Appendix 1, Attachment 4

Growth Assumptions

ATTACHMENT 4 to APPENDIX 1

POPULATION AND EMPLOYMENT PROJECTIONS

1. INTRODUCTION

Population and employment projections are a key input to the travel demand (ie transit ridership) model. An earlier report outlined the methodology for the small area projections (see Appendix 7 of the October 2015 Staff Report to Executive Committee): http://www.toronto.ca/legdocs/mmis/2015/ex/bgrd/backgroundfile-84731.pdf).

This report provides an introduction to the results of the projections work, including an overview of the input provided by Strategic Regional Research Alliance (SRRA). SRRA developed forecasts of office growth in the GTA and multi-residential development in Toronto that reflected the impact of SmartTrack on the distribution of office jobs and new multi-residential development. The forecasts will also be used as inputs to the Tax Increment Financing (TIF) analysis for the Financing Strategy for SmartTrack.

SRRA's report is available at: http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=8805083e7cb9d410VgnVCM 10000071d60f89RCRD.

2. EMPLOYMENT PROJECTIONS

2.1 Scenarios

Employment was projected for a series of scenarios:
1. Low with and without SmartTrack
2. Medium with and without SmartTrack
3. High with SmartTrack
4. Additional Regional Growth with SmartTrack

The scenarios are based on employment projections produced for the City of Toronto's 2012 Employment Uses Policy Study.[1] The Low, Medium and High scenarios all use the same total GTA employment, which matches the Provincial Growth Plan forecast. Compared to the Low scenarios, the Medium and High scenarios allocate progressively more of the GTA's employment growth to Toronto than to the rest of the GTA.

City staff consider the Medium employment scenarios to be the most likely. The Low scenarios represent growth aligned with the Provincial Growth Plan forecasts for Toronto; while the High scenario represents an upper limit for growth in Toronto.

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[1] 'Sustainable Competitive Advantage and Prosperity – Planning for Employment Uses in the City of Toronto.' Prepared for Toronto City Planning Division, by Malone Given Parsons in association with Cushman and Wakefield, Real Estate Search Corporation and the Centre for Spatial Economics, October 2012. Link: http://www1.toronto.ca/city_of_toronto/city_planning/sipa/files/pdf/sustainable_competitive_advantage_an d_prosperity_01.pdf

The Additional Regional Growth scenario recognizes the additional growth that the GTA would see as a result of the better connections provided by SmartTrack.[2] It assumes 10% more growth after 2021 than the Growth Plan forecasts for the GTA, and is combined with either the Low, Medium or High growth scenarios. The TIF analysis uses the Additional Regional Growth scenario to generate estimates of the potential property tax growth in the SmartTrack corridor.

The projected employment is disaggregated into employment in office buildings and all other employment. The office employment in Toronto and the rest of the GTA varies between scenarios as a result of the influence of SmartTrack. There is little variation in the non-office employment. Table 1 shows a high level summary of these projections for three 'medium' scenarios.

Table 1: Distribution of employment in the GTA for the Medium scenarios ('000s)

		Medium no ST*			Medium with ST*			Add'l Regional Growth		
	2011	2031	2041	2011-41	2031	2041	2011-41	2031	2041	2011-41
Total										
GTA	2,779	3,741	4,108	1,329	3,741	4,108	1,329	3,782	4,186	1,407
Toronto	1,379	1,718	1,855	476	1,737	1,884	505	1,752	1,915	536
Rest of GTA	1,400	2,023	2,254	853	2,004	2,225	824	2,030	2,272	871
Office										
GTA	886	1,114	1,233	347	1,114	1,233	347	1,125	1,255	369
Toronto	608	738	819	210	764	851	242	771	866	258
Rest of GTA	278	376	415	137	350	382	104	354	389	111

* ST: SmartTrack

2.2 SRRA's Office Employment Forecasts

SRRA's forecasts of growth in employment in office buildings is based on the results of its 'Nodal Study,' which is a high level assessment of places in the GTA where the next wave of office growth is likely to occur.[3] SRRA identifies 27 existing and potential nodes (or clusters) of office development in the GTA (see Map 1). The forecasts are based on SRRA's expectations for the rate of growth in each node after 2011. These expectations were based on the characteristics of the node and its future role in the GTA's office market with and without SmartTrack.

In assessing nodes, the SRRA considered a variety of factors, including:
- Transportation factors: network connections, travel times, SmartTrack service levels and stations, and fares.
- Land Economics: land values and competitiveness of realty taxes.
- Planning and land use: role of mixed use development, employment density of office facilities, conversion of older industrial buildings.
- Employers' criteria: timely access to labour, available office space, employee preferences, the location of suppliers and competitors.
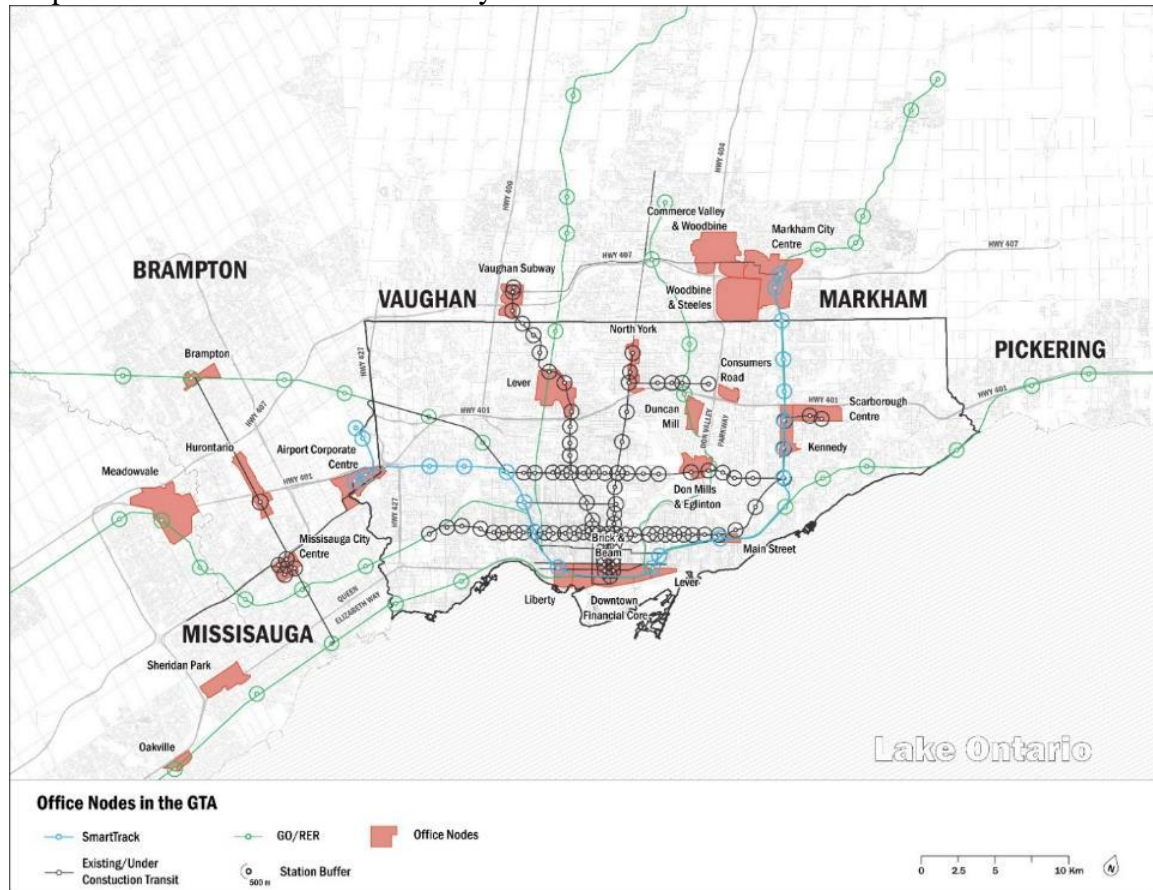
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[2] This scenario was referred to as the 'All Boats Rise' scenario in the October 2015 staff report.
[3] SRRA, *The Nodal Study: The Future of Office Development in the GTA*, Toronto, March 2015.

Overall the nodes identified by SRRA account for 75% of all office space in the region and 95% of the space built since 1990. SRRA has high expectations that employers will continue to view these nodes favourably and that they will continue to accommodate new employment growth.

Map 1: The office nodes identified by SRRA

2.3 SRRA Distribution of Office Growth with SmartTrack

SRRA identified five major areas that would see the greatest office employment growth if SmartTrack is implemented (Table 1). Together Downtown Toronto, Liberty Village, East Don Lands, Mississauga Airport Corporate Centre and Markham – Richmond Hill account for 65% of office growth between 2011 and 2041. Without SmartTrack, only Downtown Toronto would see a similar share of the GTA's growth (23%), while the others would see a much smaller share (8%).

A further 25% of the growth with SmartTrack would be distributed to groups of transit-enabled nodes near SmartTrack and planned mixed use nodes with long-term potential, while the remaining 10% would be found in all other nodes and dispersed locations.

Table 1: Distribution of office employment growth in the GTA with SmartTrack, 2011-41

Office nodes	Share of GTA's office employment Growth, 2011 - 2041
Downtown Toronto (Financial Core and the Brick and Beam area)	19.9%
Liberty Village	8.0%
East Don Land (Unilever site and South of Eastern)	13.7%
Mississauga Airport Corporate Centre	12%
Markham – Richmond Hill (Markham Centre, Commerce Valley, Woodbine and Steeles)	10.9%
Transit-enabled nodes near SmartTrack (Kennedy, Scarborough Centre, Consumers Rd, Eglinton-Don Mills, Main)	12.3%
Planned mixed use nodes with long-term potential (North York, Port Lands, Vaughan Centre, Mississauga Centre, Brampton, Oakville, Burlington)	13.0%
All other nodes and dispersed locations	10.3%

3. POPULATION PROJECTIONS

3.1 Scenarios

Population was projected for a series of scenarios with and without the influence of SmartTrack:
1. Low with and without SmartTrack
2. Medium without SmartTrack
3. High with and without SmartTrack
4. Additional Regional Growth with SmartTrack

The scenarios are based on the population component of the 2012 employment projections.[4] The Low, Medium and High scenarios all use the same total GTA population and redistribute this total between Toronto and the rest of the GTA. The GTA total corresponds to the Provincial Growth Plan forecast.

In addition, 'Additional Regional Growth' projections were developed for each of the 'with SmartTrack' scenarios. These projections assume that there will be 10% more population growth across the GTA after 2021 than the Provincial Growth Plan forecasts. Two 'Additional Regional Growth' scenarios were developed for the Low scenario, one that recognized 'firm' planning constraints on future multi-residential development, and one that recognized 'relaxed' planning constraints.

The Low population scenario uses the Provincial Growth Plan forecasts for Toronto as the total population for the City. For the most part, the travel demand modeling for SmartTrack and other rapid transit projects is based on the Low population scenario. City staff consider it to be the most likely of the three scenarios. The TIF analysis uses the

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[4] See Footnote 1

Additional Regional Growth scenario to generate estimates of potential property tax growth in the SmartTrack corridor.

The projections do not 'redistribute' population from the rest of the GTA into the City with SmartTrack; the totals for each are the same with and without SmartTrack. Table 2 shows a high level summary for these scenarios.

Table 2: GTA population distribution for Low, High and Additional Regional Growth scenarios ('000s)

	2011	Low Scenario			High Scenario			ARG Scenario*		
		2031	2041	2011-41	2031	2041	2011-41	2031	2041	2011-41
GTA	6,251	8,344	9,355	3,103	8,340	9,350	3,099	8,446	9,557	3,306
Toronto	2,701	3,194	3,405	703	3,404	3,764	1,062	3,215	3,447	746
Rest of GTA	3,550	5,150	5,950	2,400	4,935	5,586	2,036	5,230	6,109	2,560

* Based on the Low scenario for Toronto

3.2 The Multi-Residential Population Projections

The projected population of Toronto was converted into projected demand for apartments and ground-related housing. Projected population by traffic zone was based on the future distribution of the housing stock. Most of the growth in the stock is in multi-residential units (condos and rental apartments). The distribution of new housing was based on overall demand and on the land use policies of the Official Plan – the amount of new housing in a traffic zone could not exceed the amount that would be permitted by the Official Plan. The 'with SmartTrack' scenarios were based on a 'redistribution' of the future multi-residential units to recognize the influence of SmartTrack.

3.3 SRRA's Multi-Residential Population Forecasts

SRRA forecast the 'redistribution' of the future multi-residential units that would result from the influence of SmartTrack. To recognize the spatial influence of SmartTrack, and to estimate the tax increment resulting from the implementation of SmartTrack, the City was divided in to three sets of TIF zones (Map 2):
1. **Primary** zones, which are located directly adjacent to the SmartTrack stations;
2. **Secondary** zones, which are located on existing or planned transit which will benefit from system-wide improvement related to SmartTrack; and
3. **Other** areas (non-TIF zones).

Once the TIF zones were identified their boundaries were refined to conform to the relevant traffic zones, so that the forecast for the TIF analysis would align with the forecasts for the travel demand modelling.

On the advice of experts in the residential real estate industry, SRRA determined that approximately 30% of the future multi-residential units in areas outside the SmartTrack corridor (the non-TIF zones) would be attracted to the Primary zones. This amounted to 29,600 units being 'redistributed' to the Primary zones between 2011 and 2041. Furthermore, some Primary zones would attract relatively higher shares of this redistributed growth than others. There would be no change in the Secondary zones,
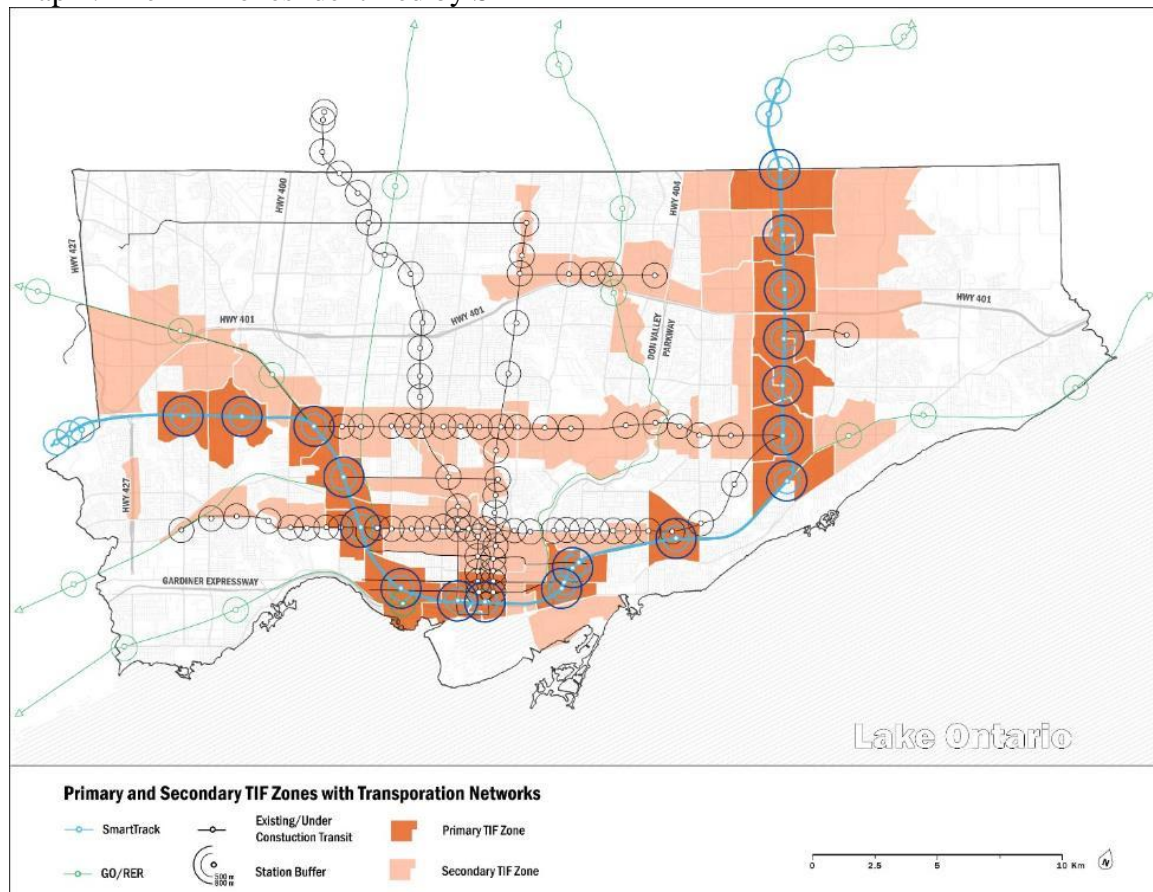
unless total future housing in the Primary zones had been absorbed, in which case the remaining redistributed growth was accommodated in the Secondary zones.

As noted above two redistribution scenarios were developed based on different sets of planning constraints on future development:
1. 'firm' constraints, under which the future development in a traffic zone could not exceed the future housing capacity under present planning policy; and
2. 'relaxed' constraints, under which, in response to the perceived market forces, more housing development was assigned to Primary zones in proportion to their share of growth after 2011.

Map 2: The TIF zones identified by SRRA

Table 3 shows the distribution of multi-residential units in Toronto in 2041, for the four scenarios based on the Low population scenario. SmartTrack results in about 30,000 more units in the Primary zones, with a corresponding decrease in the non-TIF (Other) zones. A further 6,000 units are added to the Primary zones with relaxed planning constraints in the Additional Regional Growth scenario.

Table 3: Distribution of multi-residential units in Toronto, by TIF zone ('000s)

TIF Zone	2011	Low no ST 2041	Low no ST 2011-41	Low with ST 2041	Low with ST 2011-41	ARG (1)* 2041	ARG (1)* 2011-41	ARG (2)* 2041	ARG (2)* 2011-41
Toronto	430	810	380	810	380	831	401	834	404
Primary	90	182	93	211	122	211	122	218	128
Secondary	205	394	189	394	189	403	198	407	202
Other	135	234	99	204	69	217	81	209	74

* ARG: Additional Regional Growth. ARG (1) includes 'firm' planning constraints on the future distribution of multi-residential units; and ARG (2) includes 'relaxed' constraints.

To support the TIF analysis, SRRA also estimated the value of new multi-residential units in each TIF zone, without and without SmartTrack. The generally greater values with SmartTrack contribute to the resulting tax increment.

3.4 'With SmartTrack' Population Projections

SRRA's forecast of the multi-residential development by traffic zone with SmartTrack was used by City Planning staff to develop 'with SmartTrack' population projections by traffic zone for use in the travel demand modelling. Table 4 shows the resulting population in the TIF zones in 2041, for the four scenarios based on the Low population scenario. The variations between scenarios in the distribution of population match those for the multi-residential units shown in Table 3.

Table 4: Distribution of population in Toronto, by TIF Zone ('000s)

TIF Zone	2011	Low no ST 2041	Low no ST 2011-41	Low with ST 2041	Low with ST 2011-41	ARG (1)* 2041	ARG (1)* 2011-41	ARG (2)* 2041	ARG (2)* 2011-41
Toronto	2,701	3,405	703	3,405	703	3,447	746	3,447	746
Primary	480	638	158	694	214	694	214	706	226
Secondary	868	1,208	340	1,209	341	1,227	358	1,231	363
Other	1,354	1,559	205	1,501	148	1,527	173	1,510	157

* ARG: Additional Regional Growth. ARG (1) includes 'firm' planning constraints on the future distribution of multi-residential units; and ARG (2) includes 'relaxed' constraints.