

Master Plans for
Urban Water Infrastructure in
The City of Vaughan

**City-Wide Water & Wastewater
Master Plan Class EA**

**APPENDIX E
Planning Projections Memorandum**

JUNE 2014

The Municipal Infrastructure Group Ltd.
8800 Dufferin Street, Suite 2000
Vaughan ON CA L4K 5X6
tel 905.738.5700 fax 905.738.0065



In association with:
Fabian Papa & Partners Inc.
216 Chrislea Road, Suite 501
Woodbridge ON CA L4L 8S5
tel 905.264.2420 fax 905.264.2441



Prepared on behalf of:

**The City of Vaughan
Development/Transportation
Engineering Department**
2141 Major Mackenzie Drive
Vaughan, ON L6A 1T1
tel: 905-832-8585 fax: 905-832-6145







DATE: March 9, 2012
PN: 11115
TO: **City of Vaughan:** Michael Frieri, Tony Artuso
CC: **Fabian Papa & Partners:** Fabian Papa
TMIG: Eric Tuson
FROM: Kevin Brown
SUBJECT: Review of Vaughan Planning Projections

The City of Vaughan is located in the southwest quadrant of the Region of York. Vaughan is located immediately east of Highway 50 (Vaughan/Brampton municipal boundary), between Steeles Avenue and just north of King-Vaughan Road, and west of Bathurst Street/Yonge Street. According to the Vaughan Official Plan (Sept, 2010), Vaughan is expected to have 416,600 people and 266,100 jobs by 2031.

This memo reviews the existing and forecasted population growth in the City of Vaughan based on provincial, regional and municipal planning documents, including Places to Grow: The Growth Plan for the Greater Golden Horseshoe, City of Vaughan Official Plan 2010 (VOP2010), York Region Official Plan and several Secondary Plans. The memo also comments on the suitability of using the Traffic Survey Zone population and employment breakdowns as input into the sanitary and water models for the purposes of assessing impacts to the existing systems, and requirements to provide servicing through 2031.

Ontario Places to Grow

The 2006 Provincial Growth Plan ("Places to Grow") forecasts 1,500,000 people and 780,000 jobs in the Region of York by the year 2031. While Places to Grow states that a minimum of 40% of new residential development will be located within existing built-up areas, the Regional target for Vaughan is a more aggressive 45%. The remaining can occur through greenfield development both within the existing urban area and through urban boundary expansion. Under Places to Grow, Greenfield development should achieve 50 persons plus jobs per hectare, on an overall basis.

Existing and Target Populations and Employment

The existing and future population and employment figures were obtained through reviewing a number of sources:

1. *Where & How to Grow; Directions on Future Growth in the City of Vaughan to 2031*. Urban Strategies Inc, June 2009.
2. *Housing Analysis and Employment Land Needs*. Hemson Consulting Ltd., April 2010:
3. *North Kleinburg-Nashville Secondary Plan - DRAFT*. The Planning Partnership, May 2010:
4. *The VMC Plan; Secondary Plan for the Vaughan Metropolitan Centre*. Urban Strategies Inc, September 2010.
5. Traffic Survey Zone (TSZ) data prepared as part of the City's Transportation Master Plan.

The population and employment data are presented in Table 1.

TABLE 1 – POPULATION AND EMPLOYMENT IN VAUGHAN

Year	Population	Employment
	Vaughan Official Plan ⁽¹⁾	Vaughan Official Plan
2006	249,300	162,200
2011	295,000	185,000
2016	335,000	210,000
2021	360,000	225,000
2026	385,000	240,000
2031	416,600	266,100

Notes:
 1. From *Vaughan Official Plan 2010*, Figure 2 (page 23)

The population and employment growth projections from the above sources are summarized in Table 2. Where different projections were identified in multiple sources, the number from the most recent report was carried forward.

As part of the City's Transportation Master Plan, population and employment projections were also developed for each of the City's Traffic Survey Zones (TSZs) by Halcrow, and this data was also made available for the present study. The TSZ projections pre-date the above studies and the Vaughan Official Plan, so they do not necessarily reflect the City's final planning decisions. The TSZ data do accurately represent the 2006 conditions, however, and the population and job growth totals through 2031 are consistent with the Official Plan. In the absence of specific planning targets for certain areas, then, the TSZ projections are useful in that they provide a method for distributing population and employment growth across the City.

The mechanism for distributing the population or employment growth is as follows:

- If an identified growth or intensification area covered an entire Traffic Survey Zone, then the growth projection from the TSZ was ignored, in favour of the more up-to-date growth or intensification projection.
- If there was NO growth or intensification area identified within a Traffic Survey Zone, then the TSZ population or employment growth was deemed to account for Infill within the TSZ.
- If an identified growth or intensification area covered part of a Traffic Survey Zone, then the up-to-date growth or intensification projection was subtracted from the TSZ growth projection, with the difference assumed to be infill within the TSZ.

TABLE 2 – RESIDENTIAL GROWTH PROJECTIONS

	Growth Type/Area	Units ⁽¹⁾	Pop ⁽¹⁾	Jobs ⁽¹⁾	Source
	Infill within Existing Areas	3,400	8,500		Hemson, 2010
	Vaughan Metropolitan Centre	12,000	25,000	11,500	Urban Strategies, 2010
Intensification; Major Centres	Yonge Street and Steeles Avenue	4,800	9,600 ⁽²⁾		Hemson, 2010
	Steeles West	5,500	11,000	5,000	VOP 2010
	Weston and Highway 7	2,991	6,383		Urban Strategies, 2009
	Bathurst Street and Centre Street	900	1,800	600	VOP 2010
	Vaughan Mills	5,957	12,667		Urban Strategies, 2009
	Jane Street and Major Mackenzie Drive	0	0		VOP 2010
	Subtotal – Major Centres	20,148	41,450	5,600	
Intensification; Local Centres	Kleinburg Core	80	160 ⁽²⁾		Hemson, 2010
	Woodbridge Core	1,200	2,400 ⁽²⁾		Hemson, 2010
	Maple Core	400	800 ⁽²⁾		Hemson, 2010
	Thornhill Core	150	300 ⁽²⁾		Hemson, 2010
	Carrville Centre	5,400	12,000	4,000	VOP 2010
	Concord GO Station	2,427	4,954		Urban Strategies, 2009
	Vellore Village Core	1,400	2,889		Urban Strategies, 2009
	Subtotal – Local Centres	11,057	23,503	4,000	
Intensification; Corridors	Highway 7	2,500	5,000 ⁽²⁾		Hemson, 2010
	Centre Street	850	1,700 ⁽²⁾		Hemson, 2010
	Dufferin and Centre	828	1,682		Urban Strategies, 2009
	Major Mackenzie Drive	600	1,200 ⁽²⁾		Hemson, 2010
	Rutherford Road	400	800 ⁽²⁾		Hemson, 2010
	Jane Street	100	200 ⁽²⁾		Hemson, 2010
	Subtotal – Primary Intensification Corridors	5,278	10,582		
Greenfield	Carrville (Blocks 10, 11, 12, and 18 – excludes Carrville Centre)	11,270	39,445 ⁽³⁾		Hemson, 2010
	Block 20	550	1,925 ⁽³⁾		Hemson, 2010
	Vellore (Blocks 33W, 39, 40, 47 – excludes Vellore Centre)	6,990	24,465 ⁽³⁾		Hemson, 2010
	Block 52	40	140 ⁽³⁾		Hemson, 2010
	Block 60 East	3,600	12,600		161 ha at 50 persons/ha
	North Kleinburg-Nashville (Blocks 55 and 62)	1,900	6,400		Planning Partnership, 2010
	Kleinburg-Nashville (Block 61)	4,080	14,280 ⁽³⁾		Hemson, 2010
	Block 27	6,430	22,505 ⁽³⁾		Hemson, 2010 ⁽⁴⁾
	Block 41	3,200	11,200 ⁽³⁾		Hemson, 2010 ⁽⁴⁾
	Highway 400 North Employment Lands	0	0	17,000	340 ha at 50 jobs/ha
	Block 64	0	0	7,000	140 ha at 50 jobs/ha
	West Vaughan Employment Area	0	0	20,120	402 ha at 50 jobs/ha
	Subtotal – New Greenfield Areas	37,430	95,225	44,120	
	GRAND TOTAL	89,943	241,995	65,220	
Notes:					
1. Where ranges were provided, the maximum value was carried					
2. Based on 2.0 persons/unit.					
3. Based on 3.5 persons/unit.					
4. Hemson report identified 9,630 total units for Blocks 27 and 41. Approximately 2/3 of the developable area lies within Block 27.					

Residential Growth

The residential growth projections are anticipated to be accommodated by a variety of mechanisms:

1. Infill of existing vacant lands within the built boundary;
2. Intensification within the built boundary; and,
3. Expansion into designated Greenfield lands outside of the 2006 built boundary.

The residential growth projections identified in Table 2 account for approximately 89,000 units and 237,000 people; both of which exceed their respective targets under the Official Plan (65,460 units, and 170,000 people). The reasons for the discrepancy are as follows:

1. The difference between the intensification potential (48,483 units) and the intensification target (30,430 units) amounts to 18,053 units (approximately 36,000 people); and,
2. The two residential Greenfield areas resulting from an expansion of the City's Urban Boundary (Blocks 27 and 41; 9,630 units and 34,000 people) were added because of an anticipated challenge in being able to deliver the housing supply in time to keep up with demand.

From a water and wastewater servicing perspective, it is appropriate to plan for the full development potential of the areas identified in Table 2, however.

Employment Growth

The specific employment growth projections identified in Table 2 only account for 65,000 of the anticipated 104,000 new jobs, as they do not account for the following:

1. Remaining employment growth potential within existing employment areas (employment infill, effectively); and,
2. Employment growth located within new community areas (population-related employment, and jobs within mixed-use neighbourhoods).

As such, the Traffic Survey Zone projections were used to account for the two above employment growth types.

Summary – 2031 Projections

The population and employment projections carried forward in the City-Wide Water/Wastewater Master Plan are based on the most recent available information for the anticipated growth centres through 2031. Where necessary, Traffic Survey Zone projections were used to account for growth not specifically addressed in the available studies.

The population projections carried forward in the Water/Wastewater Master Plan reflect the full growth potential of the lands in question, even though that exceeds the growth targets from the 2010 Official Plan. The total population growth accounted for in the Master Plan amounts to approximately 237,000 people through 2031, compared with approximately 170,000 residents in the Official Plan. This amounts to an over-prediction of 67,000 residents, 34,000 of which are within the Block 27 and 41 urban boundary expansion areas.

The total employment growth accounted for in the Master Plan amounts to approximately 113,000 jobs through 2031, compared with approximately 104,000 jobs in the Official Plan.

The complete population and growth projections by growth area are presented in Table 3.

TABLE 3 – GROWTH PROJECTIONS (TO 2031) FOR THE WATER/WASTEWATER MASTER PLAN

	Growth Type/Area	Units ⁽¹⁾	Pop ⁽¹⁾	Jobs ⁽¹⁾	Source
	Infill within Existing Areas	3,400	8,500	27,403	Hemson, 2010
	Vaughan Metropolitan Centre	12,000	25,000	11,500	Urban Strategies, 2010
Intensification; Major Centres	Yonge Street and Steeles Avenue	4,800	9,600 ⁽²⁾	1,016	Hemson, 2010
	Steeles West	5,500	11,000	5,000	VOP 2010
	Weston and Highway 7	2,991	6,383	290	Urban Strategies, 2009
	Bathurst Street and Centre Street	900	1,800	600	VOP 2010
	Vaughan Mills	5,957	12,667	3,212	Urban Strategies, 2009
	Jane Street and Major Mackenzie Drive	0	0	2,100	VOP 2010
	Subtotal – Major Centres	20,148	41,450	12,218	
Intensification; Local Centres	Kleinburg Core	80	160 ⁽²⁾	11	Hemson, 2010
	Woodbridge Core	1,200	2,400 ⁽²⁾	50	Hemson, 2010
	Maple Core	400	800 ⁽²⁾	36	Hemson, 2010
	Thornhill Core	150	300 ⁽²⁾	20	Hemson, 2010
	Carrville Centre	5,400	12,000	4,000	VOP 2010
	Concord GO Station	2,427	4,954	442	Urban Strategies, 2009
	Vellore Village Core	1,400	2,889	400	Urban Strategies, 2009
	Subtotal – Local Centres	11,057	23,503	4,959	
Intensification; Corridors	Highway 7	2,500	6,250 ⁽²⁾	720	Hemson, 2010
	Centre Street	850	2,125 ⁽²⁾	224	Hemson, 2010
	Dufferin and Centre	828	1,682	50	Urban Strategies, 2009
	Major Mackenzie Drive	600	1,500 ⁽²⁾	1,200	Hemson, 2010
	Rutherford Road	400	1,000 ⁽²⁾	800	Hemson, 2010
	Jane Street	100	250 ⁽²⁾	200	Hemson, 2010
	Subtotal – Primary Intensification Corridors	5,278	10,582	3,194	
Greenfield	Carrville (Blocks 10, 11, 12, and 18 – excludes Carrville Centre)	11,270	39,445 ⁽³⁾	1,644	Hemson, 2010
	Block 20	550	1,925 ⁽³⁾	289	Hemson, 2010
	Vellore (Blocks 33W, 39, 40, 47 – excludes Vellore Centre)	6,990	24,465 ⁽³⁾	3,625	Hemson, 2010
	Block 52	40	140 ⁽³⁾	67	Hemson, 2010
	Block 60 East	2,300	8,050	358	161 ha at 50 persons/ha
	North Kleinburg-Nashville (Blocks 55 and 62)	1,900	6,400	200	Planning Partnership, 2010
	Kleinburg-Nashville (Block 61)	4,080	14,280 ⁽³⁾	400	Hemson, 2010
	Block 27	6,430	22,505 ⁽³⁾	1,825	Hemson, 2010 ⁽⁴⁾
	Block 41	3,200	11,200 ⁽³⁾	913	Hemson, 2010 ⁽⁴⁾
	Highway 400 North Employment Lands	0	0	17,000	340 ha at 50 jobs/ha
	Block 64	0	0	7,000	140 ha at 50 jobs/ha
	West Vaughan Employment Area	0	0	20,120	402 ha at 50 jobs/ha
	Subtotal – New Greenfield Areas	36,130	90,675	53,411	
	GRAND TOTAL	88,643	237,445	112,715	
Notes:					
1. Where ranges were provided, the maximum value was carried					
2. Based on 2.0 persons/unit.					
3. Based on 3.5 persons/unit.					
4. Hemson report identified 9,630 total units for Blocks 27 and 41. Approximately 2/3 of the developable area lies within Block 27.					

Whitebelt Lands – Potential Growth Beyond 2031

In addition to the lands identified in the Official Plan, there is potential for future expansion of Vaughan's urban boundary to lands that are not currently protected by either the Greenbelt or the Oak Ridges Moraine.

These areas have been identified in Figure 1, and could accommodate almost 100,000 people or jobs, based on a density of 50 persons or jobs per hectare.

Whitebelt Location	Area (ha)	Population + Jobs
Block 28	340.3	17,015
Block 41	11.6	580
Blocks 42/49	600.7	30,035
Block 46	27.5	1,375
Block 47	18.2	910
Block 56	68.1	3,408
Block 63	8.1	405
Blocks 66, 67, 68, 69	841.0	42,050
GRAND TOTAL	1915.5	95,778
Note: Populations are based on 50 persons or jobs per hectare.		

Figure 1: Whitebelt Areas

The Municipal Infrastructure Group

March 2012

