

## 2. Purpose of / Rationale for the Undertaking

This chapter begins with a description of the purpose or reason for the project. It then provides the rationale or justification for why the project is needed.

### 2.1 Purpose of the Undertaking

The purpose of the undertaking is to improve transportation mobility and facilitate more convenient and reliable transportation choices within the Western Vaughan Transportation Improvements Study Area (see **Figure 2-1**) as growth occurs over the next 25 years.

Improving transportation mobility means moving people by many different and efficient means. Enhancing transportation mobility in the Western Vaughan Transportation Improvements Study Area requires thinking beyond car-based travel and developing more innovative strategies that make better use of York Region infrastructure. Moreover, York Region seeks a solution that adheres to the principles of sustainability, as identified in the November 2009 Transportation Master Plan adopted by Regional Council and:

1. Preserves and enhances the sustainable environment;
2. Supports economic vitality; and
3. Encourages healthier neighbourhoods and communities.

**Purpose of the Undertaking:**

*To improve transportation mobility and provide more reliable transportation choices.*

### 2.2 Rationale for the Undertaking

In anticipation of future population and employment growth, York Region recognizes the need to manage congestion more efficiently and sustainably, ensuring that its transportation system can accommodate new growth. Including the City of Vaughan, if practical solutions are not implemented, there will be several foreseeable challenges to the future operation of Western Vaughan transportation system, including: high levels of traffic congestion; discontinuous roads; low vehicle occupancy rates; limited transit service; and heavy truck traffic. These challenges and the approved growth in population and employment are described below.

#### 2.2.1 Population and Employment Growth

The Provincial Growth Plan for the Greater Golden Horseshoe developed under the *Places to Grow Act, 2005* (Growth Plan), is the provincial policy framework for growth between now and 2031. The *Places to Grow Act, 2005* mandates greater intensification along transit-oriented development corridors and nodes, which will result in increased densities of people living and working in urban areas, including the Western Vaughan Study Area.

In support of the Growth Plan, York Region has committed to ensuring that beginning in 2015, 40% of all residential development within the Region will take place within existing built-up areas (York Region Official Plan, 2009).

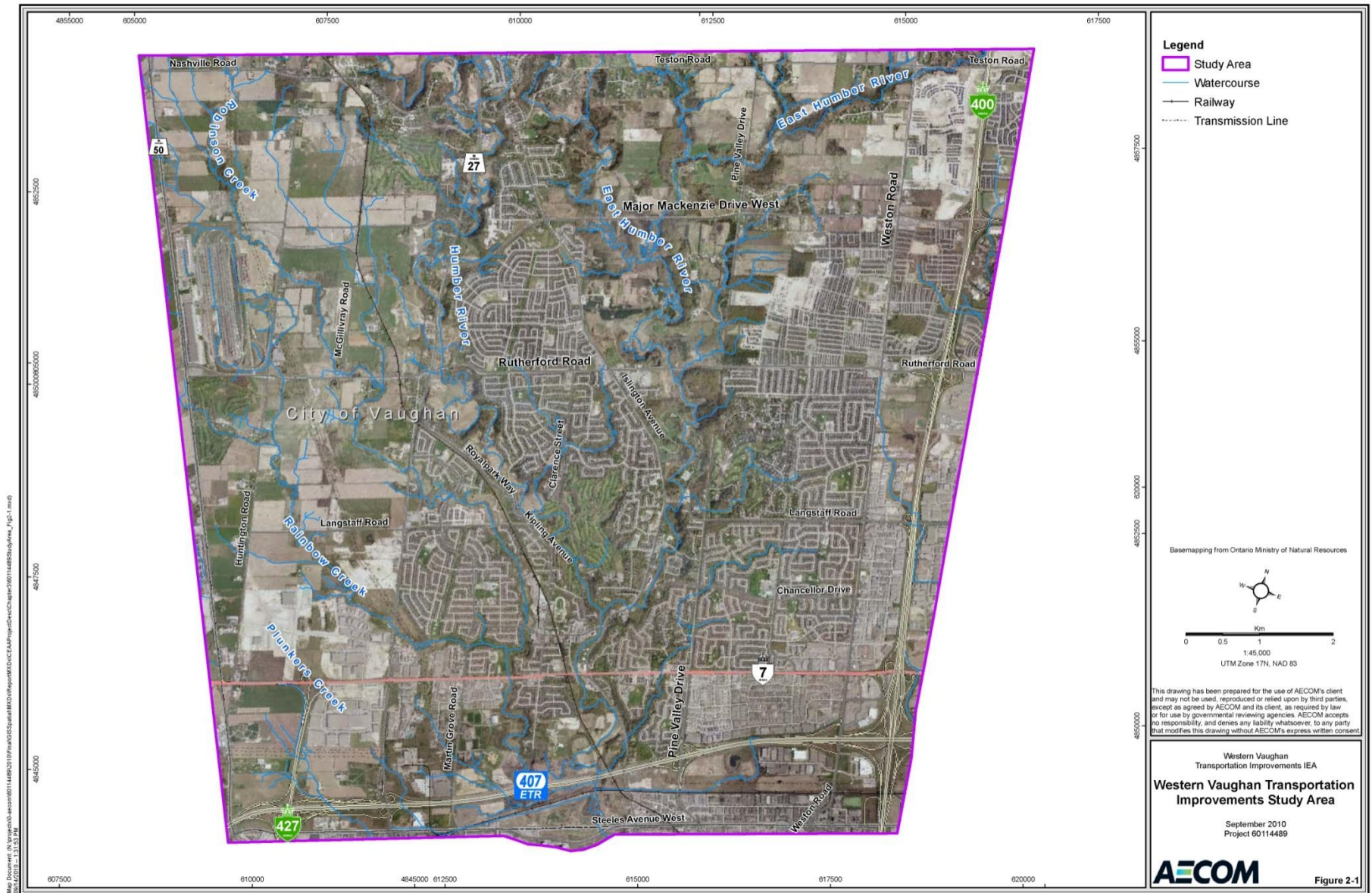


Figure 2-1 Western Vaughan Transportation Improvements Study Area

The Regional Municipality of

The *Oak Ridges Moraine Protection Act, 2001* and the *Greenbelt Act, 2005* have also changed the manner in which York Region will grow in the future. Nearly one-third of the Region is located within the Oak Ridges Moraine and the majority of that land is protected from development. In addition, another third of York Region, including a portion of the Study Area, is located within the Greenbelt, a provincially designated area in the Province of Ontario. Within the Greenbelt, development within the Study Area is limited to areas beyond the borders of both the Oak Ridges Moraine and Greenbelt (refer to **Figure 2-2**).

York Region is projected to experience a more than 60% increase in population by 2031 to nearly 1.5 million residents. Likewise, future employment is projected to increase nearly 80% over that same time span (**Table 2-1**).

**Table 2-1 Population and Employment Estimates within York Region and Western Vaughan\***

	2006		2031		2006 vs. 2031	
	Western Vaughan	Entire York Region	Western Vaughan	Entire York Region	Western Vaughan	Entire York Region
<b>Population</b>	100,577	930,739	125,310	1,504,541	25%	62%
<b>Employment</b>	47,574	455,134	103,015	802,314	117%	76%

Note: \* Population and Employment Estimates provided by York Region Planning Department.

Due to the mature state of primarily low-density communities in Western Vaughan, as well as several environmental constraints, there are limited areas that will support new growth. As a result, population growth within the Study Area will be concentrated in a few locations, primarily in:

- Vellore Village community (increase of approximately 20,000 residents);
- Kleinburg-Nashville (increase of approximately 1,800 residents); and
- Woodbridge (increase of approximately 2,600 residents).

**Figure 2-3** illustrates projected areas of residential growth in Western Vaughan through 2031.

Employment activity in Western Vaughan is projected to more than double by 2031, as a result of anticipated business growth. As depicted in **Table 2-1**, Western Vaughan is projected to add over 55,000 additional jobs by 2031, much of that focused along Highway 427 (between Highway 50 and Highway 27 north to Teston Road), where over 40,000 jobs alone are projected to be added within the next 25 years. Additional employment growth is planned along major north-south freeway corridors, including Highway 400 to the east and Highway 427 to the west (see **Figure 2-4**). The Region also anticipates modest employment growth along the Highway 407 corridor in the south and within the new Vellore Village community.

### 2.2.2 Transportation System Deficiencies

While there are many benefits to increased population and employment growth in the local area, a potential side-effect is the increased stress on the transportation system resulting from more people travelling to, from and within Western Vaughan. In support of the need to manage future traffic growth, York Region through its adopted Transportation Master Plan and provincially approved new Official Plan - has developed policies efficiently and sustainably. A strategically planned and sustainable transportation system that focuses is on not just its essential to managing this growth.

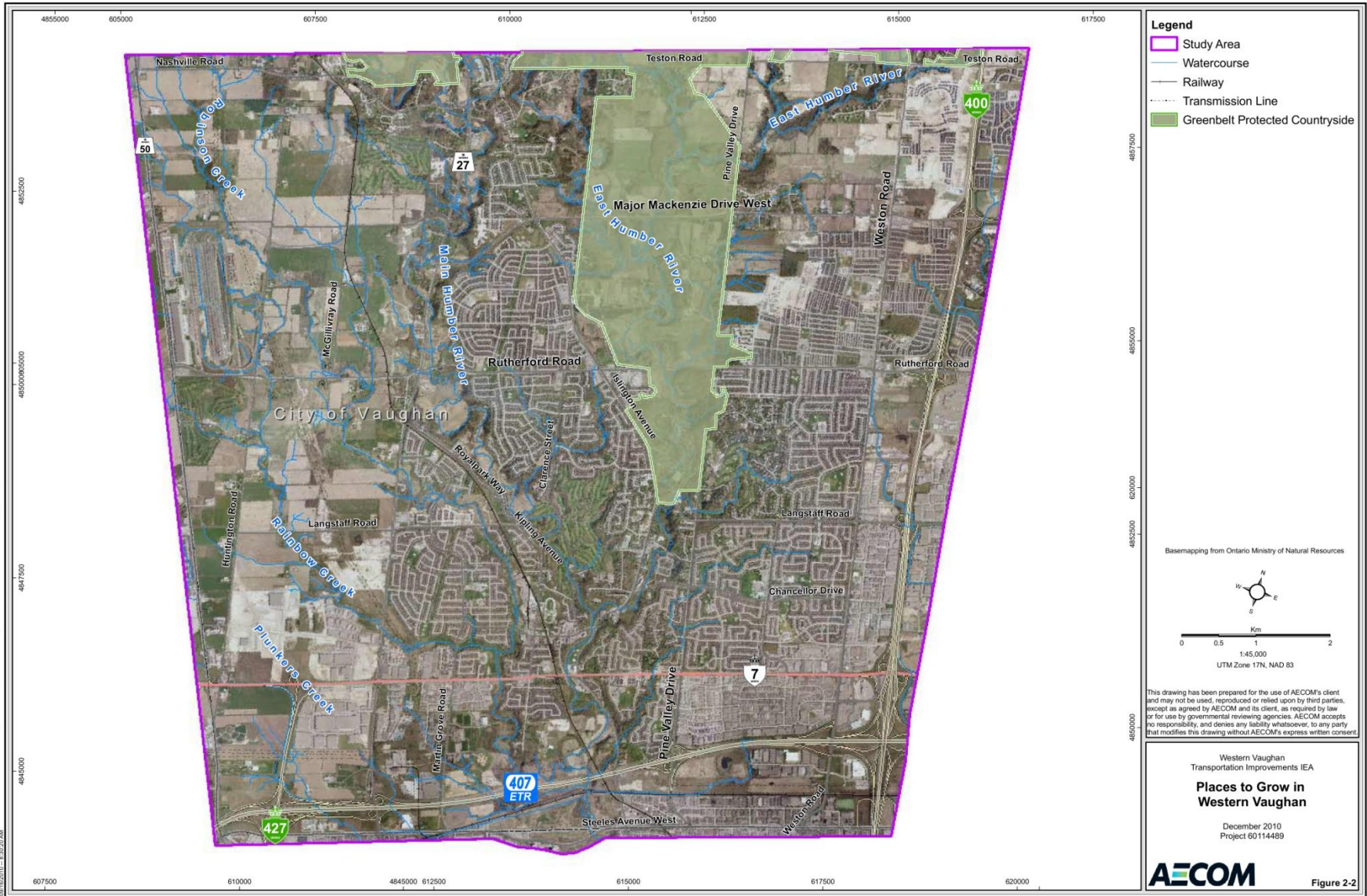


Figure 2-2 Places to Grow in Western Vaughan

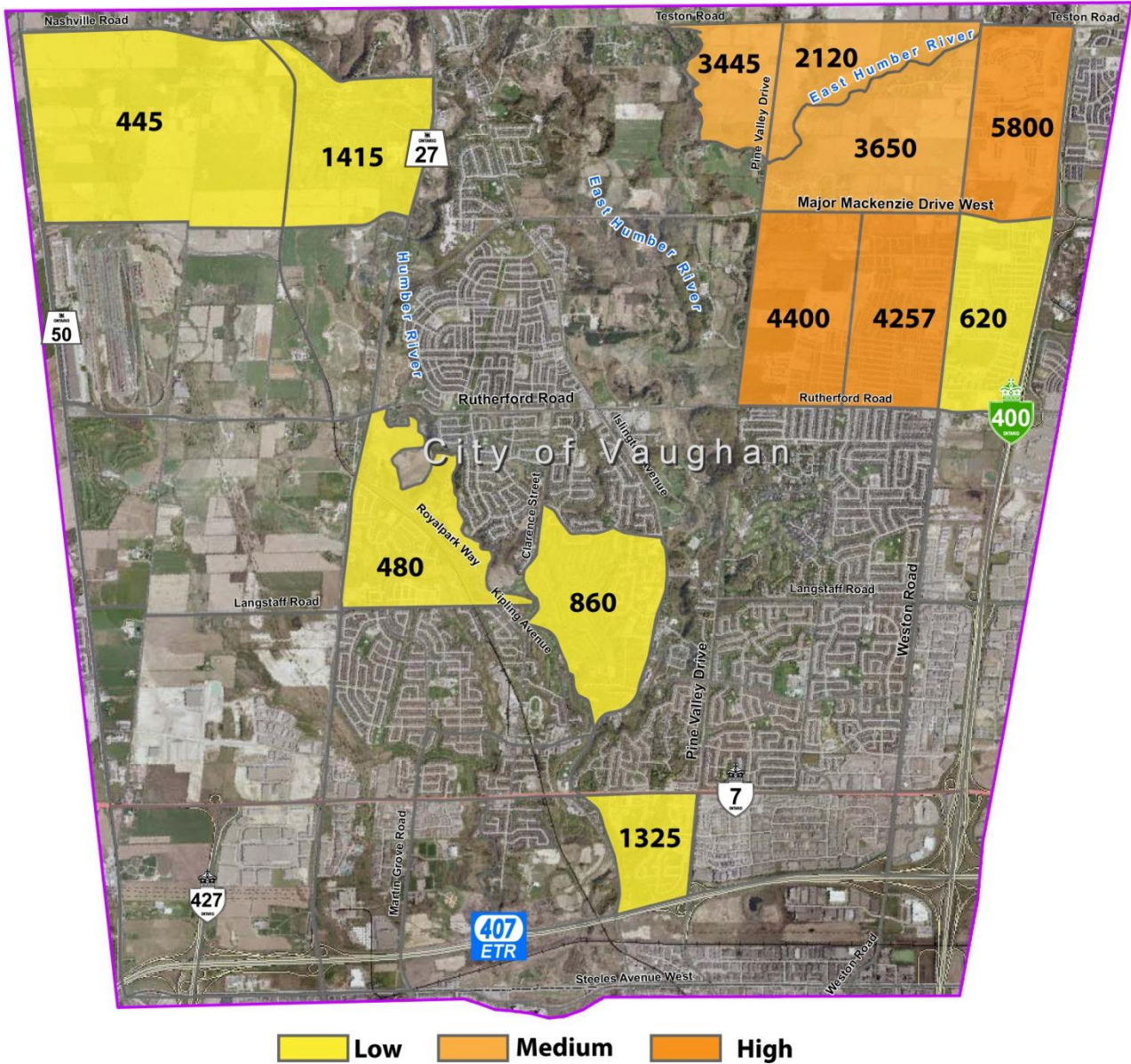


Figure 2-3 Projected Population Growth in Western Vaughan by 2031

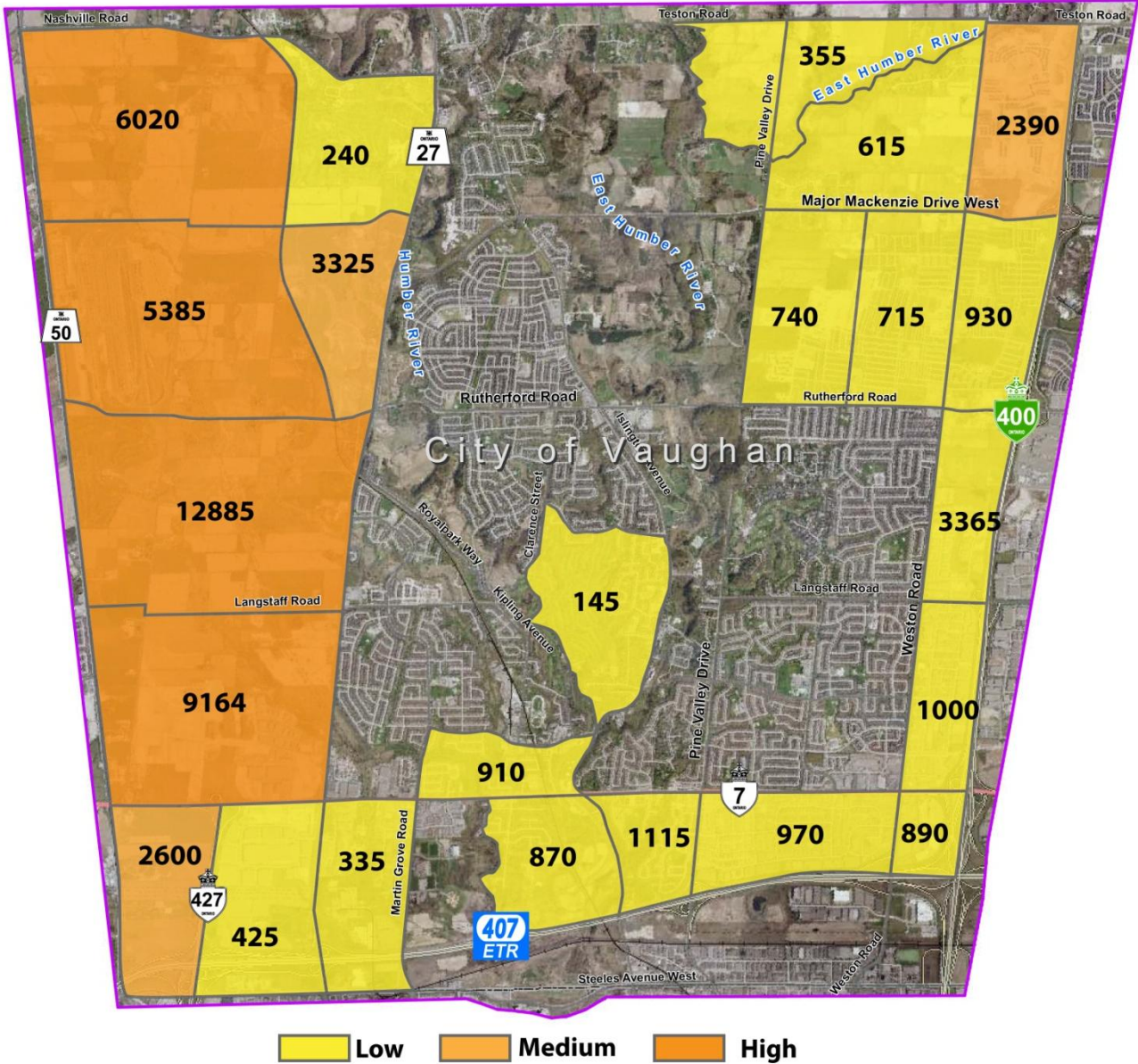


Figure 2-4 Projected Employment Growth in Western Vaughan by 2031

The following sections describe existing transportation deficiencies that will be addressed in this study. The sum total of the transportation deficiencies will result in a transportation system incapable of meeting the demands of future projected growth, unless practical solutions are identified.

### 2.2.2.1 Existing and Future Congestion

York Region assessed existing and future congestion levels through its travel demand model, from which volume/capacity (v/c) ratios were determined (see **Figure 2-5** for methodology overview; **Appendix 2** for full detailed methodology). The v/c ratio is a measure of traffic demand on a facility (expressed as volume) compared to its traffic-carrying capacity. A v/c ratio of 0.7, for example, indicates that a traffic facility is operating at 70% of its capacity. Threshold v/c values are defined for three categories of congestion:

- Uncongested . v/c less than 0.80;
- Some Congestion . v/c between 0.80 and 0.90; and
- Congested . v/c greater than 0.90.

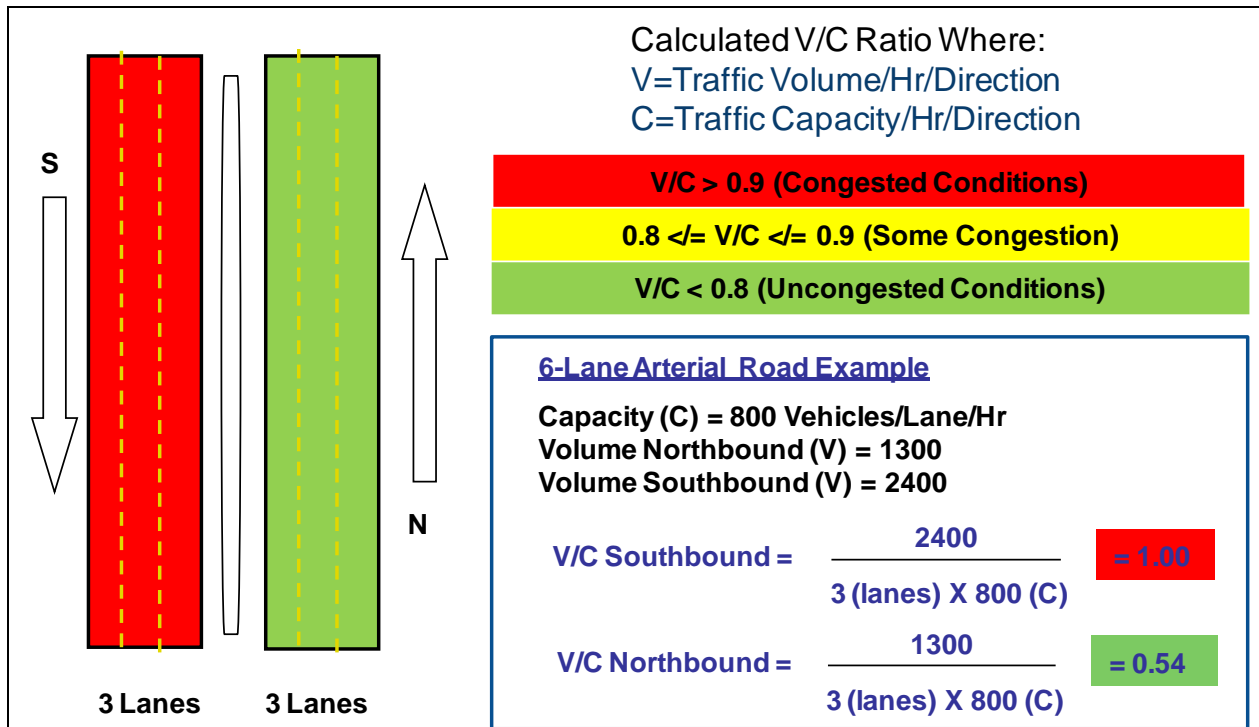


Figure 2-5 Level of Traffic Service (V/C ratio) Methodology

Further to the analysis, a more detailed link-by-link assessment of congestion within the Study Area confirmed that congested sections of the Study Area roadways are consistent with the calculated corridor v/c ratios (**Figures 2-6 to 2-8**). This assessment considered improvements associated with other related studies, such as the 427 Transportation Corridor Environmental Assessment, the GTA West Corridor Environmental Assessment, and the Highway 427 Extension Area Transportation Master Plan Study.

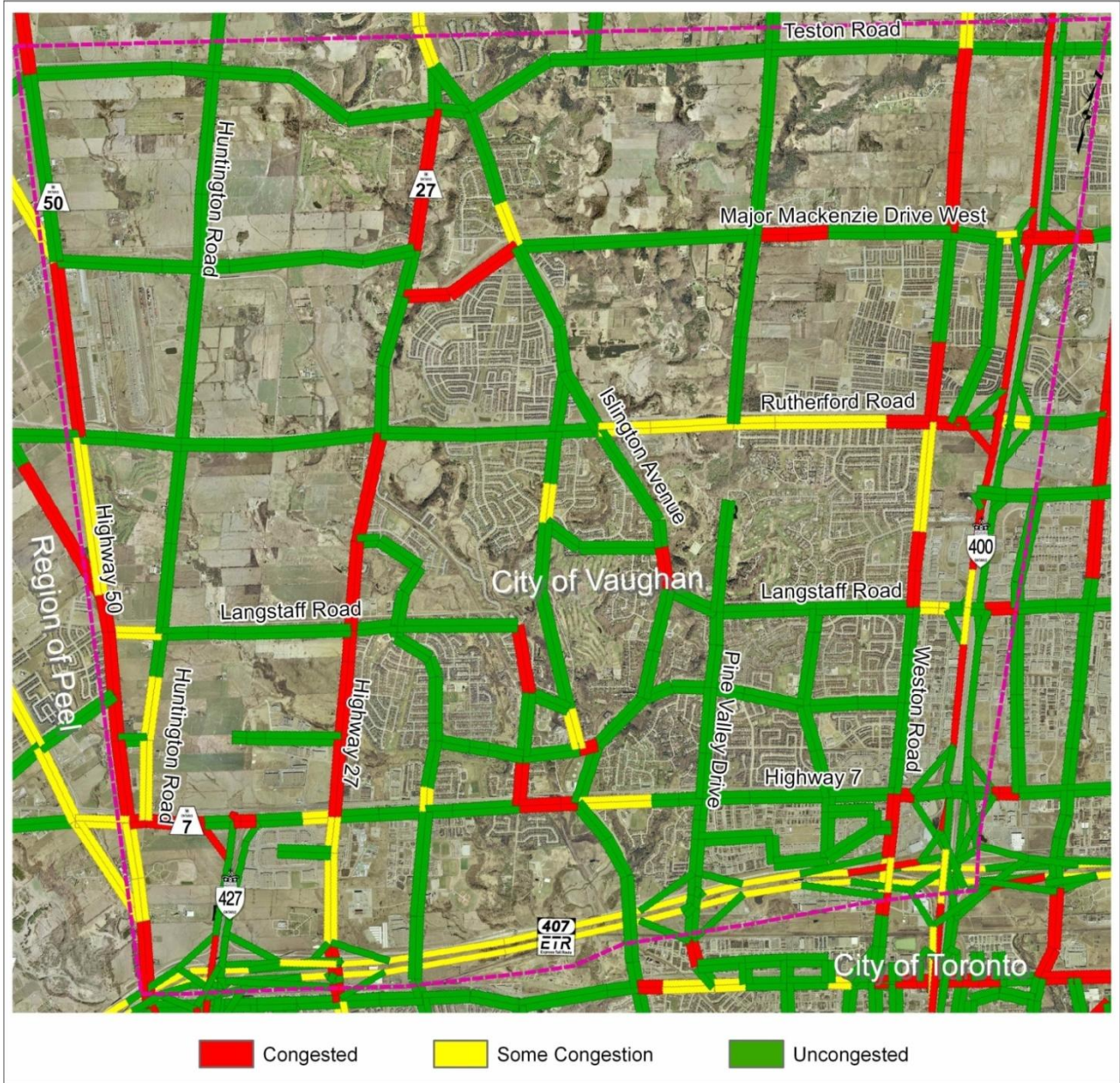


Figure 2-6 Existing (2006) AM Peak Hour Traffic Conditions



**Figure 2-7 2021 AM Peak Hour Traffic Conditions**















