commercial, Institutional, and Mixed Use Buildings.	☐ Ground Oriented Residential (single detached, semi-detached, Townhouse blocks with 11 units or more) and Apartments
☐ Minor Application (including but not limited to; changes to parking lots, revisions to facades, outdoor patios, amendment to existing agreements.	☐ Telecommunication Facilities (Not Subject to Section 41(4)) of the Planning Act.

Is this an Individually Designated Property? ☐ Yes ☐ No	By-Law #:
Is the Property in a Heritage Conservation District? ☐ Yes ☐ No	District Name:
Are there previous development applications on subject lands? ☐ Yes ☐ No ☐ Don't Know	
If yes, previous file number(s) and date of application(s):	

PROPERTY INFORMATION

Municipal Address:	Street No.:	Street Name:		Unit Num.:
Registered Plan Number:		Lot/ Block Numbers:		
Roll Number:		Conc. & Lot Number:		

OWNER/ APPLICANT INFORMATION

PROPERTY OWNER INFORMATION: (check one) ☐ Person(s) ☐ Company

Registered Land Owner:	Surname:	First Name:		Initial:
Name of Company (if applicable):		Company Officer:		
Application Contact:	Surname:	First Name:	Initial:	Position:
Address:	Street No.:	Street Name:		Unit Num.:
Municipality:		Province: Ontario		Postal Code:
Telephone:	Fax:	E- Mail:		

AGENT, SOLICITOR, OR PLANNING CONSULTANT

Firm:				
Application Contact:	Surname:	First Name:	Initial:	Position:
Address:	Street No.:	Street Name:		Unit Num.:
Municipality:		Province: Ontario		Postal Code:
Telephone:	Fax:	E- Mail:		
Legal Name for Use with Agreements:				
Designate to Which All Correspondence Will be Sent:				

DETAILED APPLICATION INFORMATION TABLE (METRIC)		
Project/ Marketing Name:		
Description of Project/ Application:		
Uses proposed in building/buildings:		
SITE STATISTICS (All Sections Must Be Completed)	**PROPOSED (as per application)**	**EXISTING (if applicable)**
Lot Area (ha)		
Lot Coverage (%)		
Residential G.F.A. (m^2)		
Non-residential G.F.A. (m^2)		
Total Bldg. G.F.A. (m^2)		
No. of Residential Dwelling Units		
Building Height (# of storeys)		
Number of Parking Spaces Provided		
Number of Handicapped Spaces		
Number of Loading Spaces		
OUTDOOR PATIO REQUIREMENTS		
Proposed Patio Area (square metres)		
Existing G.F.A. of Restaurant		
Number of Parking Spaces		
TELECOMMUNICATIONS TOWER REQUIREMENTS		
MAIN BUILDING	**PROPOSED REQUIREMENTS**	**BY-LAW REQUIREMENTS**
Tower Height		
Size of all structures (m^2)		
Size of Leased/Fenced Area (m^2)		
SITE SERVICING (check applicable)		
☐ Municipal Water	☐ Private Septic	☐ Storm Sewer
☐ Sanitary Sewer	☐ Private Well	☐ Communal Septic

ePLAN Site Plan Control Submission Requirements:

Application Type: ▪ New Residential, Industrial, Commercial, or Institutional; ▪ Amendment to Existing Industrial, Commercial, or Institutional ▪ Telecommunications Towers (see page 11 for the checklist)	▪ Approved Pre-Consultation Checklist & Planning Justification Letter ▪ 1 copy of the Site Plan & Site Statistics ▪ 1 reduction of the Site Plan (8.5” x 11”) ▪ 1 copy of the Building Elevations ▪ 1 Reduction of the Building Elevations (8.5” x 11”) ▪ 1 Legal Property Survey ▪ 1 copy of the Landscape Plan ▪ CAD drawing of the Site Plans and Elevations in an AUTOCAD (DWG) 2012 file format. ▪ All applicable reports, application form/plans in PDF ▪ Applicable Processing Fee <u>Mandatory Engineering Submissions</u> a) 1 copy of Studies or Reports • Storm water Management Report (Engineering Study Review Fee Required) • Sanitary Design Calculation a) 1 set of Plans or Drawings • Grading Plan • Drainage Plan for Minor and Major Flow • Site Servicing Plan and Municipal Connection Drawing
▪ Outdoor Patio	▪ The approved Pre-Consultation meeting checklist ▪ 1 Copy of the Site Plan, Site Statistics, and Elevations of the Fencing Details ▪ 1 Legal Property Survey ▪ Applicable Processing Fee ▪ All plans may be in a reduced format. (8.5” x 11”) application form and plans in PDF
Heritage Applications: ▪ Industrial, Commercial, Institutional, and amendments to existing Site Plan Control Agreements.	▪ Approved Pre-Consultation checklist & Planning Justification Letter ▪ 1 Copy of the Site Plan & Site Statistics ▪ 1 Reduction of the Site Plan (8.5” x 11”) ▪ 1 Copy of the Building Elevations ▪ 1 Reduction of the Building Elevations (8.5” x 11”) ▪ 1 Legal Property Survey ▪ 1 Copy of the Landscape Plan ▪ CAD Site Plans and Elevations in an AUTOCAD (DWG) 2012 fileformat. ▪ All applicable reports, application form/plans in PDF Mandatory Engineering Submissions Plans or Drawings • 1 copy of Site Servicing Plan & Municipal Connection Drawing

- The ‘Site Statistics’ table must be completed. Applications that state: “See Drawings” will not be accepted.
- The owner and/or applicant must retain a Professional Engineer who holds a Certificate of Authorization from the P.E.O. and experienced in Municipal Engineering and storm water management to prepare the Engineering submissions prior to the Director of Engineering for his approval prior to site plan endorsement.
- Colour renderings of site plans and drawings will be required at all public meetings.
- For accurate calculations of application fees, please review the Tariff of Fees as amended by By-Law 211-83, as amended.

Site Plan and Elevation Drawing Requirements:

- ☐ Key Map: Indicating the location of the subject property and the local vicinity.

A Table of Statistics that indicate the following information:

- ☐ The current zoning designation and applicable Zoning By-Law of the subject property.
- ☐ Total lot area of the subject property.
- ☐ Gross Floor Area (GFA) and Gross Leasable Area (GLA) of the proposed building.
- ☐ Net Floor Area of the proposed building.
- ☐ The Floor Area Ratio (FAR) shown as a percentage of the total lot area.
- ☐ Lot Coverage shown as a percentage of the total lot area.
- ☐ The front, rear and, side setbacks of the proposed building, both provided and as required by the applicable Zoning By-Law, and the distance between existing and proposed buildings.
- ☐ Number of parking spaces, both provided and required by By-Law 28-97 (including physically disabled parking spaces.)
- ☐ The landscaped area shown as a total area and percentage of the total area of the lot.

The Site Plan must include:

- ☐ The location of all existing trees and proposed landscaping details.
- ☐ The location and dimensions of all existing and proposed buildings.
- ☐ The location and dimensions of all hydro transformers.
- ☐ The proposed parking layout, including isle widths and dimensions of parking spaces.
- ☐ The location and dimensions of all waste storage and loading/unloading facilities.
- ☐ The location of the proposed fire route.
- ☐ The first floor elevation.
- ☐ All retaining walls over 0.5 m in height.
- ☐ Abutting streets.
- ☐ All existing underground municipal services and utilities.

Elevations must show:

- ☐ The height and width of all proposed buildings.
- ☐ The location of all windows, doors, loading docks, etc.
- ☐ The details of all four sides of the proposed building(s), including the type and colour of materials to be used.
- ☐ The location of all roof-top mechanical equipment (HVAC, etc.) and proposed screening.

DEFINITIONS:

FLOOR AREA: means the total area of all floors in a building, measured between the exterior faces of the exterior walls of the building at each floor level.

FLOOR AREA, GROSS: means the aggregate of the floor areas of a building above or below the established grade, but excluding car parking areas within the building that are below established grade.

FLOOR AREA, LEASABLE: means the aggregate of the floor areas of a shopping centre that are leased to the tenants of the shopping centre for their exclusive use, above or below established grade.

FLOOR AREA, NET: means the aggregate of the floor areas of a building above or below established grade, but excluding car parking areas within the building stairways, elevator shafts, service/mechanical rooms and penthouses, washrooms, garbage/recycling rooms, staff locker and lunch rooms, loading areas, any space with a floor to ceiling height of less than 1.8 metres and any part of a basement that is unfinished, is used solely for storage purposes and is not accessible to the public.

LANDSCAPE PLAN REQUIREMENTS FOR SITE PLAN APPROVAL

- Landscape Concept drawing to be submitted at time of application.
- Landscape Plans to be prepared by a Landscape Architect having membership with the Ontario Association of Landscape Architects submitted to the Commissioner of Development Services for approval and inclusion in the Site Plan Agreement
- Landscape Plans may be submitted after but in conformity with the site plan approved by Council at an adequate scale to explain and indicated the following:
- A tree preservation program (where applicable) see Tree Preservation Plan Requirements
- All existing trees, accurately located on the plan with base elevations provided and clearly specified as to the type, caliper, condition. Existing trees to be removed must be indicated with a broken line. The location and details of all protective fences must be indicated.
- All existing trees within 3m of the property line should be indicated on the Landscape Plans and on the Tree Preservation Plan
- A plant list, using a key system, to indicate the full botanical name, common name, quantity, quality, caliper, height, spread and special remarks.
- Provide a Key Map

- Natural and man-made features such as berms, swales, ponds, creeks, rivers and ditches and the top of valley banks must be indicated and generally dimensioned.

Continued

- Details and specifications of the following items:

  Planting details of trees, shrubs, groundcover etc.

  Walls, fences and screening

  Walkways, curbing, ramps, stairs and all paved areas and any features or special area. Spot elevations for proposed grading and top and bottom elevations of ramps, stairs, retaining walls, planters, underground parking structures. parking stalls/lines.

  Lighting fixtures, planters, ground signs etc. (catalogue photocopies are acceptable)

  Tree preservation fencing

- Features and planting on adjacent lands owned by the applicants and which are held or are to be developed in a subsequent stage.

- Proposed planting on lands

AT TIME OF SUBMISSION:

- Provide 4 folded copies of the Landscape Package.
- Provide a cost estimate.
- Provide a Land Appraisal for calculations of Cash-in-Lieu of Parkland
- If necessary at the agreement stage provide $300 per Street Tree as determined for the site.

PRESERVATION PLAN REQUIREMENTS

- A tree preservation plan will be required at the time of submission of an application for site plan approval or subdivision approval. This plan should describe the existing vegetation with all proposed development superimposed thereon, including all existing and proposed site grading. The existing vegetation should be described as follows:

  - Designation of species types
  - Location of all trees and shrubs on the development site
  - Existing and proposed elevations at the base of trees to be preserved
  - Size, general health and quality of this vegetation
  - An opinion as the retention value considering future development.

- The plan will be prepared by a qualified Landscape Architect in good standing with the O.A.L.A., in conjunction with a qualified arborist who will prepared the vegetation analysis.

- The plan should indicate all existing vegetation within 3m of adjacent lands.

- Provide a Key Map.

- If there is no existing vegetation on the proposed development site, a statement to that effect must be made on the draft plan.

Continued

- No rigging cables shall be wrapped around or installed in trees; and surplus soil, equipment, debris or materials shall not be placed over root systems of the trees within the protective fencing. No contaminants will be dumped or flushed where feeder roots of trees exist.

- The developer or his agent shall take every precaution necessary to prevent damage to trees or shrubs to be retained.

- Where limbs or portions of trees are removed to accommodate construction work, they will be removed carefully and exposed wood treated with an approved tree wound dressing.

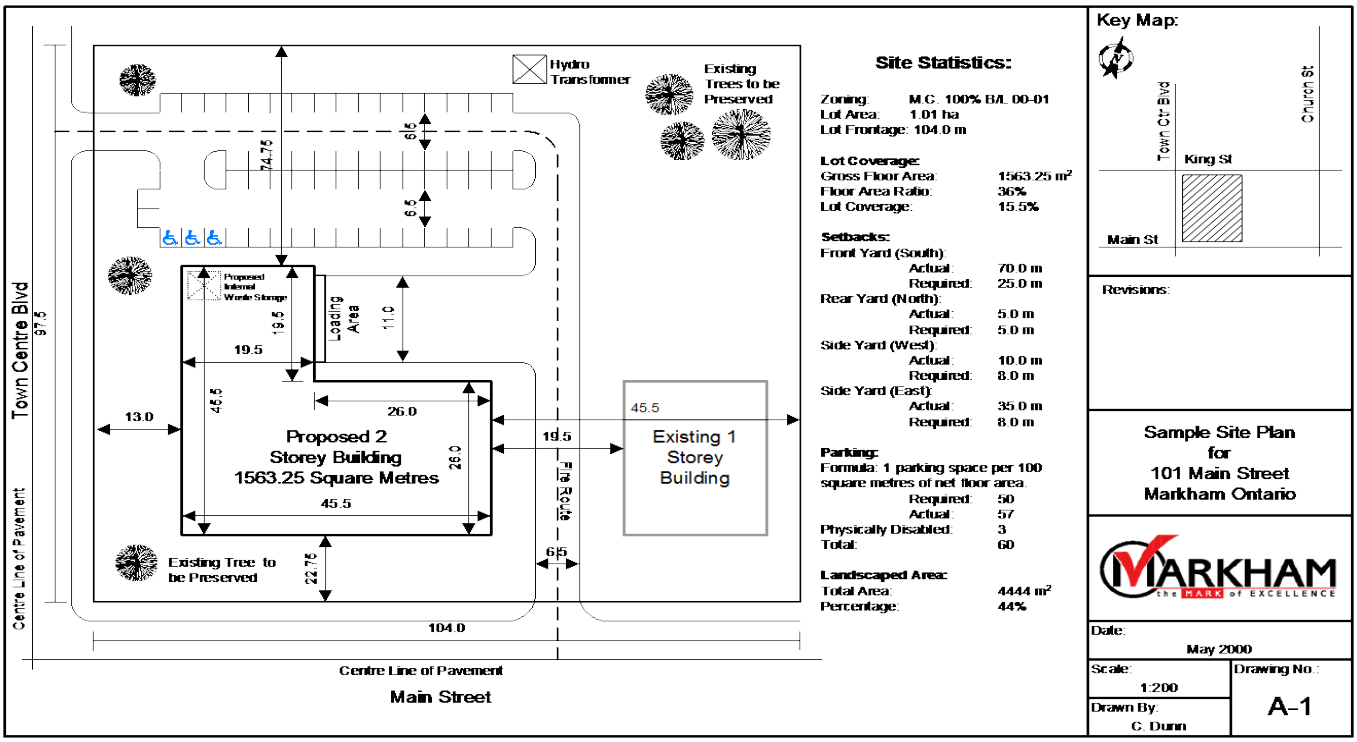
- Where root systems of protected trees are exposed directly adjacent to or damaged by construction work, they shall be trimmed nearly and the area back filled with appropriate material to prevent desiccation.

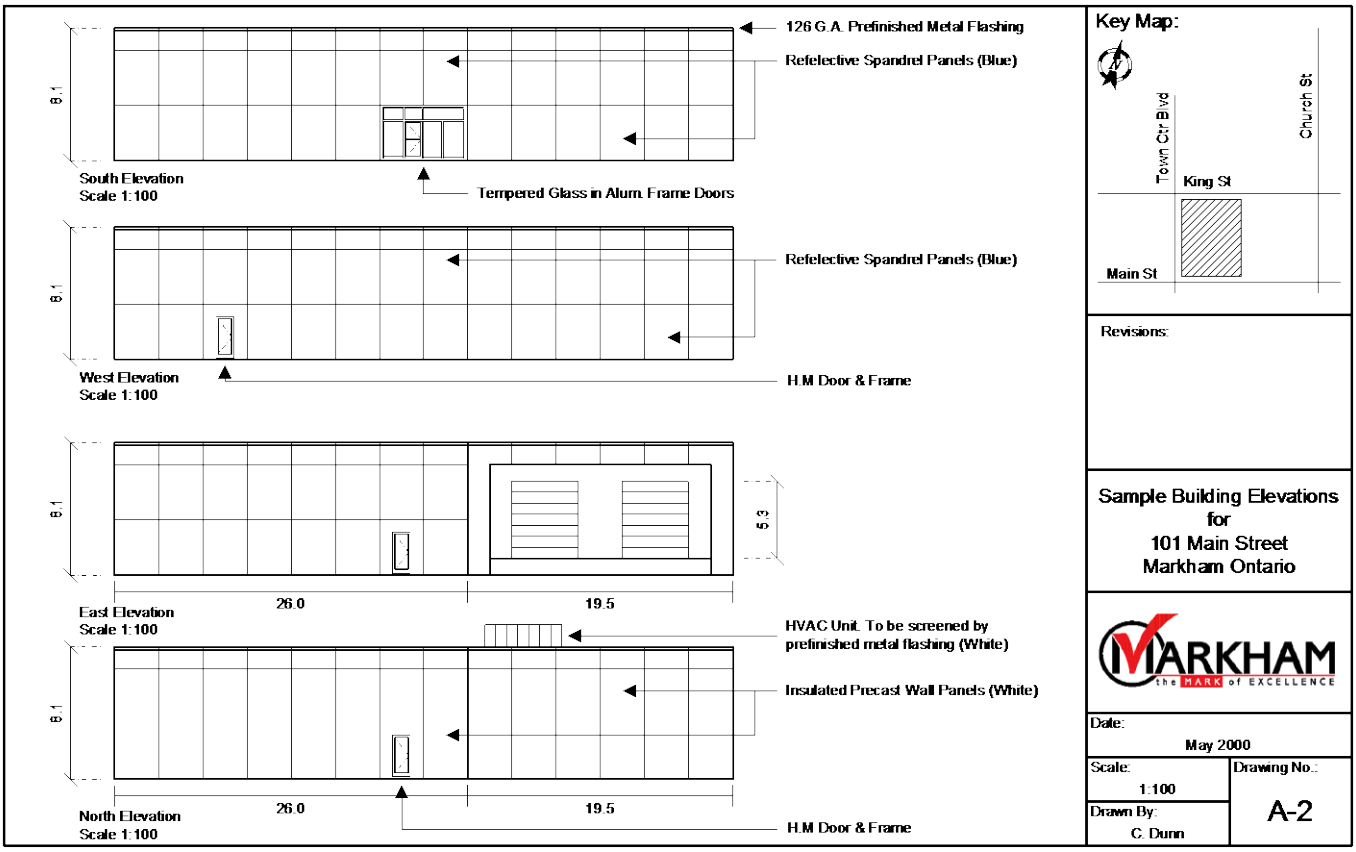
- Where necessary, the trees will be given an overall pruning to restore the balance between roots and top growth or to restore the appearance of the tree.

- Trees to be preserved that have died or have been damaged beyond repair, shall be replaced by the developer at his own expense with trees of a size and species as approved by the Commissioner of Development Services.

- If grades around trees to be preserved are likely to change, the developer shall be required to take such precaution as dry welling and root feeding to the satisfaction of the Commissioner of Development Services.

Sample of a Site Plan and Elevation Drawings:





SPECIFICATIONS FOR PARCEL MAPPING FOR DWG SUBMISSIONS

Scale Factor:	**0.99960000**
Measuring Units:	**metres**
Units of Resolution	**1:250**
Coordinate System:	**UTM Zone 17N**
Datum:	**NAD 83**

LEVEL SPECIFICATIONS FOR PARCEL MAPPING:

Level 1	Street Lines (Road Allowance)
Level 2	Property Lot Lines
Level 5	Subdivision Plan Linework
Level 6	Subdivision Text
Level 7	Reference Plan Linework
Level 8	Reference Plan Text
Level 9	Other Plan Linework
Level 10	Other Plan Text
Level 12	Street Names
Level 27	Condominium Plan Linework
Level 28	Condominium Plan Text
Level 41	Ground Control Points eg: SIBs etc
Level 42	Ground Control Text eg: SIBs etc
Level 45	Survey Control Monuments

Note: No duplicate linework and all linework should be closed but broken at connection points.

If you require additional information regarding the digital AutoCAD submission, please contact
Robert Tadmore at (905) 477-7000 extension 6810, Geomatics, The City of Markham
101 Town Centre Blvd., Markham, Ontario, L3R 9W3

City of Markham, Development Services, 101 Town Centre Boulevard, Markham, Ontario L3R 9W3
Telephone: 905.475.4861 Fax: 905.479.7768 Website: www.markham.ca

CHECKLIST FOR TELECOMMUNICATION FACILITIES

1. Site Plan Approval Application (including all standard submission requirements)

2. A site selection/justification report outlining the location of non-tower and co-location options which have been considered, and why the proponentôs proposal is the preferred option. This report shall include details with respect to the coverage and capacity of the existing facilities in the surrounding area, and confirm the need for a new tower at the proposed location with this context. All materials including the application form **must be submitted on disk for a complete application.**

Yes No

3. Map/inventory of all towers within the proponentôs search area.

Yes No

4. PIN printout/survey

Yes No

5. Colour photograph(s) with support structure superimposed.

Yes No

6. Information required as per municipal building permit process (if required)

Yes No

7. Information required as per Conservation Authority permit process (if required)

Yes No

8. Environmental impact statement, if required under the existing land use designation.

Yes No

9. Confirmation of appropriate utility locates, such as gas companies and hydro providers, have been consulted.

Yes No

10. Confirmation that Transport Canada has been consulted.

Yes No

CITY OF MARKHAM
DEVELOPMENT ENGINEERING SECTION, ENGINEERING DEPARTMENT
COMPLETE ENGINEERING SUBMISSION FOR SITE PLAN CONTROL APPLICATIONS

Owners/applicants are advised to consult with Engineering staff, prior to making a formal application, to determine any site specific issues and special studies that may be required to make a complete submission.

The following submissions: (A) Mandatory Engineering Submissions and (B) Other Engineering Submissions form a complete application for <u>site plan control application</u> for the Engineering Department. Other departments of the City, external jurisdictions or agencies may have other submission requirements in addition to the City's requirements.

(A) Mandatory Engineering Submissions

a) Studies or Reports
- Stormwater Management Report
- Sanitary Design Calculation

b) Plans or Drawings
- Grading Plan
- Drainage Plan for Minor and Major Flow
- Site Servicing Plan and Municipal Connection Drawing

(B) Other Engineering Submissions

a) Studies or Reports
- Traffic Impact Study
- Environmental Site Assessment
- Noise Study
- Environmental Impact Study
- Geotechnical Study/Soil Report
- Functional Servicing Study (when there are potential downstream capacity issues)

b) Plans or Drawings

(C) Other Requirements

a. Execution of a Site Plan Agreement (typical engineering condition)
b. Execution of Servicing Agreement
c. Payment of Engineering Fees (see Fee By-law)
d. Payment of On-site Engineering Security (see Calculation of On-site Engineering Security)
e. Payment of Off-site Engineering Security (see Calculation of Off-site Engineering Security)
f. Payment of Recovery (see Recovery Pamphlet)

STORMWATER MANAGEMENT REPORT

Purpose

- To determine the quantity and quality changes in stormwater runoff due to the proposed development on existing infrastructure and watercourses
- To identity municipal infrastructure improvements required to support the proposed development
- To identity mitigation measures to minimize adverse impacts and opportunities to improve existing conditions

When Required

All site plan control applications will require some form of stormwater management. For singles and semis where stormwater runoff is not controlled, a letter report is required to indicate that the subdivision has been designed to accommodate the stormwater runoff. Where the proposed development is a renovation or addition of a small scale, a letter report is required to demonstrate that there is no or negligible impact due to the proposed development.

Format

A stormwater management report is prepared by a professional engineer with a Certificate of Authorization from the Professional Engineers of Ontario and qualified in municipal engineering/stormwater management. The report is to follow the City of Markham Guidelines for the Preparation of Stormwater Management Reports (under review). Depending on the proposed development and its impact on stormwater run-off, the submission includes computer modelling results, design calculations, list of referenced materials (e.g. master environmental servicing plans) drawings and reports to demonstrate how storm run-off is to be managed. Documentations to show approval of the stormwater management concept from other agencies, e.g. TRCA are to be included in the report.

Where stormwater run-off has significant impact on downstream watercourse, a separate environmental impact study may be required.

Principles

A stormwater management report must be based on established stormwater management principles, best practices, policies of the City and conservation authority of the affected watershed, policies and guidelines from the Ministry of the Environment.

Contents

A storm water management report must address the following:

- Quantity and control of minor flow from the site
- Quantity and control of major flow from the site
- Quality control of storm run-off from the site
- External drainage areas under pre-development and post-development conditions including impact on external flows
- Impact and capacity of downstream sewer systems
- Impact on downstream watercourses and/or other storm water management facilities, including capacity, flooding, erosion control
- Storm water management principle that maximize source control to reduce runoff from the site and maximize conveyance control to infiltrate and/or treat runoff before entering the municipal sewer system
- Other agencies that are required to grant approval or issue permits
- Studies or reports that were used to formulate the storm water management proposal

SANITARY DESIGN CALCULATION

Purpose

- To determine the quantity of sanitary flow due to the proposed development
- To identity municipal infrastructure improvements required to support the proposed development

When Required

Some site plan control applications will generate increase in sanitary flow and sanitary design calculation is required to track this increase. Where the proposed development is a renovation or in-fill addition of a small scale and increase in sanitary flow is not anticipated, a letter report is required to support this and to confirm that the existing sanitary connection will continue to be used for the proposed development. Where the proposed development is on a vacant site, a letter report is required to demonstrate that sanitary flow from the site has been designed for under the subdivision and indicated in subdivision servicing study.

Format

A sanitary design calculation is prepared by a professional engineer with a Certificate of Authorization from the Professional Engineers of Ontario and qualified in municipal engineering. For smaller development proposals, the submission of a sanitary design sheet may be acceptable.

Where downstream capacity is not available and on-site mitigation cannot adequately address downstream capacity deficiency, an area-wide functional servicing report will be required.

Principles

A sanitary design calculation must be based on established municipal servicing principles for anticipated population or equivalent population of non-residential uses.

Contents

A sanitary design calculation must address the following:

- Quantity of sanitary flow
- Size and invert of sanitary connection
- Mitigation measures where downstream capacity is not available

TRAFFIC IMPACT STUDY

Purpose

- To analyze potential traffic impact of the proposed development related to existing and proposed access points and on-site vehicle circulation
- To identity external infrastructure improvements required to mitigate the identified traffic impact

When Required

Some site plan control applications with high traffic generating uses at access points (driveways) and can negatively impact the traffic operations of the abutting streets. Traffic impact studies are typically not required for elementary schools, places of worship, neighbourhood retail developments.

Format

A traffic impact study is prepared by a qualified transportation consultant. The report will analyse existing conditions and future conditions at different horizon years and peak periods.

Principles

A traffic impact study must be based on established transportation and traffic engineering principles and supplemented by surveyed traffic data. Various established traffic forecasting techniques can be used depending on the projection horizon years.

Contents

A traffic impact study must address the following:

- Traffic generation for various peak periods
- Assumptions for trip distribution
- On-site circulation and impact to access points
- Conflicts and level of service analysis at access points
- Mitigation measures to address level of service deficiencies

ENVIRONMENTAL SITE ASSESSMENT

Purpose

- To identify soil and/or groundwater contamination that do not meet the standards stipulated in the Environmental Protection Act and its regulations
- To identity remedial action plan or environmental management plan to address the identified contamination
- To ensure all lands to be conveyed to the City are environmentally acceptable for their intended use

When Required

Format

Principles

Contents

NOISE STUDY

A working committee with representative from the City's Engineering Department and Planning and Urban Design Department is currently developing policies related to noise policy. It is anticipated the new policies will be presented to Council later in 2007 for adoption.

In the interim, Engineering staff will determine if noise studies are required. All noise studies are peer reviewed to ensure they meet MOE requirements.

Purpose

When Required

Format

Principles

Contents

GEOTECHNICAL STUDY/SOIL REPORT

Purpose

- To determine and mitigate the impact of the proposed development on stability of the land
- To determine the stability of slopes and mitigation measures
- To determine any construction safety measures required due to unique soil and ground conditions

When Required

Some site plan control applications involve changing the existing topography of the land, e.g. adding fill materials, cutting new slopes, or developing on lands with unique geotechnical conditions. In situations where the City requires assurance that the proposed development and/or construction methods are not going to cause adverse geotechnical conditions such as excessive or uneven settlement, slope instability, a geotechnical report will be required.

Format

A geotechnical report is prepared by a professional engineer with a Certificate of Authorization from the Professional Engineers of Ontario and qualified in geotechnical engineering or soil mechanics.

Principles

A geotechnical report must be based on established principles with considerations for local conditions. The analysis must use assumptions/parameters derived for site investigation, field and laboratory testing. The results of computer models may have to be verified by suitable in-situ testing.

Contents

A geotechnical report must address the following:

- Soil and geotechnical parameters
- Factor of safety and risk assessment
- Mitigation measures and monitoring program where necessary

FUNCTIONAL SERVICING STUDY

Purpose

- To determine the area-wide capacity of municipal services including stormwater, sanitary sewage and water supply
- To identity municipal infrastructure upgrades, cost estimates and impact to existing infrastructure required to support the proposed development

When Required

This type of study is more typically required for changes in the types or intensity of land use such as in an official plan amendment application or a zoning amendment application. However, a functional servicing study is required for a site plan application where a proposed development creates a demand for municipal services (stormwater, sanitary sewage, water supply) that cannot be mitigated on-site and requires upgrades to existing infrastructure or installation of new infrastructure.

Format

A functional servicing study is prepared by a professional engineer with a Certificate of Authorization from the Professional Engineers of Ontario and qualified in municipal engineering.

Principles

A functional servicing study must be based on established municipal servicing principles for anticipated population or equivalent population of non-residential uses.

Contents

A functional servicing study must address the following:

- Water Consumption - estimated consumption, capacities of trunk watermains, water pressure,
- Sanitary Sewage ï estimated discharge, capacities of trunk sewers,
- Storm Drainage ï estimated run-off, methods of attenuation, capacities of conveyance systems and end-of-pipe treatment
- Capacity and System Improvements ï areas of deficiencies and mitigation alternatives, systems improvements and associated costs.