

**Proposed Zoning Amendment
Access to Private Parking Garages
(Reverse Slope Driveways)
Town-Initiated Zoning By-law Amendment**

Public Meeting Presentation

March 27, 2012

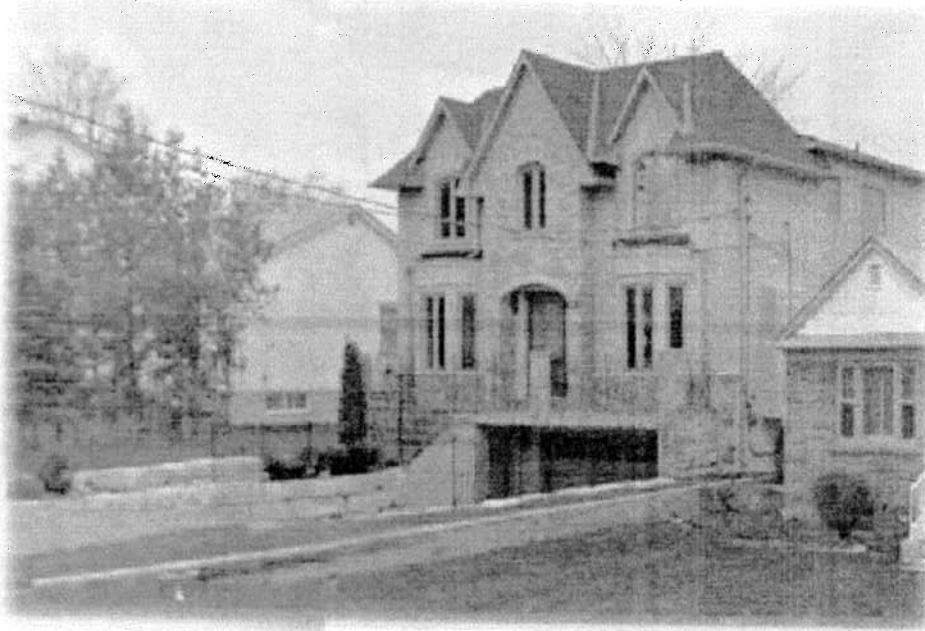
Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT

A Reverse Slope Driveway.....

- slopes negatively away from the elevation of the street
- common to many different land uses, including residential uses
- usually leads to an attached parking garage located wholly or partially below ground, in the lower level of a building
- not referring to access ramps that lead to underground garages as part of a large scale commercial, office or residential building

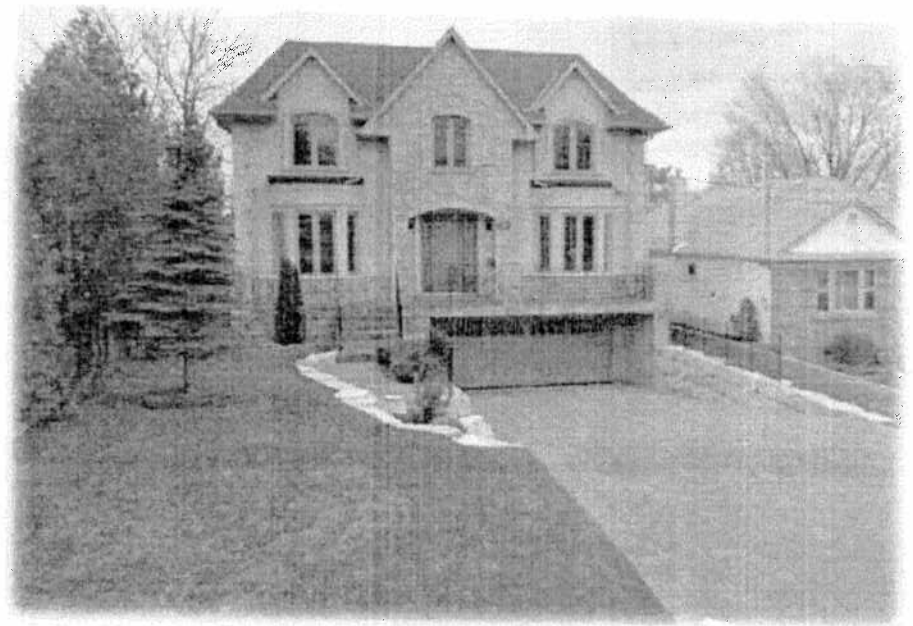


Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT

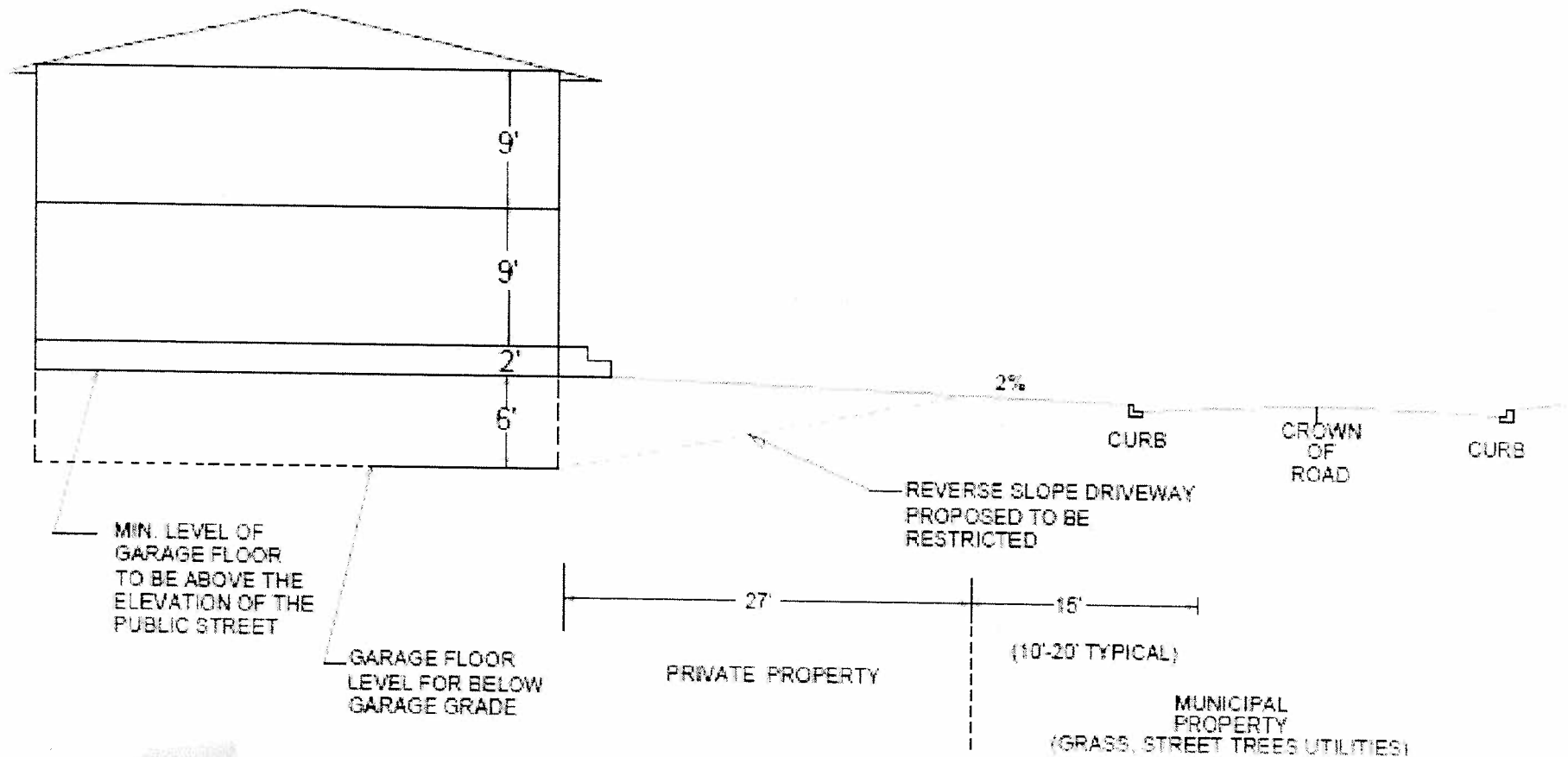


-have become more commonplace in older areas of the GTA as land values have increased and homeowners are seeking more living space on smaller lots

-a feature of certain infill dwellings where additional living space is desired on the ground floor



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History of the Proposal

- In August 2005 a major storm struck Southern Ontario, and significant flooding was experienced in the Thornhill area
- 103mm of rain fell in one hour
- Storm exceeded 100-year storm level, resulting in millions of \$\$\$ in property damage including damage from flooded basements
- following this, residents petitioned Town for remedial measures to prevent future problems

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History of the Proposal

- West Thornhill Stormwater Flood Remediation Class EA Study initiated in 2008
- Review , updating and further public consultation occurred through to Dec. 2010
- Ministry of Environment approval of Class EA – August 2011
- In addition to an increase in the storm sewer capacity as recommended by the EA, other measures were identified that could reduce the amount of run-off entering the sewer system, including restricting **reverse slope driveways**
- During discussions with residents respecting updating of Thornhill's Infill Zoning By-laws in 2010, reverse slope driveways were identified as an issue to be investigated

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***Process to date***

- Staff were authorized by DSC in December 2011 to proceed with a public process to receive comments on a Town-initiated zoning amendment that would restrict reverse slope driveways
- From December 2011 to March 2012, Staff conducted research into the issue, including surveying of other municipalities, review of various by-laws respecting reverse slope driveways, and evaluating various means to restrict basement/cellar garages
- Internal and external agency consultation was initiated in January 2012
- Staff also sent the proposal to all members of the Town's Developer Roundtable Group for comment in January 2012
- In accordance with the Planning Act, notice of tonight's public meeting was provided in the Markham Economist and Sun, on both March 8, 2012 and March 15, 2012

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What the Research Revealed....***

- Out of 10 Ontario municipalities surveyed, **three (3)** had provisions in their by-law respecting reverse slope driveways and/or basement garages
 - ❖ Brampton – no, dealt with by Works Dept on individual basis
 - ❖ Kingston – no, dealt with at site plan or building permit stage
 - ❖ Oakville – no
 - ❖ Windsor – no
 - ❖ Whitby – no
 - ❖ Oshawa – no
 - ❖ Mississauga – no
 - ❖ Hamilton – yes, but only required garage floor to be “above grade”
 - ❖ Toronto – yes, originated in North York district with similar flooding issues
 - ❖ Vaughan – yes

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What the Research Revealed....***

- The current practice in Markham is for the matter to be dealt with exclusively by our Engineering Department
- There are currently no provisions in any of Markham's zoning by-laws that would prevent a homeowner from constructing a reverse slope driveway or a basement garage
- Since about 1998, the Town has required homeowners to enter into an agreement that indemnifies the Town in the event that basement flooding occurs due to water entering the home from the street through a reverse slope driveway and/or basement garage
- The Town has entered into ten (10) such agreements with homeowners to date, with eight (8) of those agreements being for homes in the Thornhill area
- It is unknown how many reverse slope driveways/basement garages were constructed in the Town prior to 1998

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What the Research Revealed....***

Excerpt from Public Sector Digest Magazine, Winter 2009:

“Reverse slope driveways have been identified as a common culprit in the exacerbation of urban flooding impacts. This type of driveway directs water into the home, and can increase the risk of basement flooding for neighbours, as excess water can enter the municipal sanitary sewer through basement floor drains. For this reason, some municipalities have taken steps to prevent construction of new reverse slope driveways”

Excerpt from Report to North York Community Council, December 2008:

“Reverse slope driveways are a significant source of water flow and contribute to basement flooding as the catchbasins that drain the driveway are at a lower elevation in relation to the road and therefore are susceptible to flooding from even minor surcharging of the storm sewers..... Due to the significant effect reverse slope driveways have on basement flooding, it is recommended that they be restricted in order to help alleviate the problem of basement flooding”

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- Reverse slope driveways have also been criticized from an urban design and zoning perspective, as they may contribute to perceived “overbuilding” of a site
- In Markham’s infill zoning by-law areas, the Gross Floor Area of a basement/cellar garage **is included** in the total GFA for the dwelling, for the purposes of calculating the maximum Floor Area Ratio
- However, minor variances have recently been granted by the Committee of Adjustment to allow a greater Floor Area Ratio for a dwelling, with applicants successfully arguing that a basement/cellar garage **should not be included** in the calculation of GFA

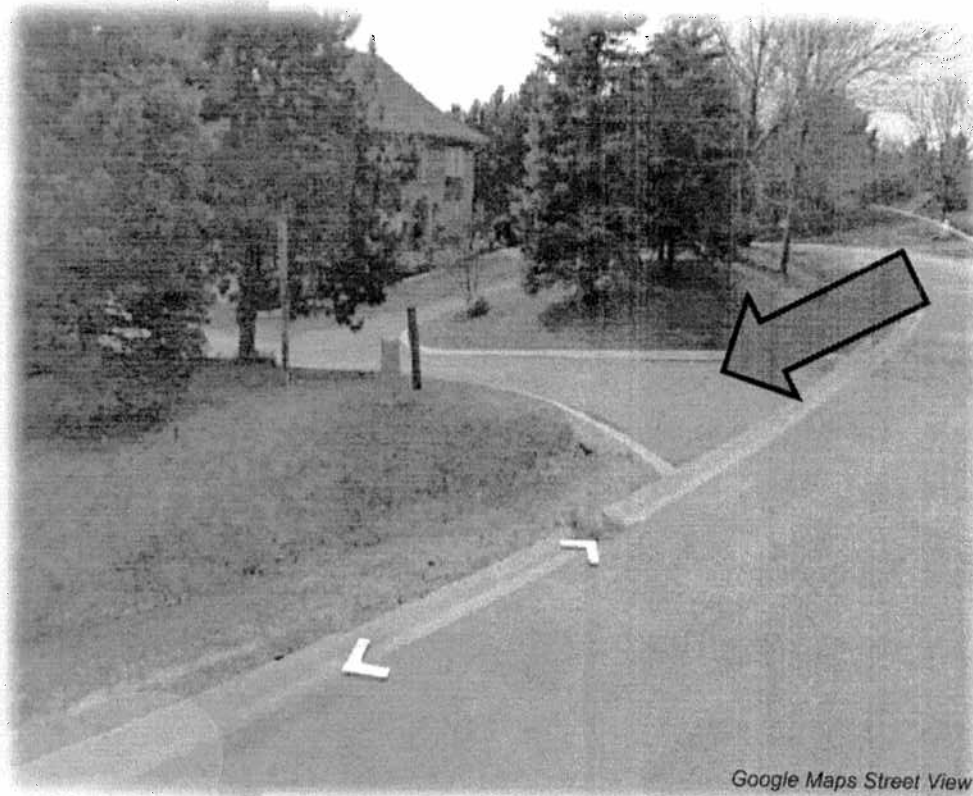
Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What We Have Heard.....***

- **Markham Engineering** supports the restriction of reverse slope driveways in order to assist in alleviating future flooding issues
- **Markham Urban Design** responds that reverse slope driveways may be undesirable, as the reverse slope driveway has the potential to emphasize the garage in the streetscape, and may possibly compromise the pedestrian connection to the street. The use of retaining walls may also add to aesthetic concerns unless designed properly
- **Thornhill Ratepayer Groups** have gone on record as opposing reverse slope driveways due to both flooding concerns, and concerns over the bulk and massing of new homes (overbuilding of the site) that result from allowing garages to be located in the basement or cellar of a home

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What We Have Heard.....***

- **Markham Developers** - Out of 84 Markham developers who were sent individual requests to comment on the proposal, five (5) responded that they had no objection, and one (1) (Fieldgate Developments) responded with an objection
- **Fieldgate Developments** believes that, due to changes afoot in the building industry, a home with a basement/cellar garage (and thus reverse slope driveway) may be an appropriate alternative building form for future intensification of communities
- **Toronto and Region Conservation Authority** responded that they do not permit reverse slope driveways in TRCA regulated areas as they become a flood risk issue. They believe that permitting reverse slope driveways is generally undesirable and only exposes the landowner and the municipality to additional, unnecessary risk
- **General Flooding Issues in Thornhill**– Comments were received from a concerned citizen with respect to general flooding issues in Thornhill, and requesting information on how the Town was responding to the overall neighbourhood flood threat. Put in touch with Engineering

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***What We Have Heard.....***



Google Maps Street View

- Comments were received from a concerned ratepayer with respect to how the by-law would apply to situations where the existing “lay of the land” renders the lot naturally lower than the elevation of the street. In such cases it may be difficult or impossible for a homeowner to meet the by-law requirement

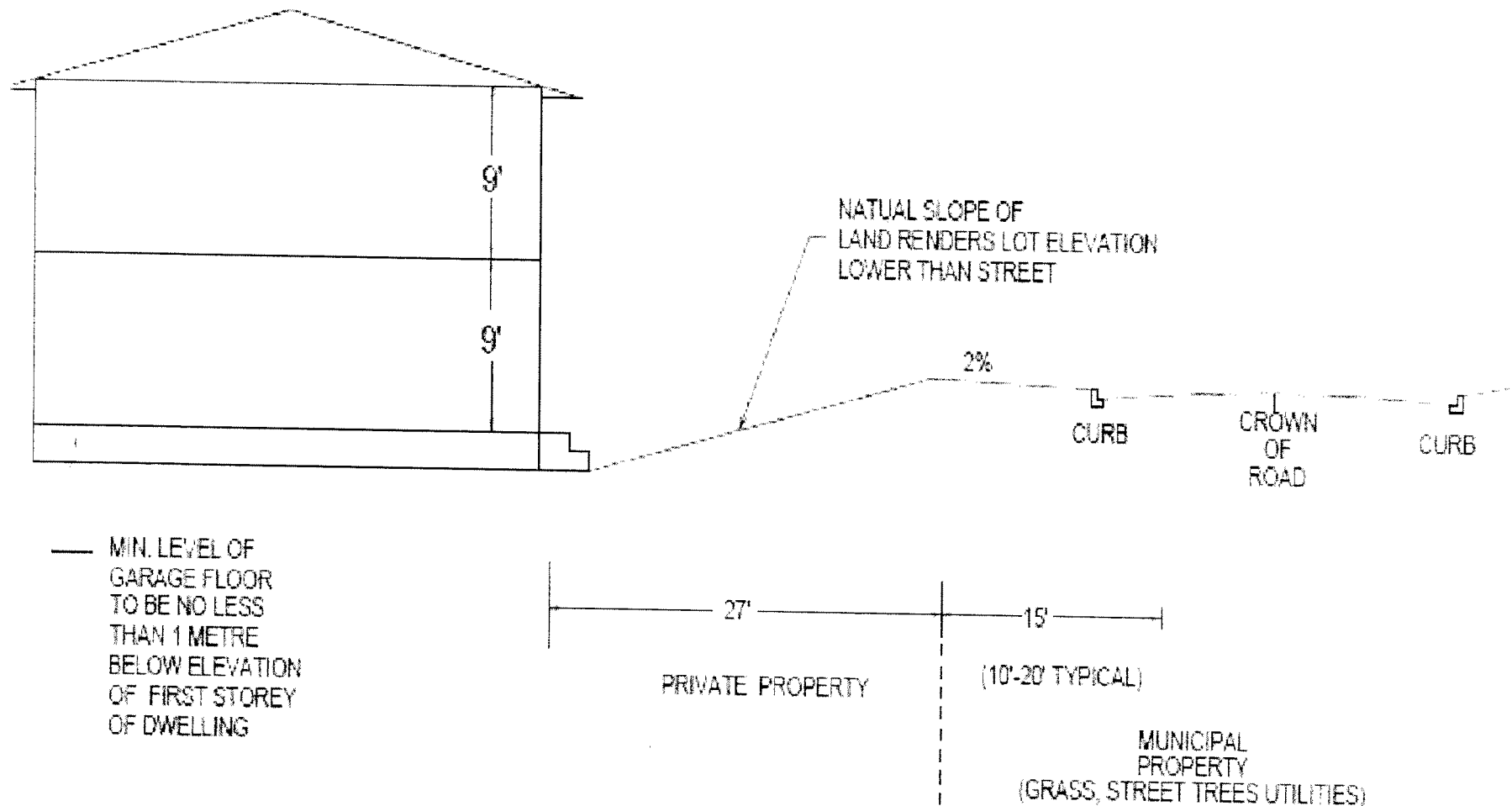
Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***Conclusions Reached.....***

- Reverse Slope Driveways and basement/cellar garages can contribute to additional perceived bulk and massing on a residential site, which may be undesirable from both an urban design and planning perspective
- Reverse slope driveways have been identified as contributing to urban flooding, as water can enter the sewer system through floor drains. This can affect not only the dwelling with the reverse slope driveway, but also contribute to the flooding of neighbouring properties as well
- Reverse slope driveways may be appropriate for large scale commercial and residential buildings, but not for ground-oriented residential dwellings
- There may be potential safety concerns associated with reverse slope driveways, i.e. sightline restrictions when backing out of a reverse slope driveway onto the public street

Reverse Slope Driveways PROPOSED ZONING BY-LAW AMENDMENT ***The Proposed Amendment***

- Should apply only to ground-oriented dwelling units (single-detached dwellings, etc)
- Should apply throughout the entire Town of Markham
- Should apply only to new construction, existing reverse slope driveways and associated garages would be “grandfathered” in
- Should require the floor level of an attached garage to be higher than the elevation of the street from which access is gained
- Elevation should be measured at the point where the driveway meets the street, to account for lots with varied elevations
- Special circumstances may be dealt with through applications for variance to the Committee of Adjustment, or Committee may direct staff to prepare a by-law amendment that specifically speaks to an exemption for existing lots that are lower than the elevation of the public street

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Reverse Slope Driveways Next Steps

Staff supports a by-law amendment restricting reverse slope driveways/garage floor elevations that are lower than the elevation of the public street, and are prepared to present a by-law to Council at the next available meeting

- 1) Committee may direct Staff to immediately prepare a by-law restricting reverse slope driveways and garage floor elevations lower than the elevation of the public street. Such a by-law may include special provisions/consideration respecting existing lots that are “naturally” lower than the elevation of the public street
- 2) Alternatively, the Committee may request staff to report back at a future date with a Recommendation Report on the matter

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