Draft

Markham Centre Transportation Study

Town of Markham
IBI Group
November 10, 2009

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Outline

- Study Objectives and Approach
- Study Highlights
- Existing and Future Background Conditions
- Land Use Scenarios Examined
- Transportation Demand Implications of Scenarios
- Improvements Required to Support Development
- Review of Concerns Raised by Stakeholders
- Conclusions and Next Steps

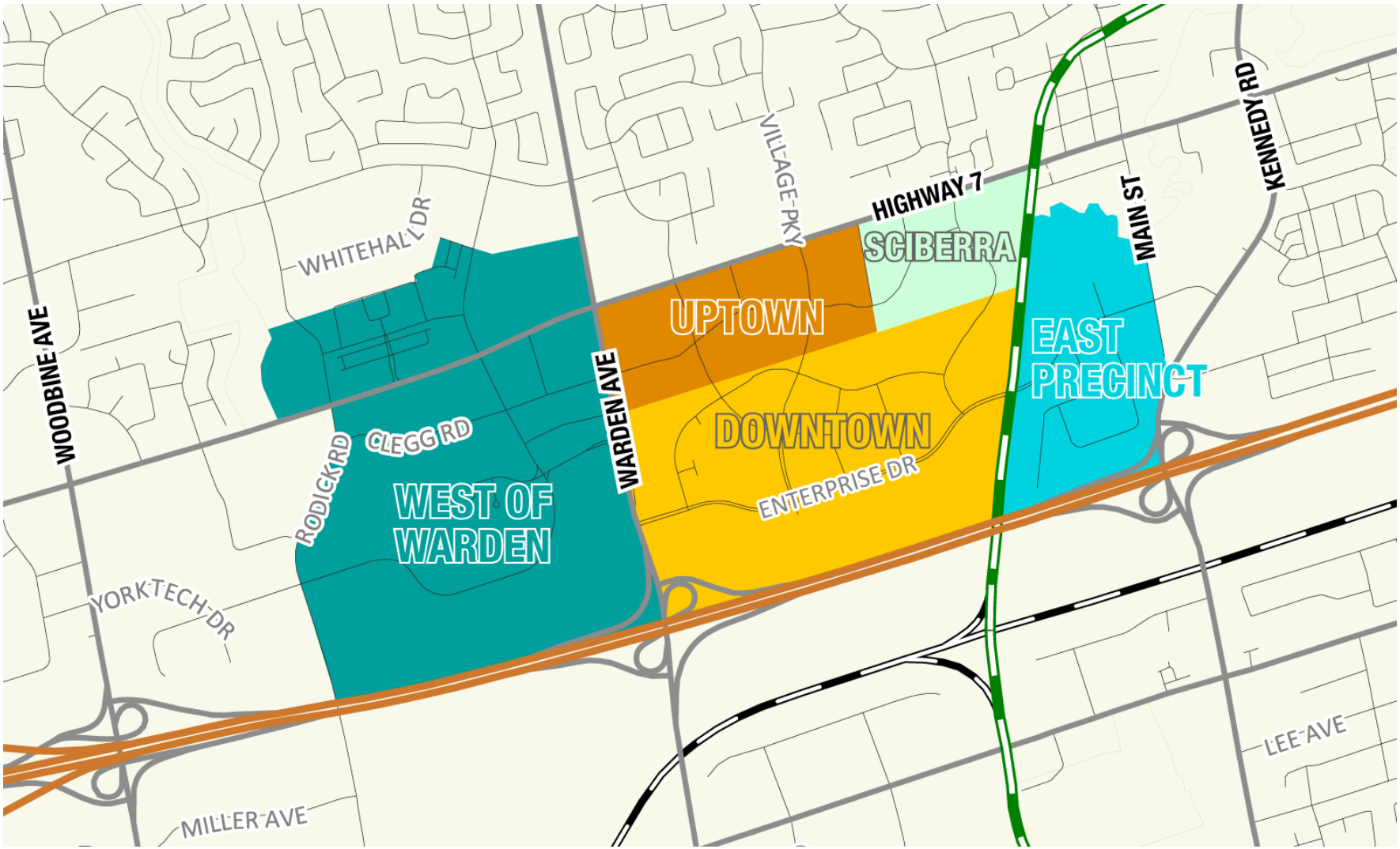
Study Objectives and Approach

- Compile and update information from past studies
- Estimate transportation demand for development options related to Growth Management Strategy (GMS), taking into account future transportation supply and mode split changes
- Quantify the capacity of the transportation network to accommodate estimated demand
- Provide recommendations on required infrastructure improvements and supporting policies

Study Highlights

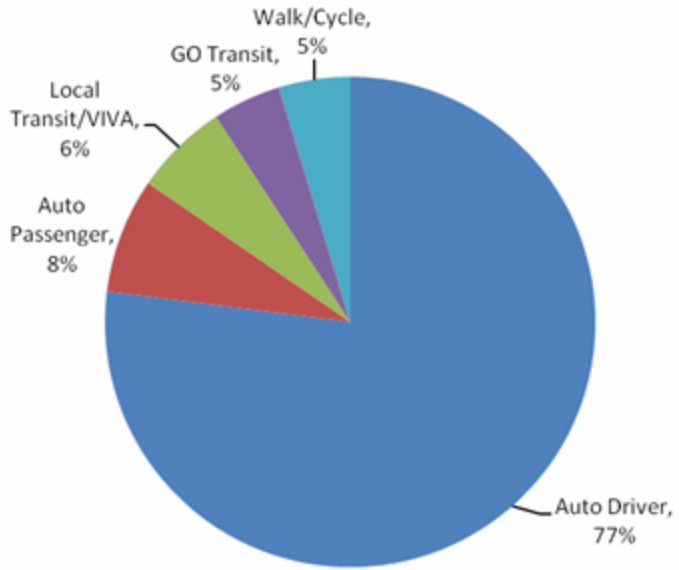
- Markham Centre is planned for high density because of its proximity to existing and planned transit improvements
- Planning transportation for high density growth centres requires a paradigm shift in travel behaviour
- Existing arterial road network is approaching capacity - planned transit and road improvements are part of the implementation strategy to support growth
- The evolution of Markham Centre should include:
  - Enhanced Rapid Transit and GO Rail service levels
  - Enhanced internal/local transit to help improve connections to local destinations and regional transit
  - Policies to influence travel behaviour (e.g. marketing development as being car-constrained)
  - Network of dedicated bike facilities and related amenities
  - GO Station/407 Transitway parking supply that is in line with urban development objectives and road network capacity
  - Additional local roads to facilitate pedestrian connections and to distribute traffic to Regional Roads

Study Area and Analysis Zones



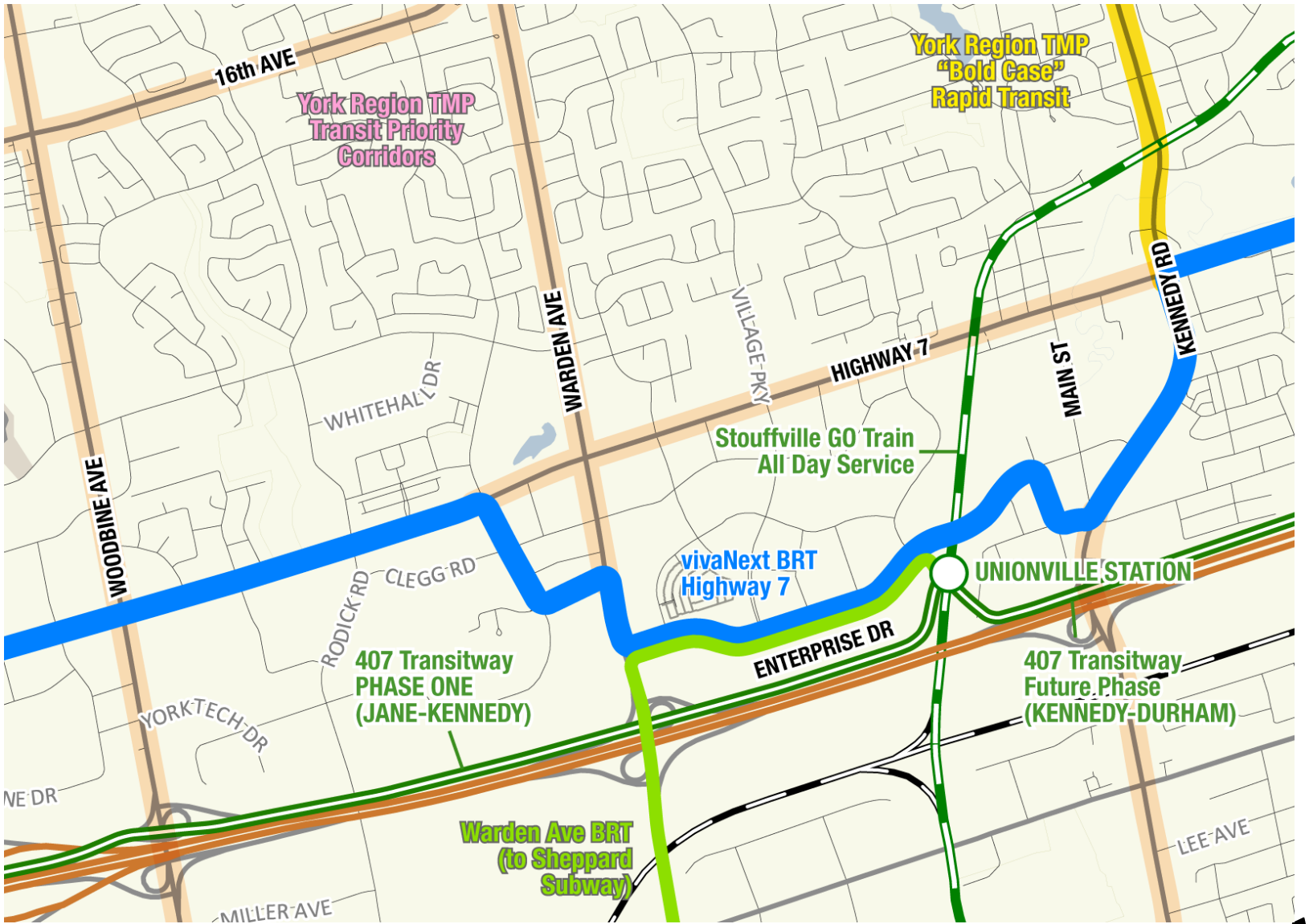
Existing Transportation Conditions

- 23% of weekday morning rush hour trips from Markham Centre are made by sustainable modes (transit, walk, cycle, auto passenger), up from 11% in 1996
- Transit ridership is increasing according to projected levels
- 14% of morning peak residential trips originating from Markham Centre and nearby surrounding areas stay within the same area
- Existing road network is approaching capacity during weekday peak periods
- Generally, network operates well during non rush hour periods



Existing Weekday AM Peak Outbound Modal Shares

Planned Transit Improvements (0-25 years)



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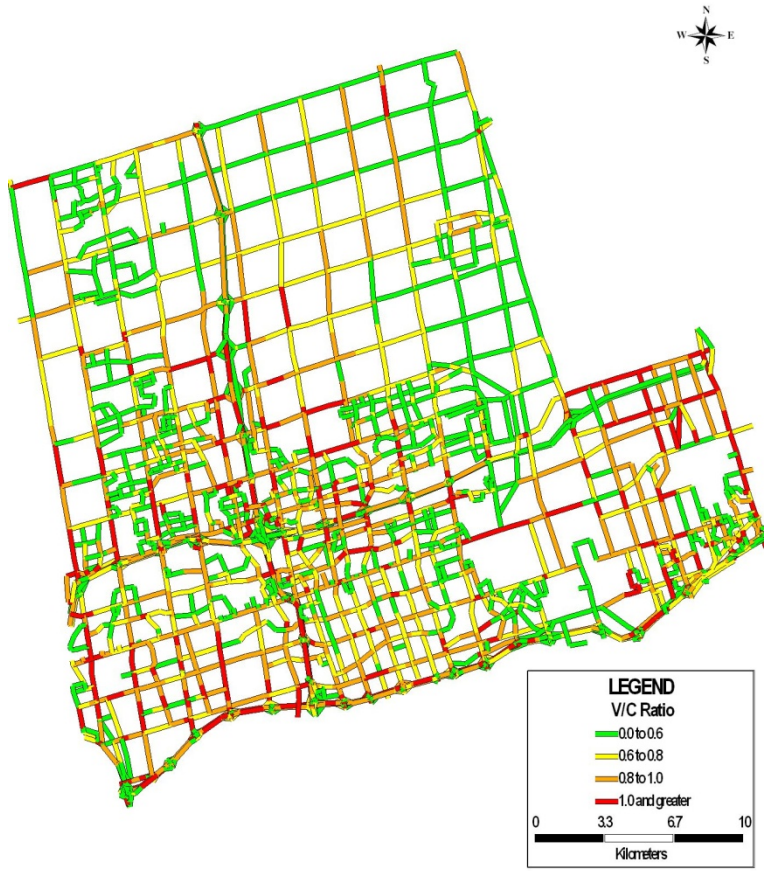
Planned Road Improvements (0-10 years)

Future Background Transportation Conditions (Town-wide)

- Between 2006 and 2031, AM peak hour motorized trips (auto + transit) within Markham are projected to grow by 76% (from 51,000 to 90,000 trips)
- Transit trips will increase significantly, from 3,000 peak hour trips to almost 11,000 trips (a 270% increase)
- Auto trips will grow at a much slower rate (58%), but the absolute increase is still 30,000 peak hour trips

- Reducing growth in “through traffic” is one of the keys to achieving the development goals for Markham Centre



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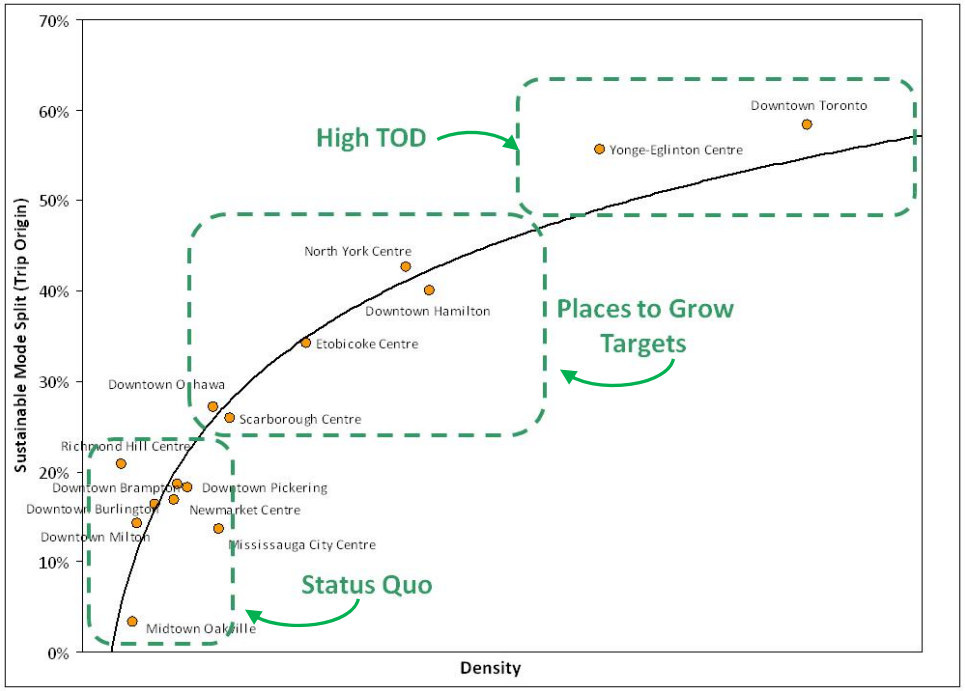
Future Modal Split Assumptions for Markham Centre

- A substantial increase in the use of transit and non-motorized travel is required
- Previous studies have assumed a 30% transit mode split
- For the purpose of current study it is estimated that by 2031, 50% of all peak hour trips will be made using “sustainable modes” of which about half will be transit

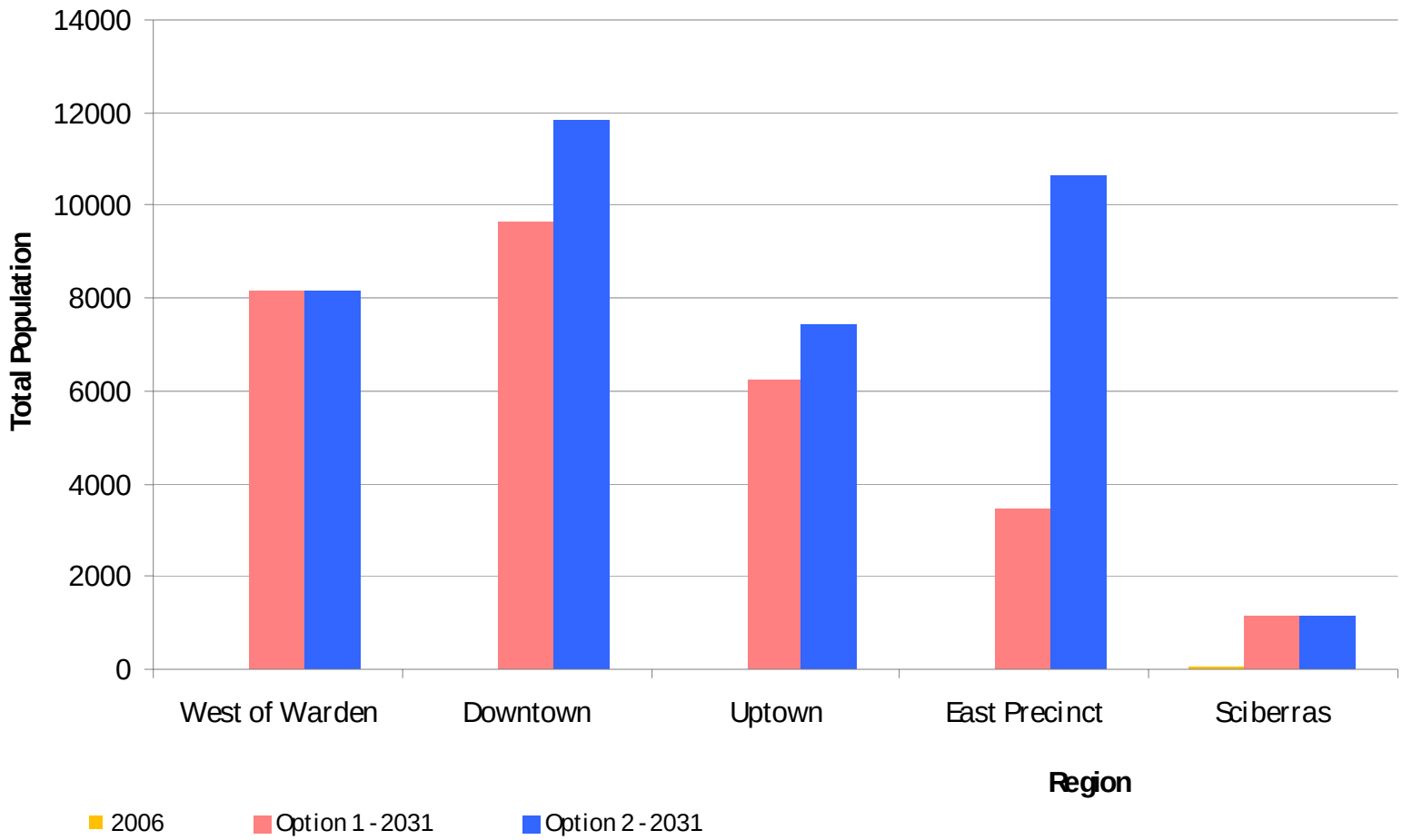


Development Scenarios Examined

- Two alternative land use scenarios were developed by Town staff for analysis purposes under GMS:

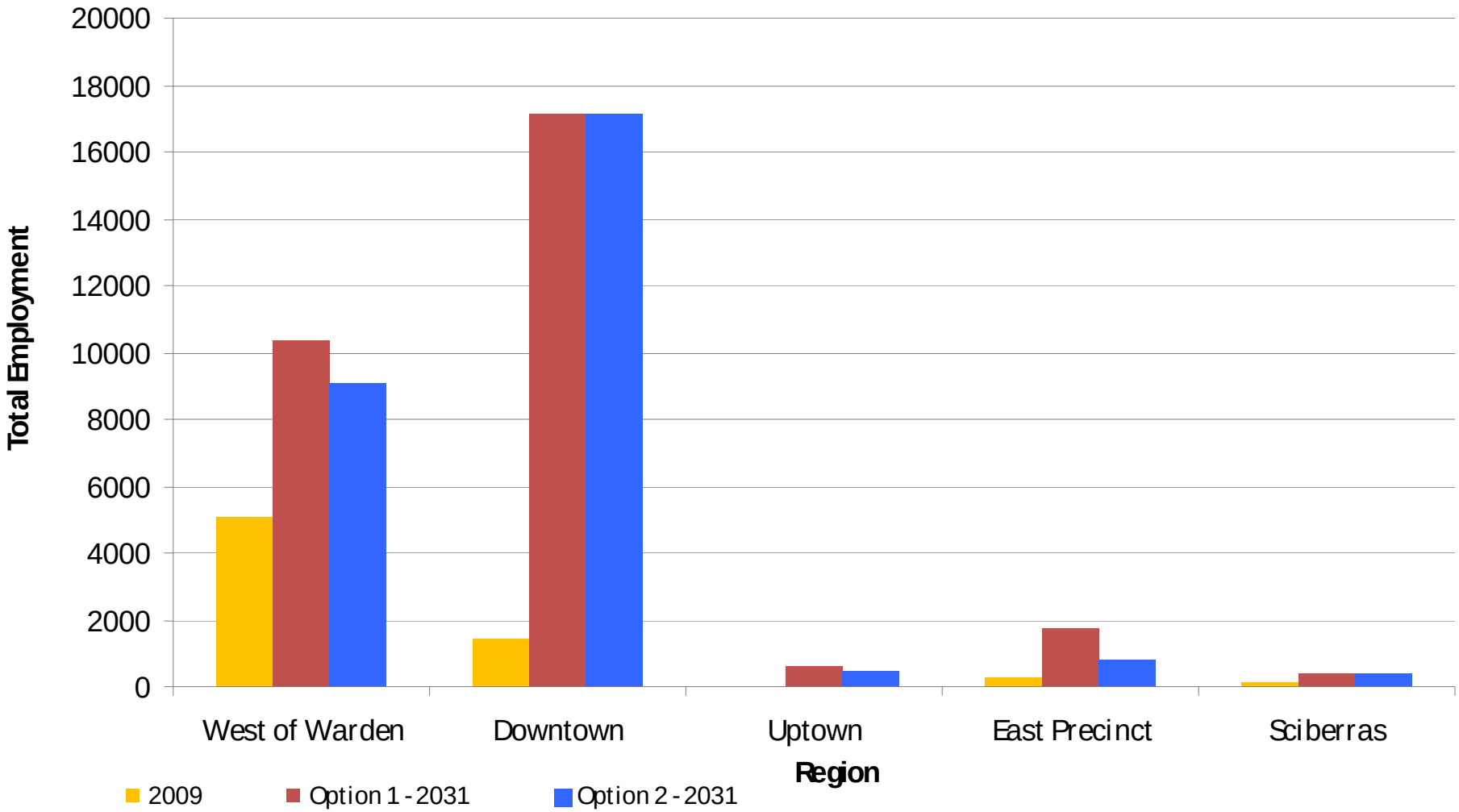
	2031 Horizon
Option 1 – Town Base Forecast Scenario	Units: 14,700 Pop: 28,600 Emp: 30,200
Option 2 – High Growth Scenario	Units: 21,000 Pop: 39,300 Emp: 28,000

Comparison of Scenarios - Population



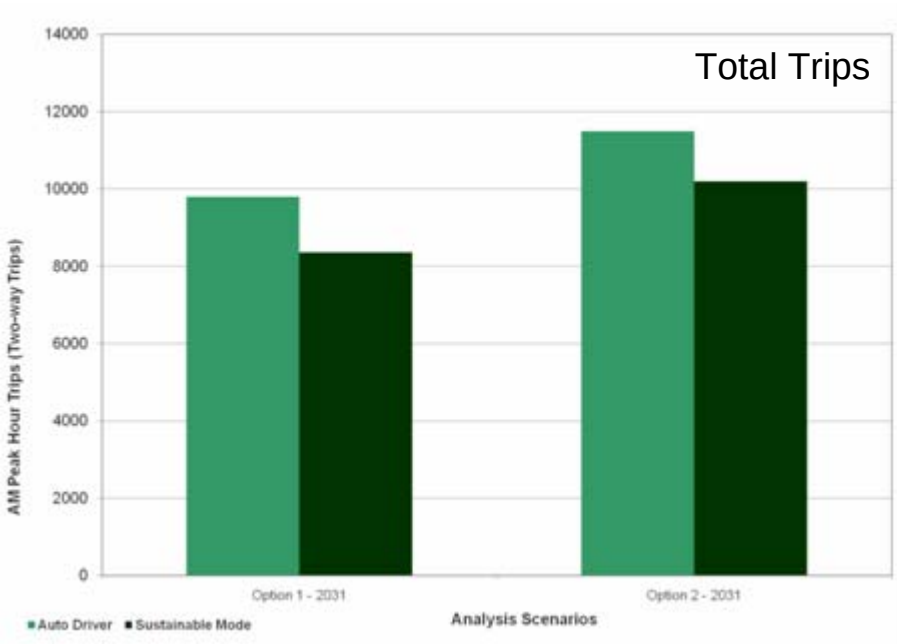
Note: Population in 2006 was minimal; 2009 population data not available

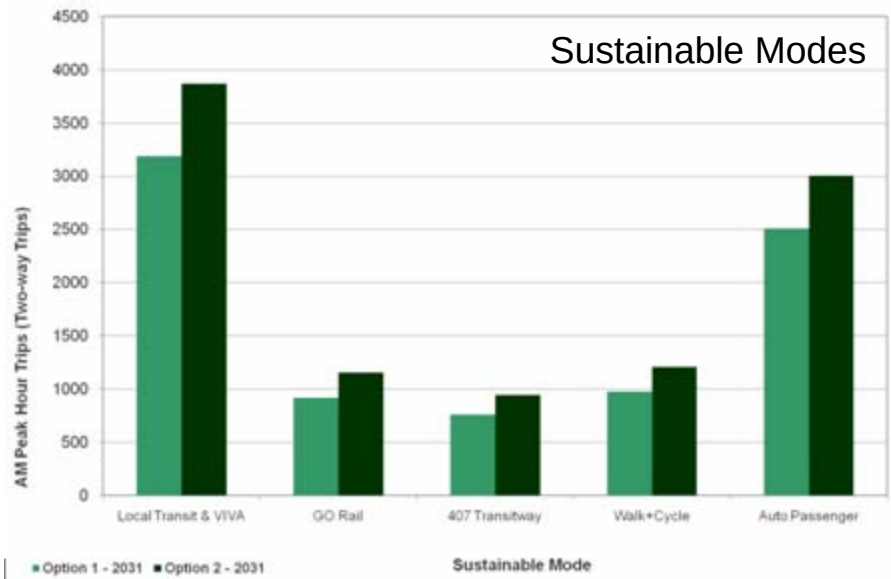
Comparison of Scenarios - Employment



Trip Generation

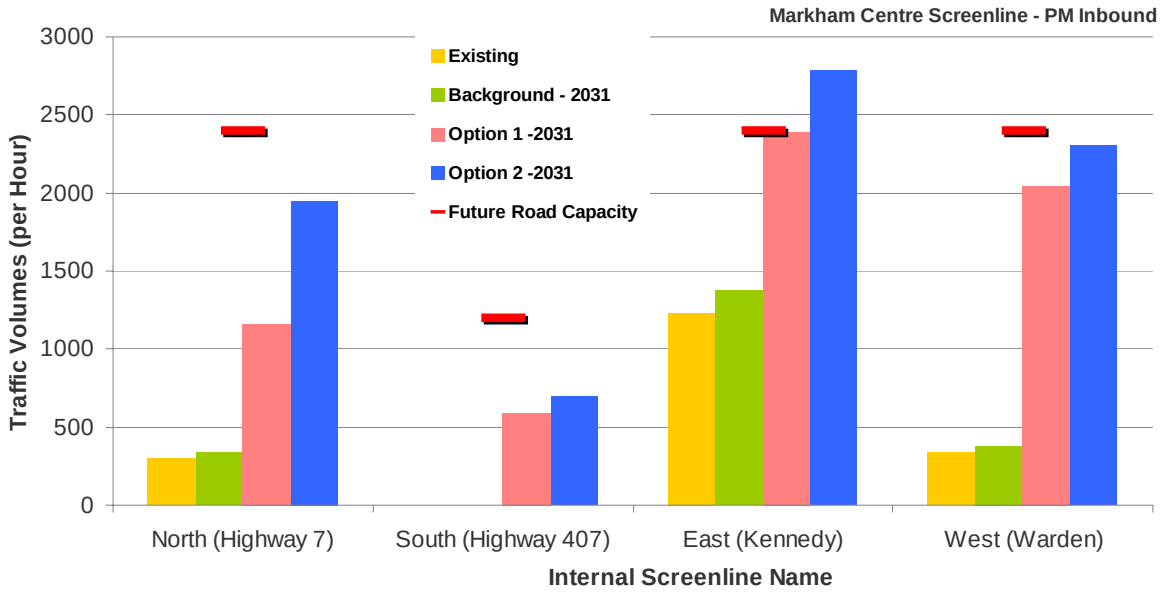
- Based on mode split projections, the proposed developments will generate between 10,000 and 12,000 auto trips in the AM Weekday Peak Hour
- Difference Option 1 and Option 2 is not large (6%) and transportation needs will be similar
- Option 2 has a slightly higher potential for transit given the increased population density



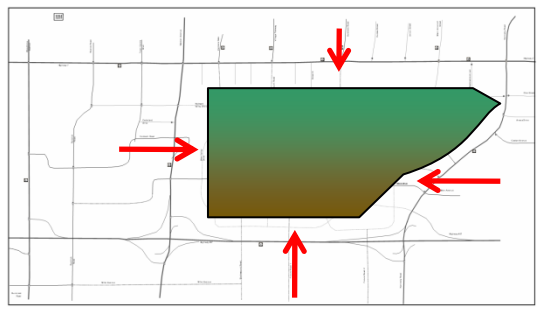


Transportation Network Impacts

- Future VIVA, GO and 407 Transitway systems can accommodate forecast transit demand
- East-west road capacity is a limiting factor for internal trips
- Access to arterial network can be improved by adding planned/potential collector roads, but road capacity is ultimately limited by Regional Road capacity



Afternoon inbound peak direction



Transportation Network Considerations

Transit Considerations

- Major improvements in transit have been identified by Metrolinx and York Region
- Additional recommended improvements include:
  - Internal transit circulator bus
  - Improved transit service on Highway 7, in addition to Enterprise Rapid Transit
  - Accelerated Highway 407 Transitway delivery
  - Direct rapid transit connection to Sheppard Subway (Don Mills or Warden)
  - Direct rapid transit connection to Scarborough Town Centre

Pedestrian and Cycling Considerations

- Notwithstanding compactness of planned mixed use development, walking distances between activities are still significant
- In order to achieve targeted non-motorized mode splits, Markham needs to go beyond traditional approaches
- Recommendations include:
  - Dedicated cycle tracks/lanes
  - Extensive bike parking
  - Public “Bikeshare” system
  - Integration with all transit services

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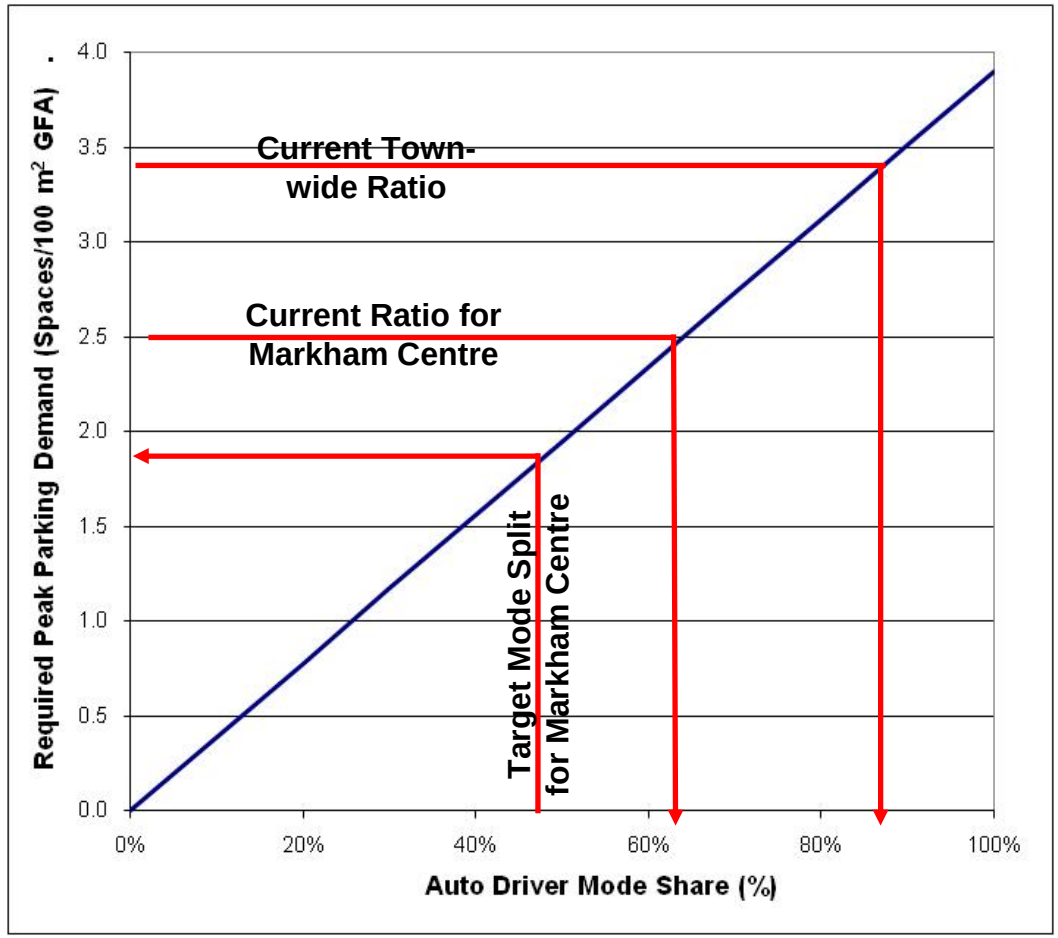
Supporting Policies

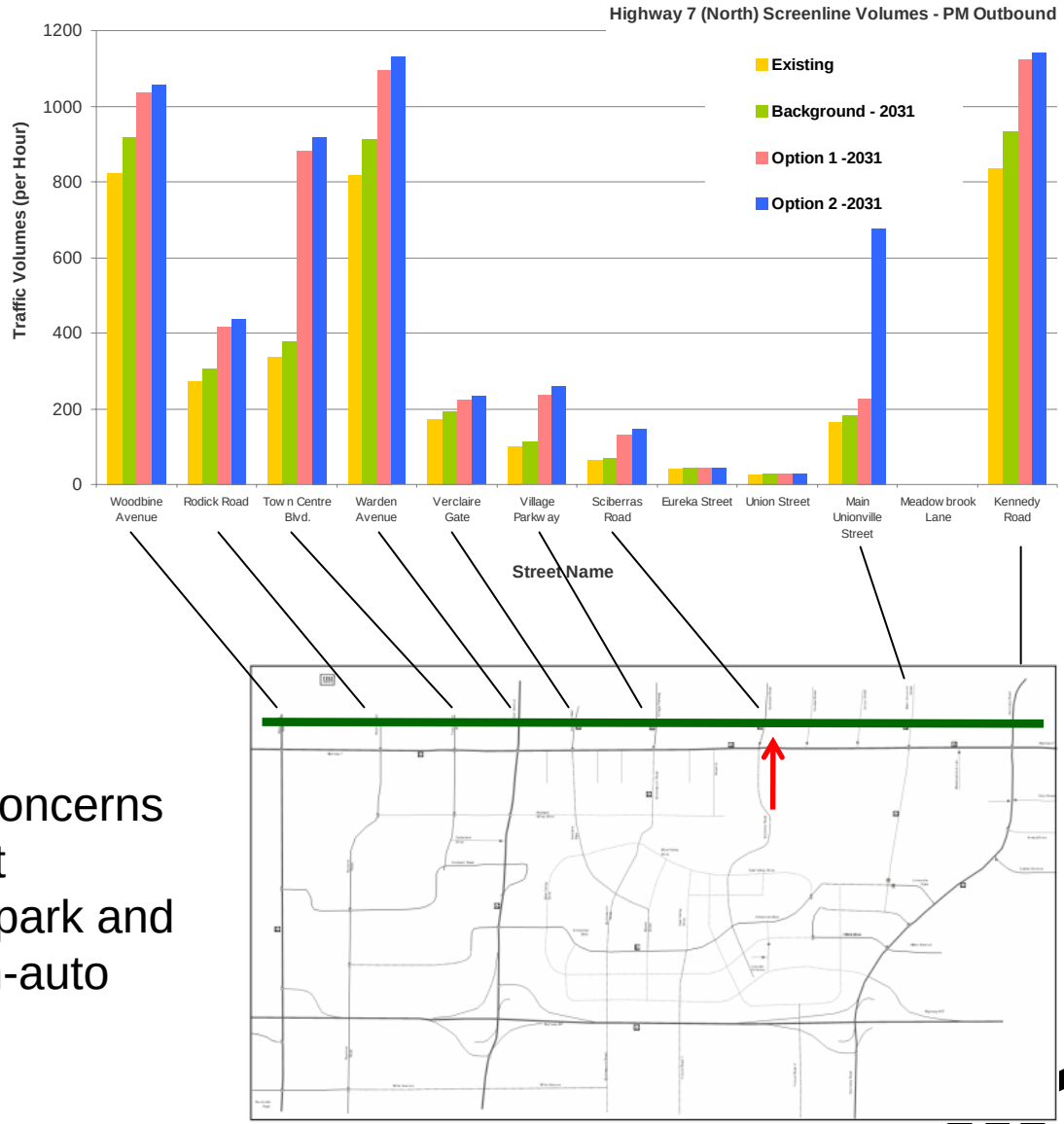
- Land use policies and development phasing need to link with transportation infrastructure and demonstrated achievement of mode split targets
- Policies relating to parking, road design, active transportation, etc. must reflect long term outlook for Markham Centre



Office Parking Supply vs. Mode Split

Issues Raised by Residents and Other Stakeholders

- Traffic Infiltration
- Timing of transit improvements
- Local transit service improvements
- Desirable amount of parking for GO Station/Mobility Hub



Options exist to mitigate concerns including traffic movement restrictions, dispersion of park and ride lots, promotion of non-auto alternatives

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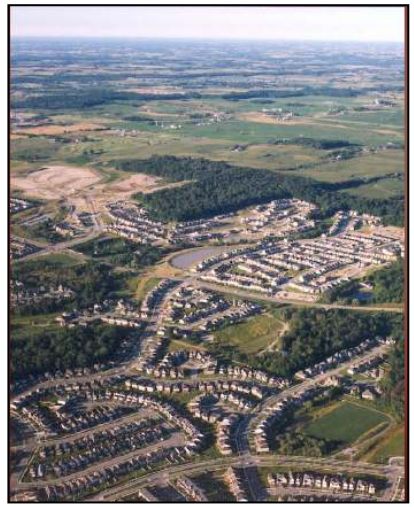
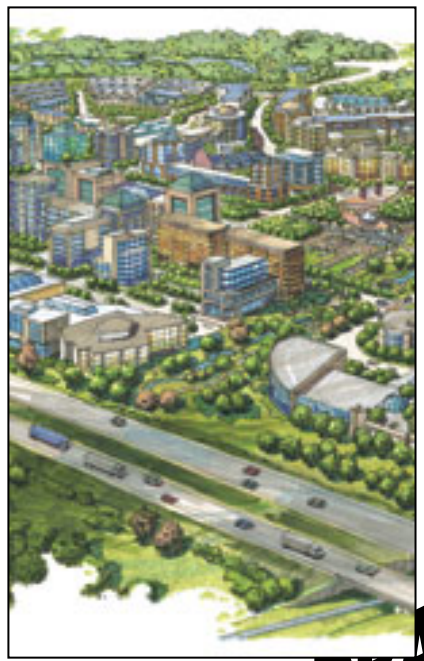
Conclusions and Recommendations

- From a sustainability perspective, it is preferable to accommodate growths in Markham Centre than auto-dependent communities, but,
- Residents and employees in Markham Centre need to have viable alternatives to the automobile
- A phased approach is appropriate which requires monitoring of performance measures and infrastructure improvements
- 2031 development levels require all planned rapid transit improvements to be in place, plus extensive local transit for circulation
- Option 1 can be accommodated while the incremental impacts of Option 2 may require additional mode shifts to transit, walking and cycling
- Need to accelerate cycling improvements on Regional Roads (Highway 7, Warden, Kennedy) while building dedicated cycling and pedestrian facilities in conjunction with new local roads and development
- New road connections are required to distribute traffic to Regional Roads:
  - Birchmount Road Extension - completion 2010/2011
  - Rodick Road to Esna Park - completion 2010/2011
  - Enterprise Drive to Unionville Gate - completion late 2009
  - Miller Avenue to Birchmount Road or Kennedy Road - EA study underway
  - Enterprise Drive to Yorktech Drive - EA study not commenced

Final Thoughts

- The Town of Markham's 2031 growth plan assumed at least 28,000 people and 30,000 jobs (Option 1 - 2031) will be accommodated in Markham Centre. If these people and jobs had to be accommodated in greenfield areas:
  - An additional 710 hectares of land would be consumed
  - 210 additional lane-kilometres of roads would be built at a cost of over $200 million
  - 30,000 more cars would be on the road each day travelling some 350,000 kilometres
  - 13 million more litres of fuel per year would be used
  - Traffic infiltration would worsen in neighbourhoods between greenfield and existing employment areas





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Next Steps

- Receive comments from Council and Markham Centre steering committee
- Finalize land use and transportation scenarios under GMS
- Finalize transportation study reports (Markham Centre and MTSP)
- Finalize town-wide parking strategy and Markham Centre parking business plan
- Develop policies and recommendations for Secondary Plan
- Develop specific “metrics” for performance measures by phase of development
- Continue discussion of coordinated Regional transportation and land use strategies
- Advance transit and road initiatives to support Markham Centre