

COMMITTEE OF THE WHOLE AUGUST 19, 2002

33 WEST BLOCK PLAN – HIGHWAY 400 INTERCHANGE AT TESTON ROAD

Recommendation

THAT the Commissioner of Planning and the Commissioner of Engineering and Public Works recommends:

- 1) That the City of Vaughan supports the implementation of the 'button-hook' interchange design at Teston Road and Highway 400.
- 2) That the City of Vaughan requests the Region of York indicate its support for the 'button-hook' as the preferred Teston Road interchange design.

Purpose

The purpose of this report is to discuss the merits of a 'button-hook' interchange design at Teston Road/Highway 400, for input to the Region of York's current Environmental Assessment for the Teston Road widening. The interchange design needs to be addressed in order to allow the planning for the Block 33 West Block Plan to proceed.

Background - Analysis and Options

Region of York - Teston Road Environmental Assessment

The Region of York is currently proceeding with an Environmental Assessment for the Teston Road widening. The Region's consultants will be reporting to the Region on the results of their analysis in mid-September. Their work has included a review of alternative interchange designs for the future Teston Road/Highway 400 interchange. Generally, where minimal physical constraints are present, the interchange design would utilize all four quadrants of the major road crossing Highway 400 – a design referred to as 'Parclo A'. However, owing to the presence of the Cold Creek valley in the entire north-west quadrant of Teston Road/Highway 400, this option is not viable. Therefore, the Region's consultants have been studying two other alternatives:

- 1) 'Parclo B' is a more typical design utilizing three of the four quadrants, and locating the south-bound entry and exit ramps to Highway 400 in the south-west quadrant.
- 2) the 'buttonhook' design which provides for a direct connection from the south-bound Highway 400 entry and exit ramps to a north-south primary road – Street A – in the Block 33 West block plan as proposed by the Block 33 West Landowner group.

York Region's consultants are now nearing completion of their preliminary evaluation, and have determined that both options will enable the interchange to function at a satisfactory level, both operationally and in terms of safety. Both options have previously been built on '400 – Series' highways in Ontario.

Ministry of Transportation

The Ontario Ministry of Transportation requires sound engineering reasons in order to support the 'button-hook' option, have in the past expressed some concerns about the atypical design, and are continuing in discussions with York Region to come up with an effective interchange design.

Block 33 West Block Plan

Early in 2002 a Block Plan was submitted for Block 33 West incorporating the 'button-hook' interchange design at Teston Road (see Attachment 2). While the 'button-hook' design is not a typical design for Highway interchanges it has been designed to specifically respond to the Cold Creek valley system to the north of Teston Road and also address a number of site-specific issues related to the development of Block 33 West, including:

- The design permits a north-south primary road - Street A - to provide a continuous connection from the north end of the block at Teston Road to Major Mackenzie Drive at the south end, and so provide better access for local traffic without needlessly adding to congestion on the arterial road system.
- The 'buttonhook' option provides two good alternative access points to the employment areas from Highway 400, via the Major Mackenzie Drive interchange and Street A, or alternatively via the Teston Road interchange and Street A.
- The 'button-hook' supports the primary road network within Block 33 West, with Street A serving both the employment lands and the residential areas within the block, and providing a separator at the interface between these adjacent uses.
- The Block Plan road structure and 'button-hook' design eliminate the need for Street A to cross the Cold Creek and valley system

Analysis

Staff have a number of significant concerns with implementing the 'Parclo B' option at Teston and Highway 400, and consider that the 'buttonhook' option provides several advantages, as outlined below:

Environmental Impact on Cold Creek and Valley

The TRCA has noted strong support for the 'button-hook' design because it eliminates the need for Street A to cross the Cold Creek and valley system and connect to Teston Road at Shady Vale Lane. TRCA has indicated that Cold Creek is an important tributary of the Humber River system and supports a coldwater fishery and diverse community of floral and faunal species. Also, residents of Rimwood Estates have expressed their strong opposition to a connection opposite Shady Vale Road, which would result in mixing of residential and industrial traffic at this key access point to their neighbourhood.

Impact on Provision of Employment Lands in Block 33 West

The 'buttonhook' design provides a safe and technically sound transportation system which will serve both the residential and employment areas of the block appropriately. The employment lands in the block are very important to the City's employment land supply that is very limited in the Highway 400 corridor.

In contrast, the Parclo B design results in significantly poorer access to the employment lands, greater traffic congestion at the south end of Street A, and more conflict between trucking associated with the employment lands, and residential traffic within the community. Collectively, these considerations may seriously impair the opportunity to establish this area as the higher quality employment area envisioned by OPA 600.

Efficient Access to Block 33 West from Highway 400

The 'buttonhook' option provides an alternative to the Major Mackenzie interchange for gaining convenient direct access to Block 33 West and its employment areas from Highway 400. This will enable most truck traffic traveling to and from the employment areas to remain close to the highway corridor, rather than adding to the traffic in the surrounding residential community. The

Block Plan road structure supported by the 'button-hook' eliminates the need for a crossing of the Cold Creek and valley system.

In contrast, the Parclo B option will leave the Major Mackenzie Drive interchange as the only convenient access from Highway 400 to Block 33 West, resulting in significantly heavier traffic congestion through the Major Mackenzie Drive interchange. The Parclo B design will not permit traffic exiting to Teston Road from Highway 400 to directly access Block 33 West and its employment areas, as there is insufficient distance between the interchange and the Cold Creek valley to the west to permit Street A to be connected to Teston Road. This would necessitate the north end of Street 'A' swinging westward to connect to Weston Road instead of connecting to Teston Road, resulting in additional traffic problems.

Impact on Vellore Village Centre

The 'buttonhook' option results in less traffic through the Vellore Village Centre. OPA 600 provides for development of the Vellore Village Centre at the intersection of Major Mackenzie Drive and Weston Road. This Centre is expected to be the main focus of the Vellore community, with a concentration of housing and shopping facilities developed in a pedestrian friendly form. Detailed planning is already underway to firmly establish the plan for this developing area.

In contrast, the Parclo B option may increase traffic volumes through the Weston Road and Major Mackenzie Drive intersection, thereby undermining the opportunity to achieve Council's vision for the Vellore Village Centre. Traffic to Block 33 West employment areas from the west will be required to use Weston Road and Major Mackenzie Drive since there will not be an access from Teston Road. High traffic volumes are a significant hindrance to creating the preferred form of comfortable pedestrian environment in the Vellore Village Centre.

Conclusion

The Block Plan requires a direct connection from Street A to Teston Road. The Parclo B design does not permit this connection, except via a connection across the Cold Creek valley that is also unacceptable to the TRCA due to its environmental impacts. The 'button-hook' provides for a safe and technically sound transportation network; it does not impact an environmentally sensitive Cold Creek valley system; and, it supports the City's planning objectives with respect to the plans for the Vellore community. In Staff's view, the 'buttonhook' option is preferred to the Parclo B option. Therefore, should Council concur, the 'buttonhook' design should be supported and approved by the City and Region of York as the basis for development of the new Teston Road interchange.

Attachments

1. Location Map – Block 33 West
2. Block 33 West Block Plan
3. OPA 600, Schedule B, Vellore Urban Village 1

Report prepared by:

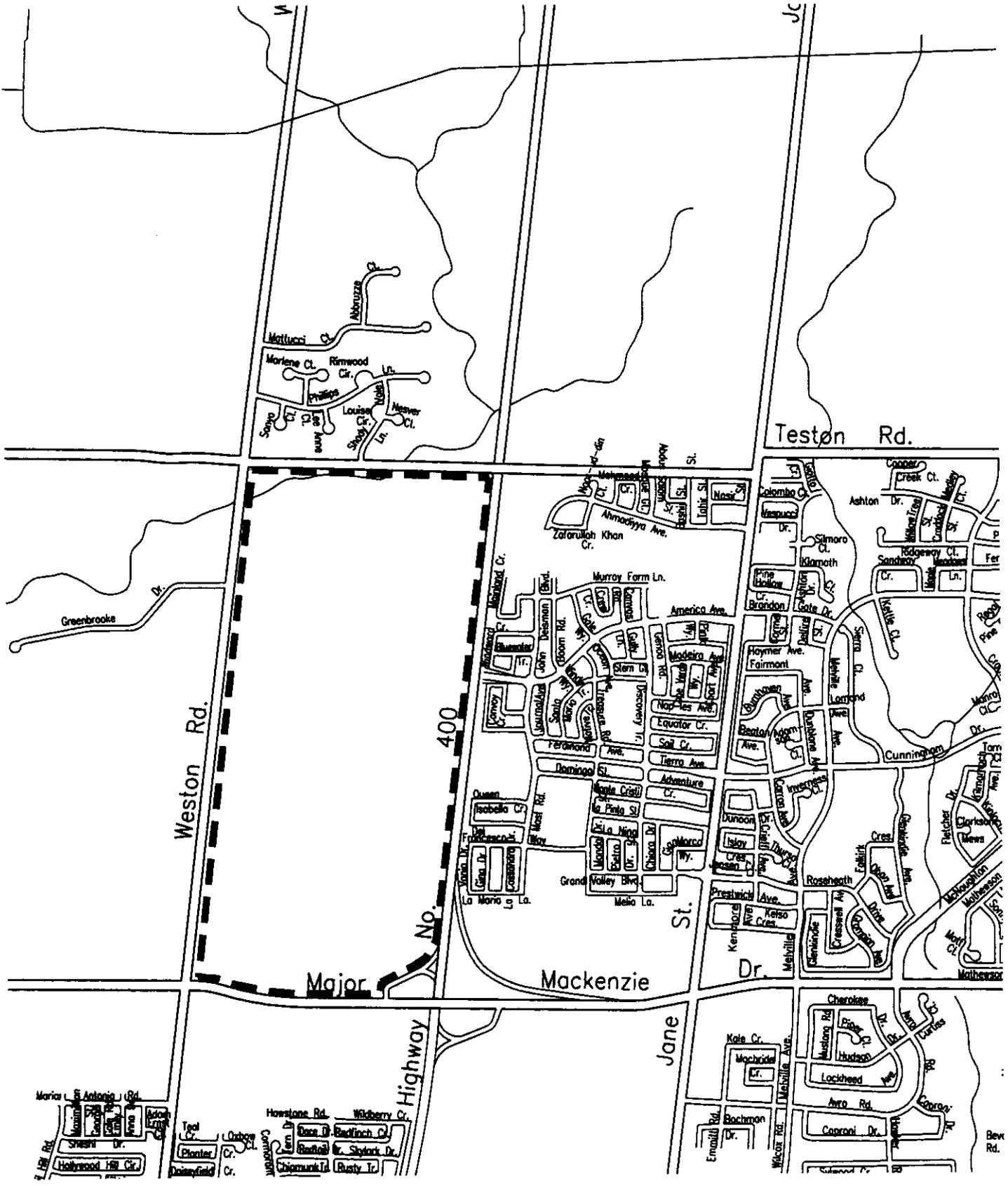
Rob Gibson, Senior Planner, ext. 8409
Paul Robinson, Senior Planner, ext. 8410

Respectfully submitted,

MICHAEL DeANGELIS
Commissioner of Planning

BILL ROBINSON
Commissioner of Engineering and Public Works

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SUBJECT LANDS
FILE #BL.33W.2001

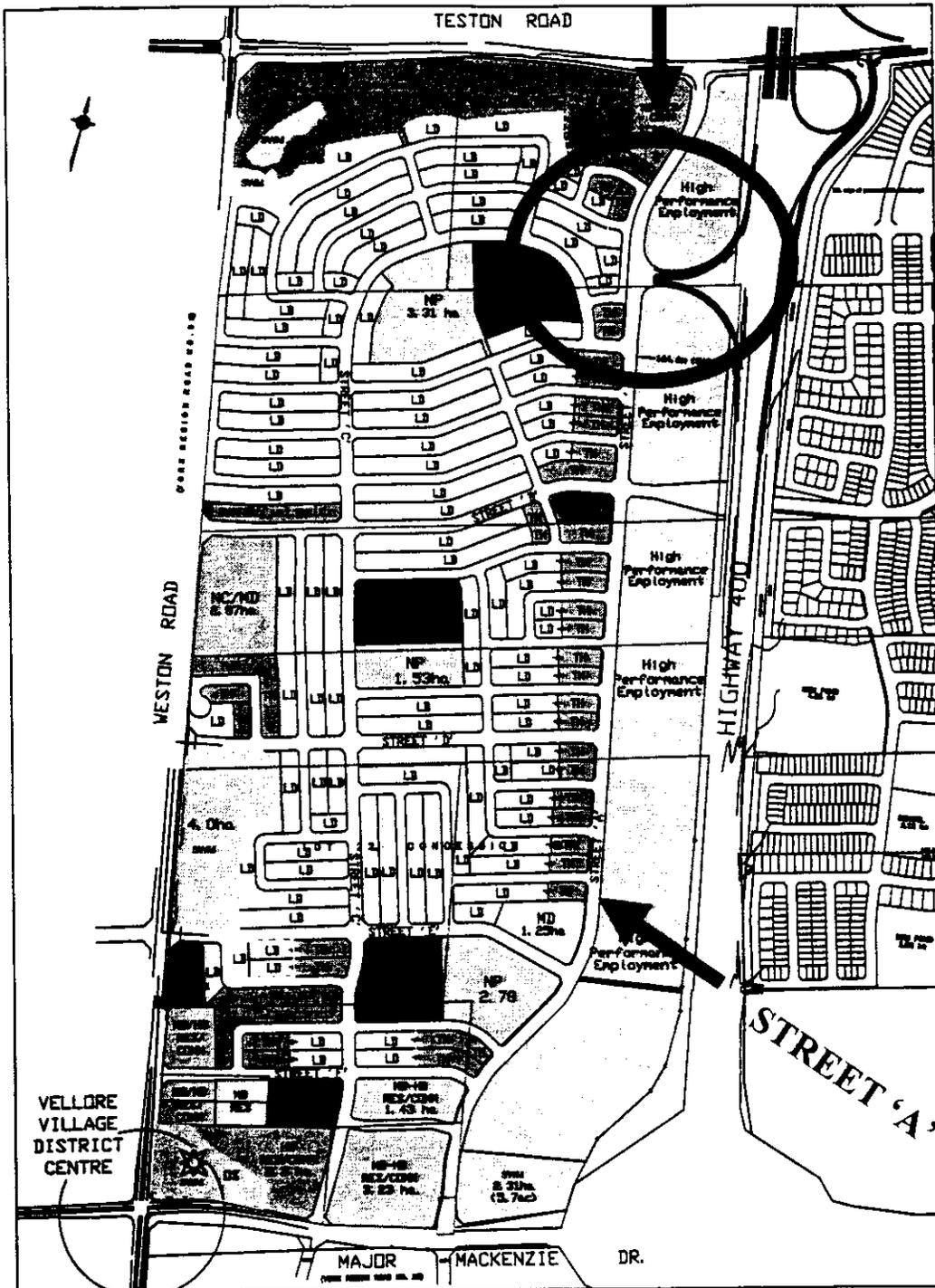
ATTACHMENT '1'
BLOCK 33 WEST

FILE #:	REPORT #:
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DATE: 02/05/13	
SCALE:	NOT TO SCALE

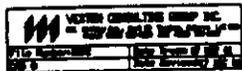
APPLICANT:

CITY OF VAUGHAN PLANNING DEPARTMENT

"BUTTON-HOOK" INTERCHANGE



CONCEPT PLAN
The Community of
Weston Highlands
in the Village of Vellore



ATTACHMENT '2' BLOCK 33 WEST

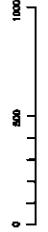
FILE #:	REPORT #:
DATE: 02/05/13	LOCATION: PT. LOTS 21-25, CON. 5
SCALE:	NOT TO SCALE

APPLICANT:

CITY OF VAUGHAN PLANNING DEPARTMENT



VELLORE URBAN VILLAGE 1

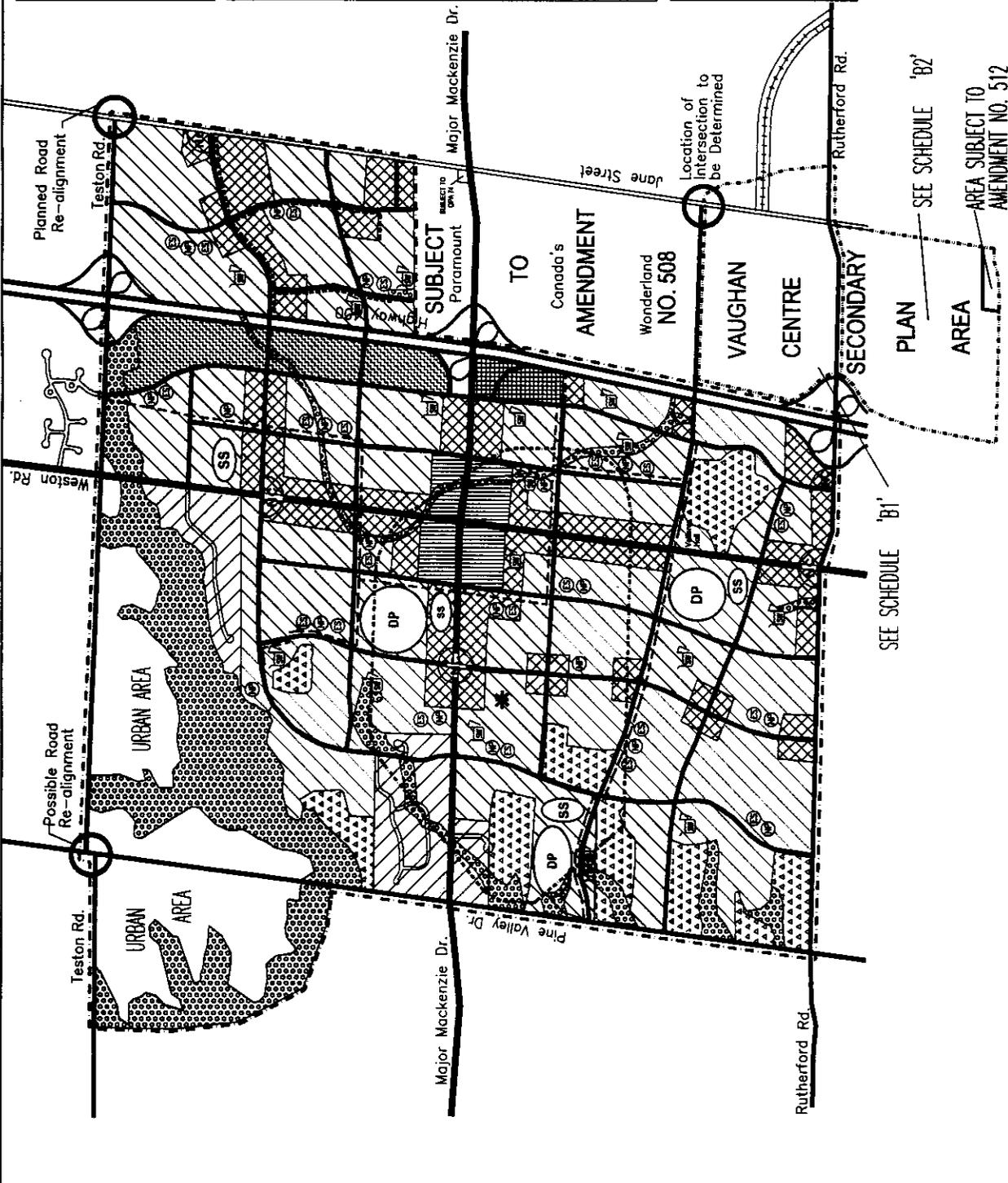


LEGEND

- Elementary School
- Secondary School
- Neighbourhood Park
- District Park
- Neighbourhood Commercial Cen.
- Urban Subject to Village Area #1
- Low Density Residential
- Medium Density Residential/Commercial
- Village Village Centre
- Estate Residential
- Urban Area
- High Performance Employment Area
- Valley Lands
- Stream Corridor
- Greenway System
- Tableland Woodlots
- General Commercial
- Storm Water Management
- Vaughan Centre
- Waste Disposal Assessment Area (Power, Establs)

THIS IS SCHEDULE 'B' TO AMENDMENT # 500
 ADOPTED THE 25th DAY OF SEPTEMBER, 2000

SIGNED: OFFICERS
 L.L. WILSON W.M.
 J. LEECH C.M.



ATTACHMENT '3'
VELLORE URBAN VILLAGE 1
 CITY OF VAUGHAN PLANNING DEPARTMENT

FILE #
 BL.33W.2001

REPORT #

LOCATION:
 02/05/13
 NOT TO SCALE